



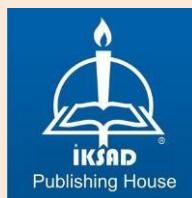
2. INTERNATIONAL PALANDOKEN SCIENTIFIC STUDIES CONGRESS

24-25 APRIL 2021 ERZURUM

CONGRESS BOOK

EDITOR

**Assoc. Prof. Dr. Aliye AKIN
Dr. Gabriela BOANGIU**





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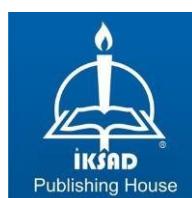
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CONGRESS ID

CONGRESS TITLE

2. INTERNATIONAL PALANDOKEN SCIENTIFIC STUDIES

CONGRESS

DATE AND PLACE

24-25 April 2021, ERZURUM / TURKEY ONLINE PRESENTATIONS

ORGANIZATION

ISARC

INTERNATIONAL SCIENCE AND ART RESEARCH CENTER

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SCIENTIFIC STUDIES CONGRESS

24-25 APRIL 2021

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- ◆ Requests such as change of place and time will not be taken into consideration in the congressprogram.



24.04.2021

SESSION -1 HALL -1

MODERATOR: Assistant Prof. Dr. Özlem KAYA

Kazakhstan Time: 13:00-15:30 Italy Time: 09:00-11:30 Azerbaijan Time: 11:00-13:30 Romania Time: 09:00-11:30

Spain Time: 09:00-11:30 Australia Time: 17:00-19:30 Nigeria Time: 08:00-10:30 India Time: 12:30- 15:00

AUTHORS	AFFILIATION	TOPIC TITLE
Tengis KOPALIANI Shalva ZVIADADZE	Iv. Javakhishvili Tbilisi State University Gerorgia	The Variable Exponent Lebesguefunction Spaces Close To L^∞
Dr. Sacit SARIMURAT	TUBITAK Space Technologies Research Institute	Numerical Analysis Of The Offshore Wind Turbine Monopile Foundations
Assistant Prof. Dr. Givi NADIBAIDZE	Tbilisi State University	On The Mixed-Type (C , $-1 < \alpha < 0$, $\beta > 0$) Cesaro Summability Of Double Series With Respect To Block-Orthonormal Systems
Giorgi GOGNADZE	Iv. Javakhishvili Tbilisi State University	On The Asymptotic Estimation For General Dirichlet Integrals
Hamdi DAGISTANLI	MEV Izmir Bornova Science High School	From Blue Phosphorene to Graphene: Electronic Band Structure Calculations
Dr. Sera İFLAZOĞLU	Middle East Technical University	Synthesis Of Calcium Tetraborate Compound By Different Methods And Investigation Of Photoluminescence Properties
Prof. Dr. Ana DANDELIA	Tbilisi State University	On The Intersection Of Embedded Sets
Teimuraz AKHOBADZE Shalva ZVIADADZE	Iv. Javakhishvili Tbilisi State University	On Classes Of Generalized Bounded Variations
Koba IVANADZE Teimuraz AKHOBADZE	Iv. Javakhishvili Tbilisi State University	On Salem Test For General Dirichlet Integrals
Dr. Furkan ÖZDEMİR	Siirt University	Examining Mathematical Thinking Levels Of Pre-Service Mathematics Teachers According To Various Variables
Dr. Noureddine BOUTERA AA	University of Oran1, Ahmed Benbella.Algeria	Boundedness And Stability For Generalized Schrödinger Equation



24.04.2021

SESSION-1 HALL -2

MODERATOR: Dr. Mehmet TURAN

Kazakhstan Time: **13:00-15:30** Italy Time: **09:00-11:30** Azerbaijan Time: **11:00-13:30**

Romania Time: **09:00-11:30** Spain Time: **09:00-11:30** Australia Time: **17:00-19:30**

Nigeria Time: **08:00-10:30** India Time: **12:30- 15:00** Bangladesh Time: **13:00-15:30** Iran Time: **11:30-14:00**

AUTHORS	AFFILIATION	TOPIC TITLE
Prof. Dr. Şerife BÜYÜKKÖSE Mustafa Serkan SINMAZ	Gazi University/ Şizofreni Dernekleri Federasyonu	From Schizophrenia To Mathematics
Ezgi ARSLAN	İstanbul University	The Association Between Alzheimer Disease And Microbiota
Fatma Zeynep YILMAZ Assoc. Prof. Dr. Ayşe Güneş BAYIR	Bezmialem Vakif University	The Relationship Of Antioxidant Vitamins And Minerals With The Immune System
Dr. Mehmet TURAN	Boğazici University	AI For Anticipating Potential Complications After Organ Transplantation
Barbare UGULAVA Naili SHAVSHISHVILI Nino JALAGHONIA	Ivane Javakhishvili Tbilisi State University	The Influence Of Silver Nanoparticles MadeIn Chitosan Area On MMP-9 In Experimental Models Of Chronic Bronchitis
Saleha BİBİ	Army Special Education Academy Rawalpindi	Eating Patterns Of Children With Autism Spectrum Disorders
Saleha BİBİ	Army Special Education Academy Rawalpindi	Link Between Down Syndrome And Intellectual Disability: A Mini Review
Dr. Erdal GÜNGÖR	Batman Eğitim ve Araştırma Hastanesi	Comparison of Short-Term Result of Percutaneous Pinning Surgery and Open Reduction Internal Fixation with Lateral Approach in Gartland Type-3 Supracondylar Fractures
Uzm. Dr. Zeynep KARAKUZU GÜNGÖR	Batman Eğitim ve Araştırma Hastanesi	Comparison of the Efficacy of Vacuum Interferential Current Therapy and Classical TENS Application in the Treatment of Knee Osteoarthritis



24.04.2021

SESSION-2 HALL -1

MODERATOR: Assistant Prof. Dr. Özlem KAYA

Kazakhstan Time: **16:00-18:30** Italy Time: **12:00-14:30** Azerbaijan Time: **14:00-16:30**

Romania Time: **12:00-14:30** Spain Time: **12:00-14:30** Australia Time: **20:00-22:30**

Nigeria Time: **11:00-13:30** India Time: **15:30- 18:00** Bangladesh Time: **16:00-18:30** Iran Time: **14:30-17:00**

AUTHORS	AFFILIATION	TOPIC TITLE
Neşe ORMANCI Saima TASNEEM Tuğba Büşra ÇALIŞKAN	KKTC Girne Amerikan Üniversitesi	Comparison Of Nutrition Related Knowledge and Practices Of Pre-School Teachers And Mothers; A Case Of North Cyprus
Prof. Dr. Nana JINCHARADZE	European University Georgia	Challenges For Physicians And Managers Providing Antenatal Care Services
Assist. Prof. Dr. İşıl AYDEMİR	Niğde Ömer Halisdemir Üniversitesi	Determination Of Cytotoxic Effect Of Oleocanthal On MCF-7 Breast Cancer Cells
POPESCU Darius-Liviu IONESCU Mihail-Leonard	State University of Physical Education and Sport, Chisinau, Republic of Moldova/ Romanian-American University	Physical And Psychopedagogical Recovery Of Martial Arts Trauma
Assist. Prof. Dr. Okan ÖZBAKIR	Iğdır University	Social and Economic Sustainability After Mining Operations and The Sample of Tuzluca Rock Salt Mine Therapy Center for Health Tourism
Damla ENVERGİL	KKTC Sağlık Bakanlığı	The Effects of the Psychological Contract Perception on Organisational Trust, Organisational Identification and Organisational Citizenship Behaviour on Health Employees
Ayşe KAYAN Fatih SEVGİ Gizem TURKKAN	Selçuk University	Investigation Of Antibacterial And Antibiofilm Activities Of Some Iron Oxide Nanoparticles



24.04.2021

SESSION-2 HALL-2

MODERATOR: Assoc. Prof. Sevcan YILDIZ

Kazakhstan Time: 18:30-21:30 Italy Time: 14:30-17:00 Azerbaijan Time: 16:30-19:00
Romania Time: 14:30-17:00 Spain Time: 14:30-17:00 Australia Time: 22:30 -01:00 Nigeria Time: 13:30-16:00
India Time: 18:00-20:30 Bangladesh Time: 18:30-21:00 Iran Time: 17:00-19:30 Kosova Time: 16:30-19:30
Pakistan Time: 17:30-20:00 KKTC Time: 15:30-18:00

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Bilal ÜSTÜN	Nevşehir Hacı Bektaş Veli University	The Opinions Of The Students In The Preparatory Class For German Language Teaching On The Listening Comprehension Classes In Distance Learning
Leila MORSALI Assist. Prof. Dr. Siros IZADPANAH Ali SHAHNAVAZ	Islamic Azad University, Zanjan, Iran	The impact of pronunciation learning strategies on Iranian EFL learners
Nikoo DAVARPANAH	Islamic Azad University, Zanjan, Iran	The Relationship Between the EFL Learners' Interpersonal Intelligence, the Frequency and Types of Informal Fallacy and Evidence in Argumentative Writing
Dr. KOVÁCS Gabriella	Sapientia Hungarian University of Transylvania Romania	Target Language Culture In Elt
Lecturer, PhD Irina-Ana DROBOT	Technical University of Civil Engineering Bucharest	Graham Swift's Novels' Titles Shared With Songs
Senior Lecturer Alan R. LÍBERT	University of Newcastle Australia	Skiing Vocabulary In Artificial Auxiliary Languages
Masoumeh IZADPANAH SOLTANABADI Assist. Prof. Dr. Siros IZADPANAH	Islamic Azad University, Zanjan, Iran	The Effect of Flipped Classroom: In Case of Vocabulary Recall and Retention Among Iranian Elementary EFL Learners
Berfay ERDOĞAN	Ankara Yıldırım Beyazıt University	A Study In Understanding The Saving Behavior: Frugality And Materialistic Behavior Of College Students
Assoc. Prof. Dr. Sevcan YILDIZ Esra KARLIOVA SOYSAL	Akdeniz University	An Investigation On The Relationship Of Intangible Cultural Heritage And Soft Power: The Epic And Its Effects On International Relations
Haleh MASHHADLOU Assist. Prof. Dr. Siros IZADPANAH	Islamic Azad University, Zanjan, Iran	Designing an Educational Performance Evaluation for Iranian English Teachers: Performance of Teachers Based on Their Gender Differences and Teaching Experience
Associate Professor Victoria ROCACIU	Institute of Cultural Heritage of MECC, Chisinau	The Artistic Value Of Various Graphic Approaches Of „The Little Purse With Two Half-Pennies” Story By Ion Creanga
Dr. Iosefina BLAZSANI-BATTO	Azerbaijan University / Romanian Language Institute, Bucharest, Romania	Romanian Lectureship In Baku – A Result Of Cultural Cooperation In The Framework Of Eastern Partnership



24.04.2021
SATURDAY/15:30-18:00

SESSION-3 HALL-1

MODERATOR: Prof. Dr. Gülcin YAHYA KAÇAR

Kazakhstan Time: 18:30-21:30 Italy Time: 14:30-17:00 Azerbaijan Time: 16:30-19:00

Romania Time: 14:30-17:00 Spain Time: 14:30-17:00 Australia Time: 22:30 -01:00 Nigeria Time: 13:30-16:00 India Time: 18:00-20:30 Bangladesh Time: 18:30-21:00 Iran Time: 17:00-19:30 Kosova Time: 16:30-19:30 Pakistan Time: 17:30-20:00 KKTC Time: 15:30-18:00

AUTHORS	AFFILIATION	TOPIC TITLE
ABDULKADIR Sani Mohammad Ahmad IBRAHİM Usman Mohammad GİDADO Sani Inusa MILALA	Abubakar Tafawa Balewa University Bauchi,Nigeria	Appraisal Of Adoption Of Sustainable Construction Material Waste Management By Construction Firm In Nassarawa State
Lec. Dr. Hakan YÜKSEL	Kafkas University	The Reading In The Context Of 'Vatan Newspaper' To Transition Virtual Journalism In Turkey
Assist. Prof. Dr. Siros IZADPANAH Abbas BIGLARY	Islamic Azad University, Zanjan, Iran	The Effect of Portfolio Assessment on Iranian EFL leaners' Autonomy and Writing Skills in Upper Intermediate and Advanced levels
Vlad Lim	Nazarbayev University, Kazakhstan	Causes Of Ethnic Clashes In Kazakhstan
Prof. Dr. Gülcin YAHYA KAÇAR	Ankara Haci Bayram Veli University	Musical Depiction In The Instrument Compositions Of Turkish Music
Burak TEZCAN Dr. Serap Mungan AY	Marmara University	Üniversiteli Sporcuların E-Spor Bilgi Düzeylerinin Araştırılması
Maryam Esmaeil NEJAD Assist. Prof. Dr. Siros IZADPANAH Assist. Prof. Dr. Behzad RAHBAR	Islamic Azad University, Zanjan, Iran	The Mediating Role of Critical Thinking in the Relationship between EFL Learners' Writing Performance and their Language Learning Strategies
Assist. Prof. Dr. Özlem KAYA	Hittit University	The Change Of The Perception Of Luxury In Fashion
Dr. Alexandru CHİSELEV	Institutul de Cercetări Eco-Muzeale „Gavrilă Simion” Tulcea - Muzeul de Etnografie și Artă Populară Romania	<i>Hidurlez/ Qırırlız</i> at the Turkic communities from Northern Dobrudja (Romania). Traditional and contemporary aspects
Elahe TAHİRİ Assist. Prof. Dr. Siros IZADPANAH Mohammad Reza OROJİ	Islamic Azad University, Zanjan, Iran	The Relationship between Intermediate EFL Learners' Reading Comprehension Performance and their Cognitive and Meta-Cognitive Strategies as well as Test Anxiety
Dr. Gabriela BOANGIU	Institute for Socio-Human Researches Romanian Academy	Identity Value Of The Romanian Popular Costume Promoted By The Romanian Royal House
Masoud SADEGHİ Assist. Prof. Dr. Siros IZADPANAH	Islamic Azad University, Zanjan, Iran	Barriers İn Teaching Reading To ELLs And Ways Of Overcoming Those Obstacles



24.04.2021

SESSION-3 HALL-2

MODERATOR: Assist. Prof. Dr. Mücahit ÇAYIN

Kazakhstan Time: 18:30-21:30 Italy Time: 14:30-17:00 Azerbaijan Time: 16:30-19:00
Romania Time: 14:30-17:00 Spain Time: 14:30-17:00 Australia Time: 22:30 -01:00 Nigeria Time: 13:30-16:00
India Time: 18:00-20:30 Bangladesh Time: 18:30-21:00 Iran Time: 17:00-19:30 Kosova Time: 16:30-19:30
Pakistan Time: 17:30-20:00 KKTC Time: 15:30-18:00

AUTHORS	AFFILIATION	TOPIC TITLE
Zaur AGHAKISHIYEV	Azerbaijan State Economic University (UNEC)	Domestic Policy Reforms Of Azerbaijan In Covid 19 Situation
Lec. Dr. Ömer Nasuhi ŞAHİN M. Alper GÜRBÜZ	Yalova University	Various Methods In Healthcare Financing And Some Public Private-Partnership (PPP) Sectors Applications Comparison In OECD Countries
Hugo Padrón-Ávila	Universidad de la Laguna	Economic impact of COVID-19 in tourism Regions in Spain
Nigar ASGAROVA	Azerbaijan CooperationUniversity	British Factor In An Arabian Revolt Against The Ottoman Empire In 1916
Assist. Prof. Dr. Mücahit ÇAYIN	Batman University	The Effect Of Covid-19 Epidemic On Regional Macroeconomic Indicators: The Case Of TRC3
Valentina TREGUA Luca BUONOCORE Marianna della VOLPE Monica PROCOPI	University of Naples Federico II Italy	Services And Students During The Pandemic
Dr. Yadulla Mehriban Yadulla Abdullazada ULKAR	Baku State University	National Economy And Its Theoretical Evolution Levels
Mohammed R. MATAR	İstanbul Aydin Universty	Critical Discourse Analysis of Donald Trump's Letter to Recep Tayyib Erdogan; Van Dijk's Ideological Squaring
Chief Assist. Prof. Stefan KALPACHEV	University of Economics-Varna	The Contextualized Model For Career Counseling As A Better Way To Meet The Challenges Of The Recent Work World Situation



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24-25 APRIL 2021

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PAPER FROM TURKEY: 43



25.04.2021

SESSION-1 HALL-1

MODERATOR: Assoc. Prof. Dr. Aliye AKIN

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Romania Time: **14:30-17:00** Spain Time: **14:30-17:00** Australia Time: **22:30 -01:00** Nigeria Time: **13:30-16:00**
India Time: **18:00-20:30** Bangladesh Time: **18:30-21:00** Iran Time: **17:00-19:30** Kosova Time: **16:30-19:30**
Pakistan Time: **17:30-20:00** KKTC Time: **15:30-18:00**

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Resarc. Assist.Fatmanur ALSANCAK	Sakarya University	Occupational Social Work As A Field Of Practice In The Relationship Of Depression And Workplace
Ferhat ATAKUL Assoc. Prof. Dr. Dilek ÖZTAŞ Assist. Prof. Dr. Abdullah YILDIZBAŞI Prof. Dr. Ergun ERASLAN	Ankara Yıldırım Beyazıt University	Advantages And Disadvantages Of Welding Types In The Scope Of Occupational Health And Safety
Seniha Yakut GÜLER	Ankara Yıldırım Beyazıt University	In Terms Of Occupational Health And Safety Problems Of Household Working Investigation : Case Of Ankara
Muhammet Mustafa POLAT Assoc. Prof. Dr. Dilek ÖZTAŞ Assist. Prof. Dr. Abdullah YILDIZBAŞI Prof. Dr. Ergun ERASLAN	Ankara Yıldırım Beyazıt University	Health Surveillance In Welding Works In Closed Areas
ŞCHİOPU Gabriel	State University of Physical Education and Sport, Chisinau, Republic of Moldova	Contemporary Requirements For The Professional Training Of Police Officers
Vlad Lim	Nazarbayev University, Kazakhstan	Turkey and the Middle East How can we explain the animosity between Ankara and Riyadh and friendship between Ankara and Doha?
Assoc. Prof. Dr. Aliye AKIN Lec. Adnan AKIN	Bolu Abant İzzet Baysal University	Otel İşletmelerinde Pandemiye Karşı Alınan Önlemler



25.04.2021

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MODERATOR: Assoc. Prof. Dr. İbrahim Berkan AYDILEK

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Romania Time: **14:30-17:00** Spain Time: **14:30-17:00** Australia Time: **22:30 -01:00** Nigeria Time: **13:30-16:00**
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Dr. Kim. Ayşe UĞUR	Pamukkale University	Qualification Of Magistral (Or In-House Or Small Scale) Radiopharmaceutical Production Equipment
Mustafa ACAR Hasan Burak KETMEN Dr. Barış BULUT	Enforma Bilişim A.Ş.	Predictive Maintenance In Wind Power Plants
Erhan AKAGÜNDÜZ Assoc. Prof. Dr. İbrahim Berkan AYDILEK	Harran University	Nesne Takip Sisteminde Güvenli Bölge Oluşturulmasının Nesnelerin İnterneti Tabanlı Gerçekleştirilmesi
Özkan AYDIN	Osmaniye Korkut Ata University	Methylene Blue Adsorption With Bio-Carbon From Peanut Shell
Ahmet ÇİFTÇİ M. Fatih TÜYSÜZ	Harran University	A Research On The Use Of Smart Wristbands İn Wearable Technologies
Dr. Md. Iqbal HOSSAIN	Bangladesh University	Cleaner Production: A Tool for Sustainable Development in Bangladesh
Jafar RAHMATI	Bangladesh University	A Meta-analysis on Educational Technology in English Language Teaching in Iran
Resarc. Assist. Umutcan POLAT Assist. Prof. Dr. Deniz YILDIRIM	İstanbul Technical University	Active Power Control In Single Phase Grid Connected Inverters Used In Photovoltaic Systems
Turgut Vatan TOSUN Hayrullah AGAÇCIOĞLU	Yıldız Teknik University	Hydraulic Analysis Of River Crossing Road Network
Dr. Yasin Onuralp ÖZKILIÇ	Necmettin Erbakan University	Numerical Investigation Of Replaceable Reduced Beam Section With Weak Beam Splice



25.04.2021

SESSION-2 HALL-1

MODERATOR: Assist. Prof. Dr. Çınar NARTER

Kazakhstan Time: **18:30-21:30** Italy Time: **14:30-17:00** Azerbaijan Time: **16:30-19:00**
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AUTHORS	AFFILIATION	TOPIC TITLE
MUD, PhD Sahand LOTFİ	Shiraz University, Iran	Recyclable Building Stock Inventory Model (RBS) and the Role of Adaptive Reuse in a more Efficient Circular Economy
Hamza USMAN Shuaibu H. MANGA Sani ADAMU Sani Inusa MILALA	Abubakar Tafawa Balewa University Bauchi, Bauchi State Nigeria	Modeling Residential Rental Value In Bauchi Metropolis Using Hedonic Pricing Model
Askar AİMUKATOV	Aktobe Regional University, Kazakhstan	Geometric Modeling In A Computer Science Course
PhD. Muhammad Umar BELLO Mohammed Ishaq MOHAMMED Maryam Salihu MUHAMMAD	Abubakar Tafawa Balewa University, Bauchi, Nigeria	Impact of Town Planning Regulations on Residential Property Value in Bauchi Metropolis, Nigeria
PhD. Muhammad Umar BELLO Kalu Joseph UFERE Akaehomhen Okoeguale Natty Ojeniyi Suleiman Adekunle	Abubakar Tafawa Balewa University, Bauchi, Nigeria	The Provision And Performance Of Facilities Management Services In Specialist Hospital Bauchi
Assist. Prof. Dr. Çınar NARTER	İstanbul Ticaret University	Model Yapımı Yoluyla Tasarım İletişimi: Tasarım Eğitiminde Fiziksel Modellerin Sınıflandırılması
Dr. Mehmet Sinan YUM	İstanbul Ticaret University	Yaratıcı Disiplinlerde Tasarım Portfolyolarına Ait Özelliklerin İncelenmesi
Dr. Sadik MEHMETİ Mr. Sc.Valon SHKODRA	Institute of Albanology – Prishtina/Kosovo	Cultural Heritage Of Prishtina-Kosovo

25.04.2021 SESSION-2 HALL-2 MODERATOR: Assoc. Prof. Dr. Hülya BALKAYA
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AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Hülya BALKAYA	Atatürk University	Distribution Of The Nervus Ischiadicus In Hasmer Sheep Breed
T. GABISONIA M. LOLADZE N. CHAKHUNASHVILI N. TAMARASHVILI T. KATAMADZE	G. Eliava Institute Tbilisi, Georgia	The Use of Bacteriophages for Decontamination of Experimentally Contaminated Chicken Breast Meat
Res. Assist. Yıldız ATEŞ Prof. Dr. Abdullah YEŞİLOVA Res. Assist. Güneş AÇIKGÖZ	Hakkari University/ Yuzuncu Yıl University/ Hatay Mustafa Kemal University	Statistical Classification Of Life Satisfaction Criteria
Prof. Dr. Abdullah YEŞİLOVA Eylem ŞİMŞEK Res. Assist. Güneş AÇIKGÖZ	Yuzuncu Yıl University/ Hatay Mustafa Kemal University	Analysis Of Students' Exam Success Using The Log-Linear Model
TOJO Jose	Bharathiar University, Coimbatore, Tamil Nadu, India;	Tribals In Kerala: Interrelationships With Indigenous Plants
Assist. Prof. Dr. Serpil ODABAŞI Serdar KOYUNCUOĞLU	Çanakkale Onsekiz Mart University/ Republic of Turkey Ministry of Agriculture and Forestry	Research on the Diversity and distribution of freshwater Oligochaeta of Susurluk Basin (Northwestern-Turkey)
Dr. Onur ERZURUM	Selcuk University	Some Biometric Identification Methods Used In Animals
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THE VARIABLE EXPONENT LEBESGUE FUNCTION SPACES CLOSE TO L^∞ **Tengis KOPALIANI**

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ABSTRACT

Recently Edmunds, Gogatishvili and Kopaliani [EGK] show that there is a variable exponent space , with a.e., which has in common with the property that the space of continuous functions on $[0; 1]$ is a closed linear subspace in it. Moreover, both the Kolmogorov and the Marcinkiewicz examples of functions with a.e. divergence Fourier series belong to, where is a conjugate function of .

It is interesting to some ways characterize such exponents for which the space of continuous functions is closed in corresponding variable Lebesgue space. We give a necessary and sufficient condition on the decreasing rearrangement of the exponent for existence of equimeasurable exponent function of whose corresponding variable Lebesgue space has the property that the space of continuous functions is closed in it.

Let denote set of all functions equimeasurable with. Below we will state the conditions on the function for which exists such that the space continuous functions is closed subspace in.

Particularly we prove the following

Theorem. For the existence of for which is closed subspace in it is necessary and sufficient that.

[EGK] D. Edmunds, A. Gogatishvili, T. Kopaliani, Construction of function spaces close to with associate space close to , J. Fourier Anal. Appl. (2017), <https://doi.org/10.1007/s00041-017-9574-2>.

NUMERICAL ANALYSIS OF THE OFFSHORE WIND TURBINE MONOPILE FOUNDATIONS

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ABSTRACT

With the rapid development of wind energy technology, offshore wind energy has become the focal point of the world's renewable energy development. For these structures, besides the static loads of the main body of the turbine, the combined action of the horizontal repetitive loads created by waves and wind, and the moments created by these loads should also be taken into account. It is of great importance that these repeated loads are accurately reflected on the structure. One of the most critical components of offshore wind turbines is their foundations. Because of these complex loads and nonlinear soil behavior, the interaction of wind turbine foundations with the soil cannot be accurately defined by the present calculation methods. Therefore, researches conducted with different methods are of great importance. In this study, numerical analyzes of monopiles, commonly used for offshore wind turbine foundations, were performed. Within the scope of the study, three-dimensional finite element models were created for a monopile foundation. The pore water pressures and liquefaction potentials under the mentioned static and dynamic loads have been investigated for saturated sandy soil of the seabed where monopiles are applied. Liquefaction was observed in the analyzes due to the high pore water pressure as the large repeated loads continued. This effect decreased in the model created with dense sand ($D_r = 0,90$) but liquefaction was observed in the continuation of repeated loads for this model as well. The effect of the soil hydraulic conductivity value was also examined in the scope of this study, and analyzes were made for two models with different hydraulic conductivity values. By comparing the results of the two analyzes, it has been proven that the increase in the hydraulic conductivity value decreases the pore pressure formation and liquefaction risk in the saturated sandy soil of the seabed.

Keywords: Offshore wind turbines, Wind energy, Single pile foundation, Pore water pressure, Liquefaction, Hypoplastic material model

ON THE MIXED-TYPE ($C, -1 < \alpha < 0, \beta > 0$) CESARO SUMMABILITY OF DOUBLE SERIES WITH RESPECT TO BLOCK-ORTHONORMAL SYSTEMS

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ABSTRACT

Below a question related to the almost everywhere summability by ($C, -1 < \alpha < 0, \beta > 0$) methods of double series with respect to block-orthonormal systems are considered. Let $\{M_k\}$ and $\{N_k\}$ be increasing sequences of natural numbers and $\Delta_{p,q} = (M_p, M_{p+1}] \times (N_q, N_{q+1}], (p, q \geq 1)$. Let $\{\varphi_{mn}\}$ be a system of functions from $L^2(0,1)^2$. The system $\{\varphi_{mn}\}$ will be called a $\Delta_{p,q}$ -orthonormal system if $\|\varphi_{mn}\|_2 = 1, m=1,2,\dots, n=1,2,\dots$ and $(\varphi_{ij}, \varphi_{kl}) = 0, \text{ for } (i,j), (k,l) \in \Delta_{p,q}, (i,j) \neq (k,l), (p,q \geq 1)$. The notion of block-orthonormal system was introduced by Móricz. In [NAD] we obtained a two-dimensional analogue of Kaczmarz' and Móricz' theorems on the a.e. summability by the methods $(C,1,1)$ ($(C,1,0)$ or $(C,0,1)$) of double series with respect to block-orthonormal systems. Statements connected with the $(C, -1 < \alpha < 0, \beta = 1)$ almost everywhere

3

summability of series $\sum_{m,n=1}^{\infty} a_{mn} \varphi_{mn}(x, y)$ with respect to $\Delta_{p,q}$ -orthonormal system $\{\varphi_{mn}\}$ be given. It is stated the conditions on the sequences $\{M_k\}$ and $\{N_k\}$, when the condition $\sum_{m,n=1}^{\infty} a_{mn}^2 m^{-2\alpha} (\ln \ln(n+2))^2 < \infty$ guarantees the $(C, -1 < \alpha < 0, 1)$ almost everywhere summability of corresponding block-orthogonal series.

[NAD] Nadibaidze G.: On the summability by Cesáro methods of double series with respect to block-orthonormal systems. Analysis Mathematica, 38 (2012), №3, 203-226.

ON THE ASYMPTOTIC ESTIMATION FOR GENERAL DIRICHLET INTEGRALS

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ABSTRACT

Let f be a continuous 2π periodic function and let

$$S_n(f; x) = \frac{a_0}{2} + \sum_{k=1}^n (a_k \cos kx + b_k \sin kx)$$

be a partial sums of Fourier series of f . For a modulus of continuity ω denote by $H_\omega[a, b]$ class of functions f with property $|f(x) - f(x')| \leq \omega(|x - x'|)$, $x, x' \in [a, b]$. N.P. Korneichuk [1] received the estimation of the following value (it was named as Korneichuk-Stechkin lemma):

$$(1) \quad \sup_{f \in H_\omega[a, b]} \left| \int_a^b f(t) \psi(t) dt \right|,$$

where ψ is an integrable function with the average mean 0 on $[a, b]$. In addition, sign of ψ on (a, c) , $a < c < b$, maintained almost everywhere. The estimation (1) for a convex modulus of continuity ω is exact and explicitly given. Based on the above Korneichuk-Stechkin lemma [1], A.I. Stepanets [2] proved the following

THEOREM (Stepanets). For any ω modulus of continuity

$$(2) \quad \varepsilon(H_\omega; S_n) \leq \frac{2}{\pi^2} \ln n \int_0^{\frac{\pi}{2}} \omega\left(\frac{4t}{2n+1}\right) \sin t dt + O\left(\omega\left(\frac{1}{n}\right)\right),$$

where

$$\varepsilon(H_\omega; S_n) \stackrel{\text{def}}{=} \sup_{f \in H_\omega} \|S_n(f; x) - f(x)\|_C.$$

For a convex continuous function ω inequality (2) becomes the equality.

In 1974 Taberski [3] considered the following quantities:

$$a'_k = \frac{1}{l} \int_{-l}^l f(t) \cos k\pi t / l dt, \quad b'_k = \frac{1}{l} \int_{-l}^l f(t) \sin k\pi t / l dt,$$

$$S'_n(f; x) = a_0 / 2 + \sum_{k=1}^n (a'_k \cos k\pi x / l + b'_k \sin k\pi x / l),$$

where f is a locally integrable function on $x \in (-\infty, \infty)$, $l > 0$, and $n = 1, 2, 3, \dots$. The last sum can be represented by Dirichlets integrals as follows

$$S'_n(x; f) = \frac{1}{l} \int_{-l}^l f(u) D_n^l(u - x) du,$$

where

$$D_n^l(t) = \frac{\sin((2n+1)\pi t / 2l)}{2 \sin(\pi t / 2l)}.$$

Let f be an uniformly continuous function on R . We say that $f \in H_\omega$ if for each $t_1, t_2 \in R$

$|f(t_1) - f(t_2)| \leq \omega(|t_1 - t_2|)$, where ω is a modulus of continuity. Suppose

$$\varepsilon(H_\omega; S_n^l) \stackrel{\text{def}}{=} \sup_{f \in H_\omega} \|S_n^l(f; x) - f(x)\|_C.$$

The analogy of Stepanet's [2] statement for the general Dirichlet integrals is true.

THEOREM. For any modulus of continuity ω

$$\varepsilon(H_\omega, S_n^l) \leq \frac{2}{\pi^2} \ln n \int_0^{\frac{\pi}{2}} \omega\left(\frac{4lt}{(2n+1)\pi}\right) \sin t dt + O\left(\omega\left(\frac{l}{n}\right)\right).$$

In the case when ω is a convex continuous function the last inequality becomes the equality.

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FROM BLUE PHOSPHORENE TO GRAPHENE: ELECTRONIC BAND STRUCTURE CALCULATIONS

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ABSTRACT

Blue phosphorene is a graphene-like phosphorous nanosheet, which was synthesized for the first time in 2016. Two-dimensional (2D) materials (such as graphene and phosphorene) have attracted attention due to their attractive properties, which may be beneficial for applications in nanoelectronic devices. It is predicted to be a new type of 2D semiconductor material, called blue phosphorene, which has received extensive research interest due to its outstanding properties such as a considerable band gap and ultrahigh mobility. It has also solved its potential applications as superconductors and thermoelectric materials.

Graphene is an isolated monolayer of carbon hexagons, composed of sp² hybridized C-C bonds with a cloud of π electrons. From an engineering point of view, flakes composed of several layers of carbon atoms (including single-layer graphene) may be very important because of their interesting structure and physical properties.

The band gap of PC monolayer can be solved by chemical composition (P_xC_{1-x} , x is in the range of 0-0,875).

In this work, I used the first principles based on density functional theory to systematically study the effect of C atoms on the chemical functionalization of the structure and electronic structure of the blue phosphorous monolayer. In order to simulate the C-substituted atom system, the ground state is converted to P atoms, a 2 * 2 unit super-cell is used in the blue phosphene, and the vacuum gap is set to 20 Å, and a 12 * 12 * 1 Monkhorst-Pack k-grid is used for the cloth sampling by Brillouin zone is in relaxation, static and density of states (DOS) calculations. The energy convergence criterion between successive iterations applies to 10E-8 eV. All the calculations in this study were carried out by using Quantum Espresso.

Taking into account the energy band structure, it is well known that graphene is a semi-metal, and blue phosphorene has a direct band gap semiconductor. The meta structures P_xC_{1-x} act as indirect semiconductors, some of which act as conductors.

Keywords: Graphene, blue-phosphorene, density functional theory, adatom, electronic structure.

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FOSFOREN' DEN GRAFEN' E : ELEKTRONİK BANT YAPISI HESAPLARI

ÖZET

Mavi fosforen, 2016 yılında sentezlenen ilk grafen benzeri fosfor nano katmandır. İki boyutlu (2D) malzemeler (grafen ve fosforen gibi), nanoelektronik cihazlardaki uygulamalar için çok yararlı olabilecek çekici özelliklerinden dolayı dikkat çekmiştir. Bunun, önemli bir bant aralığı ve çok yüksek mobilite gibi olağanüstü özelliklerinden dolayı kapsamlı araştırma ilgisi çeken mavi fosforen adı verilen yeni bir 2D yarı iletken malzeme türü olduğu tahmin edilmektedir. Ayrıca, süper iletkenler ve termoelektrik malzemeler olarak potansiyel uygulamalarına da çözüm sunmaktadır.

Grafen, sp₂ hibridize C-C bağlarından ve bir π elektron bulutundan oluşan, karbon altigenlerin izole edilmiş bir tek tabakasıdır. Mühendislik açısından bakıldığından, karbon atomlarından (tek katmanlı grafen dahil) oluşan katmanlar, ilginç yapıları ve fiziksel özellikleri nedeniyle çok önemli olabilir.

PC tek tabakasının bant boşluğu kimyasal bileşimle çözülebilir (P_xC_{1-x} , x: 0-0,875 aralığındadır). Bu çalışmada, C atomlarının mavi fosforen tek tabaklı yapının ve elektronik yapının kimyasal işlevselleştirilmesi üzerindeki etkisini sistematik olarak incelemek için yoğunluk fonksiyonel teorisine kullanılmıştır. C ile değiştirilen atomik sistemi simüle edilmiş, mavi fosforende (2 * 2) hücreli süper hücreler kullanılmış ve vakum aralığını 20 Å ve Monkhorst-Pack' k-noktaları 12 * 12 * 1 alınarak Brillouin bölgesinde hücre parametreleri, statik ve durum yoğunluğu (DOS) hesaplamaları kullanılmıştır. Ardışık yinelemeler arasındaki enerji yakınsama kriteri 10E-8 eV için geçerlidir. Bu çalışmadaki tüm hesaplar Quantum Espresso kullanılarak yapılmıştır.

Enerji bandı yapısı göz önüne alındığında, grafenin bir yarı metal olduğu ve mavi fosforenin doğrudan bir bant aralığı yarı iletkenine sahip olduğu iyi bilinmektedir. P_xC_{1-x} meta yapıları, bazıları iletken görevi gören dolaylı yarı iletkenler olarak işlev görmektedir.

Anahtar Kelimeler: Graphen, mavi-fosforen, yoğunluk fonksiyon teorisi, elektronik yapı.

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SYNTHESIS OF CALCIUM TETRABORATE COMPOUND BY DIFFERENT METHODS AND INVESTIGATION OF PHOTOLUMINESCENCE PROPERTIES

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ABSTRACT

In this study, calcium tetraborate (CaB_4O_7) phosphors were synthesized by different methods. CaB_4O_7 compounds were produced with microwave assisted solid state synthesis method, high temperature solid state synthesis method and solution-assisted method. Crystal structure, morphology, vibrational band modes, thermal behavior and photoluminescence properties of synthesized compounds were characterized by X-ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Differential Thermal Analysis (DTA), Thermogravimetric Analysis (TGA), Fourier Transform Infrared Spectroscopy (FT-IR) and Fluorescence spectrometers, respectively. The colors of compounds were detected with CIE 1931 color space chromaticity coordinates. Highest luminescence intensities were obtained from compounds synthesized by microwave assisted solid state synthesis method.

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Keywords: Calcium tetraborate, Photoluminescence, Synthesis Techniques

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ON THE INTERSECTION OF EMBEDDED SETS

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ABSTRACT

To consider the intersection of embedded bounded closed sets in Infinite-dimensional Banach spaces the numerical parameter was introduced earlier and was defined the concept of critical value of this parameter for individual Banach spaces. In the present talk we prove that in Banach space in which every bounded set has Chebyshev centre the intersection of embedded sets is nonempty for the critical case of parameter. This result covers all known results about nonemptiness of the intersection in critical case. We also partially answer the question posed in the paper [ChP], where was shown that is a "good" critical number for the reflexive spaces, i.e., the intersection of embedded bounded closed sets in reflexive space is non empty for the critical case of parameter and was asked if it is "good" for dual spaces? We prove that answer is affirmative, if the Banach space is dual of space which contains no subspace isomorphic to .

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ON CLASSES OF GENERALIZED BOUNDED VARIATIONS

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ABSTRACT

The notion of function of bounded variation was introduced by Jordan [1]. It's turned out that the class of functions of bounded variation is highly important for mathematics. After Jordan many authors studied various classes of functions of bounded variation.

In [2] we introduced the notion of a class of functions $BV(p(n) \uparrow p, \varphi)$.

Let φ ($\varphi(1) \geq 2$, $\lim_{n \rightarrow +\infty} \varphi(n) = +\infty$) be an increasing sequence and denote

$$\tau(t) := \min\{m : m \in \mathbb{N}, \varphi(m) \geq t, t \geq 2\}.$$

Let f be a finite 2π -periodic function defined on the interval $(-\infty, +\infty)$. Δ is said to be a partition with period 2π if there is a set of points t_i for which

$$\dots < t_{-1} < t_0 < t_1 < \dots < t_m < t_{m+1} < \dots,$$

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and $t_{k+m} = t_k + 2\pi$, where $k = 0, \pm 1, \pm 2, \dots$, m is any natural number. Let $p(n)$ be an increasing sequence such that $1 \leq p(n) \uparrow p$, $n \rightarrow \infty$, where $1 \leq p \leq +\infty$. We say that $f \in BV(p(n) \uparrow p, \varphi)$ if

$$V(p(n) \uparrow p, \varphi) = \sup_{n \geq 1} \sup_{\Delta} \left\{ \left(\sum_{k=1}^{\lceil \tau(p(n)) \rceil} |f(t_k) - f(t_{k-1})|^{p(n)} \right)^{1/p(n)}, \quad \rho(\Delta) \geq \frac{2\pi}{\varphi(n)} \right\},$$

$$\text{where } \rho(\Delta) = \min_k |t_k - t_{k-1}|.$$

If $p(n) = p$ for each natural number n , where $1 \leq p \leq +\infty$, then $BV(p(n) \uparrow p, \varphi)$ coincides with Wiener class BV_p . If $\varphi(n) = 2^n$, $n = 1, 2, \dots$, then $BV(p(n) \uparrow p, \varphi)$ coincides with $BV(p(n) \uparrow p)$ introduced by Kita and Yoneda [3].

We studied [4] more wider class $B\Lambda(p(n) \uparrow p, \varphi)$ then $BV(p(n) \uparrow p, \varphi)$ is.

DEFINITION. Let f be a measurable 2π -periodic function defined on $(-\infty, +\infty)$. Let $p(n)$ be an increasing sequence for which $1 \leq p(n) \uparrow p$, $n=1, 2, \dots$, where $1 \leq p \leq +\infty$. We say that $f \in B\Lambda(p(n) \uparrow p, \varphi)$ if

$$\Lambda(p(n) \uparrow p, \varphi) = \sup_n \sup_{h \geq 1/\varphi(m)} \left\{ \frac{1}{h} \int_0^{2\pi} |f(x+h) - f(x)|^{p(m)} dx \right\}^{\frac{1}{p(m)}} < +\infty.$$

If $f \in B\Lambda(p(n) \uparrow p, \varphi)$ then f is an essentially bounded. $BV(p(n) \uparrow p, \varphi) \subset B\Lambda(p(n) \uparrow p, \varphi)$. $B\Lambda(p(n) \uparrow p, \varphi)$ and L_∞ coincide iff $\left(\frac{1}{p(n)} \ln \varphi(n) \right)$ is bounded. If $\left(\frac{1}{p(n)} \ln \varphi(n) \right)$ is unbounded, then there exists a continuous function $f \in B\Lambda(p(n) \uparrow p, \varphi)$ such that $f \notin BV(p(n) \uparrow p, \varphi)$.

THEOREM. Let f be continuous 2π -periodic function from $B\Lambda(p(n) \uparrow p, \varphi)$ and

$$(1) \quad n^{-1/p \left(\tau \left(\frac{n}{\pi} \right) \right)} \ln n \rightarrow 0, \quad n \rightarrow +\infty,$$

then the trigonometric Fourier series converges uniformly.

Condition (1) cannot be weakened under the certain conditions on p and φ .

REMARK. The analogous statement is true for classes $BV(p(n) \uparrow p, \varphi)$.

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ON SALEM TEST FOR GENERAL DIRICHLET INTEGRALS

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ABSTRACT

For a locally integrable function and a positive number Taberski [1] considered sums where and The last sums can be represented by Dirichlet integrals as follows where We prove the analog of the Salem test and the analogues of the well-known Dini-Lipschits and Dini criterions .

Various results can be get for classes of generalized bounded variation, which were considered in [2, 3].

Particularly we prove the following

THEOREM. Let be a locally integrable function,

and

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where then

uniformly in

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EXAMINING MATHEMATICAL THINKING LEVELS OF PRE-SERVICE MATHEMATICS TEACHERS ACCORDING TO VARIOUS VARIABLES

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ABSTRACT

Mathematics is the only method of thinking in the eyes of mathematicians that leads people to absolute truth and clear knowledge (Yıldırım, 2004). Mathematical thinking; it is a dynamic process that increases complex ideas and expands understanding. (Mason, Burton & Stacey, 2010) The most basic feature that distinguishes mathematical thinking from other ways of thinking is that using the mathematical knowledge and concepts that the individual has previously learned, abstraction, prediction, generalization, hypothesising and testing, reasoning, proving and descriptions, new knowledge or reaching the concept (Alkan & Güzel, 2005). The aim of this study is to examine the mathematical thinking levels of pre-service elementary mathematics teachers according to various variables. In the study, scanning model was used based on quantitative research approach. Mathematical Thinking Scale developed by Ersoy and Başer (2013) was used as a data collection tool in the study. the working group of the study with 80 pre-service teachers in continuing their education at the elementary mathematics education department of a state university in the southeast of Turkey. According to the results of the study, it was determined that the mathematical thinking levels of the pre-service teachers were above the middle level. When the scores of mathematical thinking levels were examined, it was found that pre-service teachers did not differ according to their gender. Apart from this, it was also examined whether the mathematical thinking levels of the pre-service teachers vary according to their weighted grade point averages. In addition, the results obtained from the study were compared with the existing researches in the related literature and were discussed and suggestions were made to the researchers interested in the subject.

Keywords: Mathematics education, Mathematical thinking, Pre-service teachers.

1. INTRODUCTION

Mathematics is one of the most important tools in the development of thinking (Tural, 2005). Mathematics is the only method of thinking in the eyes of mathematicians that leads people to absolute truth and clear knowledge (Yıldırım, 2004). Mathematics education performs a more important function than teaching operations and providing computational skills in daily life, and provides important supports such as thinking, linking events, reasoning, making predictions,

problem solving that enable us to survive in the life war that is getting more and more complicated with each passing day (Umay, 2003). Mathematics is a field full of materials that can trigger the development of thinking ability, especially the ability to reason. This is because of the axiomatic feature of mathematics, which is deductive, which requires the ability to think and reason to understand it. Mathematics is a formation of mathematical thinking (Özden, 2020). Mathematical thinking is the use of mathematical techniques, concepts and processes in problem solving directly or indirectly (Henderson et al. 2002). The individual tries to solve problems in almost all of his / her daily life and needs mathematical thinking for this (Blitzer, 2003). Mathematical thinking enables people to make sense of events they encounter in their lives in a purposeful, systematic, correct, precise and shortest way (Sevgen, 2002). Mathematical thinking; it is a dynamic process that increases complex ideas and expands understanding. (Mason, Burton & Stacey, 2010) The most basic feature that distinguishes mathematical thinking from other ways of thinking is that using the mathematical knowledge and concepts that the individual has previously learned, abstraction, prediction, generalization, hypothesising and testing, reasoning, proving and descriptions, new knowledge or reaching the concept (Alkan & Güzel, 2005). In other words, mathematical thinking is a whole that includes processes such as making assumptions, reasoning, proving, abstracting, generalizing and working on special cases (Breen & O'Shea, 2010).

The purpose of study is to examining the mathematical thinking levels of pre-service elementary mathematics teachers according to various variables. For this purpose, answers to the following questions have been sought.

1. What is the mathematical thinking level of the pre-service teachers?
2. Does the level of mathematical thinking vary by gender?
3. Is there a relationship between mathematical thinking levels and grade point averages?

2. METHOD

2.1. RESEARCH MODEL

In this study, in which quantitative research approach was adopted, scanning model was used. Because in the scanning model, in a universe consisting of many elements, scanning is performed to make a general judgment about the universe, use the whole universe or a group, sample or sample taken from universe (Karasar, 2011).

2.2. RESEARCH GROUP

The study group consists of 34 male and 44 female, a total of 80 pre-service primary mathematics teachers. Study group continuing their education at the elementary mathematics education department of a state university in the southeast of Turkey.

2.3. DATA COLLECTION TOOL

Mathematical thinking scale: It was developed by Ersoy and Başer (2013) to measure the cognitive learning of the participants. The scale consists of 25 items (20 positive, 5 negative) and four sub-dimensions. High scores from the scale indicate that the level of mathematical thinking is relatively high, while low scores indicate that the level of mathematical thinking is relatively low. Also, the Cronbach's Alpha coefficient was calculated as .84. Since this value is greater than .80 (Kayış, 2005), it can be said that the scale is highly reliable.

2.4. ANALYSIS OF DATA

SPSS package program was used in the analysis of the research data. "Kolmogorov-Smirnov" test and scatterplot graph were applied to determine that the data had a normal distribution and it was determined that the data had a normal distribution. After this examination, it was decided to use the parametric test method in the statistical analysis of the data. In the analysis of data, descriptive statistics, independent samples t test and correlation test were used.

3. FINDINGS

This section includes the analysis of the data obtained and the answers sought to the study problem. The gender distribution of the pre-service teachers is shown in Table 1. The arithmetic mean and standard deviation of the scores obtained from the scales were used to determine the mathematical thinking level of pre-service teachers. The arithmetic mean and standard deviation values of the scores are presented in Table 2.

Table 1. Distribution of Pre-Service Teachers By Gender

Gender	Category	N
	Male	36
Female		44

Table 2. Descriptive Statistics of Scale

	N	\bar{x}	Min	Max	Sd	Level of participation
Mathematical Thinking Skills	80	3.66	2.73	4.64	0.38	Often
High-Level Thinking Tendency	80	4.00	1.97	4.82	0.58	Often
Reasoning	80	4.15	1.98	4.96	0.60	Often
Problem Solving	80	3.70	2.37	4.78	0.48	Often
Mathematical Thinking Level	80	3.83	2.40	4.68	0.39	Often
GPA	80	74.80	56	88	5.97	

When Table 1 is examined, 36 of the pre-service teachers are male and 44 are female.

When Table 2 was examined, it was seen that the mathematical thinking level of pre-service teachers was "often". In all sub-dimensions of the mathematical thinking scale, it was determined that pre-service teachers were at the "often" level.

An independent sample t test was applied to determine whether the mathematical thinking level and the sub-dimensions of the mathematical thinking scale (higher-order thinking disposition, reasoning, problem solving, mathematical thinking skill) differ according to gender. The data obtained with the independent t test are given in Table 3.

Table 3. Results of Independent Sample t test

	Gender	N	x	Sd	t	p
Mathematical Thinking Skills	Male	36	3.59	0.41	1.838	.070
	Female	44	3.72	0.36		
High-Level Thinking	Male	36	3.83	0.68	2.267	.077
	Female	44	4.13	0.44		
Tendency	Male	36	4.03	0.69	1.569	.121
	Female	44	4.24	0.49		
Reasoning	Male	36	3.68	0.50	.477	.635
	Female	44	3.73	0.46		
Problem Solving	Male	36	3.74	0.46	1.496	.139
	Female	44	3.90	0.32		

When Table 3 is examined, it was determined that the mathematical thinking level of the female pre-service teachers and the mean scores of all sub-dimensions of the scale were higher than the male pre-service teachers. However, when this difference is analyzed statistically, it is seen that there is no significant difference ($p>.05$). Apart from this, it was also examined whether the mathematical thinking levels of the pre-service teachers vary according to their weighted grade point averages. The data obtained by Pearson Product Moments correlation coefficient are given in table 4.

Table 4. Results of Correlation

	Mathematical Thinking Skills	High- Level Thinking Tendency	Reasoning	Problem Solving	Mathematical Thinking Level
GPA	.097	.121	.041	.040	.099

When Table 4 is examined, a significant relationship was not found between GPA and mathematical thinking levels. Likewise, no statistically significant relationship was found for mathematical thinking sub-dimensions.

4. CONCLUSIONS

As a result of the study conducted to find answer to questions of the study, it was seen that the mathematical thinking level of pre-service teachers was "often". In all sub-dimensions of the mathematical thinking scale, it was determined that pre-service teachers were at the "often" level. Accordingly, it can be said that the mathematical thinking level of the pre-service teachers is above the middle level and the dispositions of reasoning, high level thinking, mathematical thinking skills and problem solving levels of the pre-service teachers are above the middle level. Arslan and İlkörücü (2018) found that pre-service mathematics teachers' mathematics thinking levels were above the medium level. Özdemir and Çelik (2020) stated in their study that pre-service teachers did not have higher than intermediate levels of mathematical thinking. In this context, it is compatible with the results of this study in the literature. It was determined that the mathematical thinking level of the female pre-service teachers and the mean scores of all sub-dimensions of the scale were higher than the male pre-service teachers. However, when this difference is analyzed statistically. Accordingly, the level of mathematical thinking does not depend on gender. Likewise, the levels in mathematical thinking sub-dimensions do not change according to gender. Özdemir and Çelik (2020) did not find a significant difference between the mathematical thinking levels of female pre-service teachers and the mathematical thinking levels of male pre-service teachers. The results of this study were similar. In this study, the lowest average score is in the problem solving dimension, and the highest average score is in the reasoning dimension. Similar results were seen in some studies (Çelik and Özdemir, 2020). Similar results were obtained in our study. In addition, a significant relationship between GPA and mathematical thinking levels was not found in the study. Similarly, a statistically significant relationship was not found for mathematical thinking sub-dimensions.

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BOUNDEDNESS AND STABILITY FOR GENERALIZED SCHRÖDINGER EQUATION

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ABSTRACT

In this paper, we study the boundedness and stability of a solutions for a class of nonlinear time-fractional differential equations with initial data by the help of fractional Duhamel principle. well known advantage of caputo derivatives with respect to the classical derivatives is its capability of taking into account the previous historical effects of model at each time step. This feature of fractional-order operators makes them more accurate and appropriate in modeling of the systems. An illustration how these are achieved and physical basis of fractional operators with different memory is presented in several research work recently.

Keywords: Existence, Fractional order, differential equation, Duhamel principle.

ŞİZOFRENİDEN MATEMATİĞE

Mustafa Serkan SINMAZ

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ÖZET

Şizofreni ile matematik arasında bir ilişki olup olmadığı pek çok araştırmacının dikkatini çekmiştir. 2015 yılında, şizofreni hastası bir kişinin matematiğin en yüksek ödüllerinden biri olan prestijli Abel Ödülü'nü alması bu ilgiyi daha da artırmıştır. Hepimizin bildiği gibi şizofreniden matematiğe en iyi örnek John Nash'tır.

Matematiğe ilgi duyan herkes sayıların gizemini merak etti ve sayıları, sayı dizilerini ve aralarındaki bağıntıları araştırdı. M.S.Sinmaz, matematiğe ilgi duyan bir şizofreni hastasıdır. Bu çalışmada M. S. Sinmaz'ı kendi sesinden tanıtarak matematiksel dizileri ve sayılarla ilgili keşfettiği bir formülü vereceğiz.

Anahtar Kelimeler: Sayılar, Sayı dizileri, Şizofreni

FROM SCHIZOPHRENIA TO MATHEMATICS

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ABSTRACT

Whether there is a relationship between schizophrenia and mathematics has attracted the attention of many researchers. In 2015, this interest was further fueled when a person with schizophrenia received the prestigious Abel Prize, one of the highest awards in mathematics. As we all know, the best example from schizophrenia to mathematics is John Nash.

Anyone with an interest in mathematics wondered about the mystery of numbers and explored numbers, number sequences, and the relationships between them. M.S.Sinmaz is a schizophrenic patient who is interested in mathematics. In this study, we will introduce M. S. Sinmaz from his own voice and give a formula he discovered about mathematical sequences and numbers.

Keywords: Numbers, Numbers Sequences, Schizophrenia

1. GİRİŞ

Şizofreni ile matematik arasında bir ilişki olup olmadığı pek çok araştırmacının dikkatini çekmiştir. 2015 yılında, şizofreni hastası bir kişinin matematiğin en yüksek ödüllerinden biri olan prestijli Abel Ödülü'nü alması bu ilgiyi daha da artırmıştır. Hepimizin bildiği gibi şizofreniden matematiğe en iyi örnek John Nash'tır.

Matematiğe ilgi duyan herkes sayıların gizemini merak etti ve sayıları, sayı dizilerini ve aralarındaki bağıntıları araştırdı.

Bu çalışmada bir şizofreni hastası olan Mustafa Serkan Sınmaz'ı biraz daha yakından tanıtarak matematiksel diziler ve sayılarla ilgili keşfettiği bir ön çalışmayı vereceğiz.

2. ARAŞTIRMA VE BULGULAR

2. 1. Mustafa Serkan Sınmaz Kimdir

Mustafa Serkan Sınmaz 1982 Nevşehir doğumludur. 2010 yılında şizofreni hastalığıyla tanıştıktan sonra kendisine Mavi At Kafe kapılarını açmış ve o kapıdan geçmiştir. Bilmeyenler için belirtmek isteriz ki Mavi At Kafe şizofreni tanısını alan kişilerin çalıştığı ve sosyal yaşama katıldıkları bir yerdır. Mavi At Kafe ile beraber ikinci bir hayatı adım atmıştır M.Serkan ve o artık bir tekne yolculuk yapıyordur. Limanları ise Mavi At Kafe ve evidir. Aynı zamanda şair de olan Mustafa Serkan'ın, "Bir Şair İki Kalem" adlı şiir kitabı da yayınlanmıştır.

2.2. Mustafa Serkan'ın Matematik Formülleri

İlk bölümde sayılarda bitiş-sonuç eşitliği formülüne odaklanılacaktır.

Öncelikle sayıları A ve B grubu olarak iki eşit parça böülüyoruz. A grubunda bulunan başlangıç sayısı olan 1'den başlayarak sayıları sırasıyla yazıyoruz. Bir sayı sınırlaması yok. A grubunda yazılı olan son sayı sonrasında B grubuna geçip sıradaki sayıyı başlangıç sayısı olarak yazıyoruz. Varsayıyalım A grubu 1 sayısı ile başladı 8 sayısı ile bitti. B grubu, A grubunun son sayısı yani 8'den sonra gelecek olan ilk sayıyla yani 9 ile başlıyor ve yine bu grup için sayıları ardışık olarak yazıp bir tablo oluşturuyoruz. Sayıların adedi eşit olmalı yani B grubunda da tam 8 eleman olmalı bundan dolayı son sayısı 16 olmalı.

Burada önemli olan bir nokta şudur: Ayrı grplarda olan aynı renkli sayıları birbiriyle eşleştirip çıkarma işlemi yapıyoruz.

Örnek 1.

A	1	2	3	4	5	6	7	8
B	9	10	11	12	13	14	15	16

$$\begin{array}{ll} \textcolor{red}{10 - 1 = 9} & 9 - 2 = 7 \\ \textcolor{red}{12 - 3 = 9} & 11 - 4 = 7 \\ \textcolor{red}{14 - 5 = 9} & 13 - 6 = 7 \\ \textcolor{red}{16 - 7 = 9} & 15 - 8 = 7 \end{array}$$

Kırmızı ve siyah renkli sayıları kendi aralarında toplayıp çıkan iki sonucu birbirinden çıkarıyoruz. Yani:

$$9 \times 4 = 36$$

$$7 \times 4 = 28$$

$$36 - 28 = 8$$

Çıkan sonucu daima 2 ile çarpıyoruz. Yani:

$$8 \times 2 = 16 \rightarrow 16 \text{ bitiş ve sonuç sayısı}$$

Örnek 2.

A	1	2	3	4
B	5	6	7	8

$$6 - 1 = 5 \quad 5 - 2 = 3$$

$$8 - 3 = 5 \quad 7 - 4 = 3$$

$$2 \times 5 = 10$$

$$2 \times 3 = 6$$

$$10 - 6 = 4$$

$$4 \times 2 = 8 \rightarrow 8 \text{ bitiş ve sonuç sayısı}$$

İkinci bölümde sonsuz sayıarda 0 sayısına ulaşma formülüne bakacağımız. Bir örnek üzerinden gidelim.

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Örnek 3.

A	1	2	3	4	5	6	7	8
B	9	10	11	12	13	14	15	16

Burada toplama ile gideceğiz.

$$10 + 1 = 11 \quad 9 + 2 = 11$$

$$12 + 3 = 15 \quad 11 + 4 = 15$$

$$14 + 5 = 19 \quad 13 + 6 = 19$$

$$16 + 7 = 23 \quad 15 + 8 = 23$$

Gruplardaki çıkan sonuçları toplayıp bu sonuçları birbirinden çıkartıyoruz ve “0” elde ediyoruz.

Gruplardaki sayı dizisini ne kadar çok artırırsak artıralım sonuçlar değişmez.

2.3. Mustafa Serkan 'ın Şiirlerine Bir Örnek

Bir Şair İki Kalem adlı şiir kitabı yayınlanan Mustafa Serkan'ın matematik ilgisi şiirlerine de yansımıştır. Aşağıda buna örnek teşkil edecek bir şiirini veriyoruz.

Bakışların fizik kurallarına aykırı

Güzelliğinin bilimsel açıklanması yapılmadı

Bakışların fizik kurallarına aykırı

Bir bakışın çarptı beni

İki parçaaya bölündüm

Artı seni düşünmekten

Bir yanım eksildi

Bu nasıl bir denklem

Çık içinden çıkabilirsen

3. SONUÇ

Kaliforniya Üniversitesi Matematik Bölümü Profesörü Prof. Dr. Edward Frenkel, *Aşk ve Matematik* kitabında “**Matematik tektir. Yalan söylemez. Sorgulamayı öğretir. İdeoloji, din ve ten rengi gözetmeksizin herkes için aynıdır. Bize umut verebilir. Çünkü Dünya gittikçe ayrımcılığa doğru gidiyor**” diyor ve ekliyor “**Matematiğin kendi iç estetiği bulunur. Matematikçiler estetik nedenlerle matematik yaparlar. Her yaratıcı matematikçi matematiğin estetik deneyimini sezgisel olarak bilir.**”

Belki de matematik yüksek eğitimi almadığı halde matematikle uğraşmak Mustafa Serkan Sınmaz için de bir umut olmuş ve bu çalışmayla tamamen sezgisel olarak da matematik yapılabileceğini bizlere göstermiştir.

4. TEŞEKKÜR

Katkılarından dolayı

- Değerli Hocamız Şizofreni Derneği Federasyonu Başkanı Prof. Dr. Arif Haldun SOYGÜR 'e,
- Mavi At Kafe Sorumluları adına Meral TAŞKENT'e

ve

- Psikolog Cansu KAYA 'ya
teşekkürlerimizi sunarız.

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MİKROBİYOTA VE ALZHEİMER HASTALIĞI ARASINDAKİ İLİŞKİ

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ÖZET

Alzheimer hastalığı (AH), hafıza kaybı ve davranışındaki dramatik değişiklikler ile karakterize ilerleyici nörodejenaratif hastalıktır. Gut mikrobiyomu ise, gastrointestinal sisteme bir mikroorganizma topluluğudur. Son yıllarda, nörodejenaratif hastalıkların nedenleri araştırılmış ve bağırsak-beyin ekseni hipotezine katkıda bulunabilecek durum veya risk faktörü tanımlanmıştır. Bu derlemenin amacı, insan mikrobiyotası ile Alzheimer hastalığı arasındaki ilişkiyi gösteren kanıtlar ve bu hastalığın ilerlemesini önlemek veya yavaşlatmak için öneriler sunmaktadır. Klinik araştırmalardan elde edilen kanıtlarda, bağırsak mikrobiyotasının patojenik süreçlerinin nörolojik ve psikiyatrik bozukluklar da dahil olmak üzere çeşitli hastalıkların başlamasını ve ilerlemesini etkileyebileceğini göstermiştir. Yüksek yağlı diyetleri, antibiyotik kullanımı, probiotik eksikliğinin sporadik AH'in gelişimi için önemli risk faktörleri olarak belirtilmiştir. Öte yandan, yüksek sebze ve meyve içeren sağlıklı diyet modellerinin (örn: Akdeniz tipi beslenme) AH riskini azalttığı belirtilmiştir. Ancak, yapılan çalışmalarla, disbiyoz ve AH arasındaki patolojinin önlenmesi ve tedavisi için kapsamlı çalışmaların yetersiz olduğu vurgulanmaktadır. Bu nedenle, yeni potansiyel terapötik hedefleri araştırmak için daha fazla çalışmaya ihtiyaç vardır.

Anahtar kelimeler: Mikrobiyota; Alzheimer hastalığı; Beslenme; Diyet modelleri; besin bileşenleri

THE ASSOCIATION BETWEEN ALZHEIMER DISEASE AND MICROBIOTA

ABSTRACT

Alzheimer disease (AD) is a progressive neurodegenerative disease which is characterized by memory loss and dramatic changes in behaviour. Furthermore, gut microbiome is a community of microorganisms in the gastrointestinal tract. Recent years, the causes of neurodegenerative diseases have investigated and a condition or a risk factor that may contribute to the gut-brain axis hypothesis are described. The purpose of this review is to provide evidence of the relationship between human microbiota and Alzheimer's disease, and suggestions to prevent or slow the progression of this disease. Clinical research showed that gut microbiota, and their associated microbiomes, may influence pathogenic processes and thus the onset and progression of various diseases, including neurological and psychiatric disorders.

High-fat diets, administration of antibiotics, lack of probiotics in diet are the important risk factors for the development of sporadic Alzheimer's disease risk of AD. On the other hand, it was stated that healthy dietary patterns such as Mediterranean diet could reduce the risk of AD. However, studies have emphasized that comprehensive studies are not enough for the prevention and treatment of pathology between dysbiosis and AD. Therefore, more studies are needed to explore new potential therapeutic targets.

Keywords: Microbiota; Alzheimer disease; Nutrition; Dietary patterns; Nutrients

GİRİŞ

Alzheimer hastalığı (AH), yaşlılarda bunamanın en yaygın nedenidir. Klinik olarak; hafıza kaybı ve davranışındaki dramatik değişiklikler ile karakterize ilerleyici nörodejenaratif hastalıktır (Askorova ve ark., 2020; Jiang ve ark., 2017; Szablewski, 2018; Seo ve ark., 2019). Alzheimer hastalığı insidansı yaşla birlikte artmaktadır; 65-75 yaş arası bireylerin yaklaşık %10'u ve 80 yaş üstü yaşlıların %32'sinde etkili olduğu gösterilmiştir. Dünya Sağlık Örgütü (DSÖ), AH insidansının her yıl artış gösterdiğini belirtmiştir. Ayrıca, 2050 yılına kadar hastalığın insidansında önemli ölçüde artış olacağı ön görülmüştür (Askorova ve ark., 2020). Bu durumun, ne yazık ki, aile ve toplum üzerinde ağır bir yük oluşturacağı açıktır (Jiang ve ark., 2017).

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AH'nın patofizyolojisi, beyindeki nöroinflamasyon, oksidatif stres, mitokondriyal disfonksiyon ve nöronal ölüme neden olan farklı amiloid beta-peptit (A β) formlarının birikmesi ile gerçekleşir (Askorova ve ark., 2020; Zhuang ve ark., 2018). Alzheimer hastalığının iki formu vardır. Tüm hastaların %5'inden azında A β üretiminin artlığına dair kanıt bulunmaktadır. Bu hastalık, üç genin (APP, PSEN-1, PSEN-2) herhangi birinde görülen mutasyonlardan kaynaklı ortaya çıkmaktadır. Bu Alzheimer formu, ailesel Alzheimer hastalığı olarak adlandırılır ve semptomların erken başlamasıyla karakterizedir (Askorova ve ark., 2020; Szablewski, 2018). Bununla birlikte, çoğu Alzheimer hastalığında geç başlangıç ve belirsiz bir genetik arka plan bulunmaktadır. Demansın bu formu, sporadik geç başlangıçlı Alzheimer hastalığı olarak bilinir. Hastalığın bu formunda patolojide genetik arka plan ile birlikte, yaşam tarzi, stres seviyeleri, kronik hastalıklar gibi faktörlerin etkili olduğuna inanılmaktadır (Askorova ve ark., 2020).

İnsan sağlığını etkileyen ve bilim adamlarının ilgisini çeken önemli faktörlerden biri bağırsak mikrobiyomudur (Askorova ve ark., 2020). İnsan bağırsağında, vücuttaki hücre sayılarından on kat daha fazla bakteri sayısı bulunmakta ve mikrobiyotadaki toplam genom, insan vücudunun genomundan 150 kat daha fazladır (Zhuang ve ark., 2018). İnsan bağırsağında yaşayan toplam 10^{13} - 10^{14} mikroorganizma için yaklaşık 1000 bakteri türü ve 7000 bakteri suçu bulunmaktadır.

Bağırsak mikrobiyotasında en yaygın filumlar: *Firmicutes* (%51) ve *Bacteroidetes* (%48)'tir (Askorova ve ark., 2020; Mancuso ve Santangelo, 2018; Sohail Khan ve ark., 2020; Szablewski, 2018). Gram-pozitif ve gram-negatif bakteriler dahil olmak üzere *Firmicutes*; *Lactobacillus*, *Eubacterium* ve *Clostridium* türlerini içermektedir. Öte yandan, *Bacteroides* ve *Prevotella* türleri, gram-negatif bakterilerinin oluşturduğu filyum *Bacteroidetes*'e aittir (Askorova ve ark., 2020). Sağlığı geliştiren etkileri olan simbiyotikler, konakçı üzerinde etkisi olmayan komsal bakteriler ve konakçı üzerinde olumsuz etkiye sahip patobiyonlar olarak üç bakteri grubu insan mikrobiyotasında yer almaktadır (Szablewski, 2018).

Son 15 yılda, bağırsak mikrobiyomunun yoğunluğu ve çeşitliliği ile diyabet ve obezite gibi patolojik durumlar arasında doğrudan ilişkili bulunmuştur (Askorova ve ark., 2020). Ayrıca çalışmalarında, bu hastalıkların sporadik Alzheimer gibi birçok nörodejenaratif hastalıkların gelişimine neden olabileceği ileri sürülmüştür (Askorova ve ark., 2020; Vogt ve ark., 2017; Zhuang ve ark., 2018). Mikrobiyomun insan sağlığına önemi ile birlikte, bağırsak mikrobiyotası ve Alzheimer hastalığının patogenezi arasındaki ilişkiyi ortaya çıkarmak isteyen çalışmalar artmaya devam etmektedir (Seo ve ark., 2019). Bu derlemenin amacı, insan mikrobiyotası ile Alzheimer hastalığı arasındaki ilişkiyi gösteren kanıtlar ve bu hastalığın ilerlemesini önlemek veya yavaşlatmak için öneriler sunmaktadır.

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Mikrobiyota Bağırsak-Beyin Aksı

Bağırsak-beyin ilişkisi ile ilgili daha önceki çalışmalar, sindirim fonksiyonu ve iştah üzerinde yoğunlaşmıştır. Ancak son zamanlarda yapılan araştırmalar, beyin-bağırsak etkileşiminin bilişsel ve psikolojik etkilerine daha fazla yoğunlaşmıştır (Cryan ve ark., 2019). Bağırsak ve beyin arasında nöroendokrin, bağışıklık, otonomik ve enterik sinir sistemleri dahil olmak üzere birçok yol örtüşmektedir. Ayrıca beyin ve bağırsak, vücutun farklı bölgelerine afferent ve efferent olarak çift yönlü etkileşim oluşturur (Szablewski, 2018; Rieder ve ark., 2017). Bağırsak mikrobiyotasında bulunan nöral ağdaki yaklaşık 500 milyon sinir, enterik sinir sistemini (ENS) içermektedir. ENS içinde bulunan afferent nöronlar, gastrointestinal yol içindeki ince değişiklikleri vagus sinir yoluyla beyne iletmektedir (Rieder ve ark., 2017). Bağışıklık sisteminin bağırsak mikrobiyotası tarafından aktivasyonu, bağırsak ve beyin arasındaki ağ için önemli bir rol oynamaktadır (Szablewski, 2018). İmmün hücreler, inflamasyon ve enfeksiyona karşı konakçı yanıtlarında önemli olan sitokinleri salgılarken, nöroendokrin hormonları (örneğin, kortizol) bağırsak geçirgenliğini, bariyer fonksiyonunu değiştirir ve sitokin salgılanması ile ilgili bağışıklık hücreleri ile iletişim kurar.

Bu nöronal ve biyokimyasal sinyalizasyon süreci, gastrointestinal (GI) yolu ile merkezi sinir sistemi (MSS) arasında kurulan yollar da dahil, tüm vücutta gerçekleşir (Rieder ve ark., 2017).

Buna karşılık, bağırsak mikrobiyomu, farklı sinyal yollarından ve biyolojik olarak aktif maddelerin salgılanması ile beyin fonksiyonlarını etkileyebilir (Askorova ve ark., 2020; Szablewski, 2018). Örneğin, Gama aminobütirik asit (GABA) *Lactobacillus* ve *Bifidobacterium*; asetilkolin *Lactobacillus*; serotonin *Escherichia*, *Streptococcus*, *Enterococcus* ve *Candida* tarafından sentezlenir. Ayrıca, mikrobiyal enzimler nörotoksinler üretebilir. Kronik yorgunluk sendromu veya nörodegeneratif disfonksiyonu olan hastalarda, artmış D-laktat üreten bakteri seviyeleri görülmüştür (Szablewski, 2018). Araştırmacılar, bu dinamik sinyal yoluna dokuları ve organları içeren “bağırsak-beyin ekseni” olarak belirtmiştir (Rieder ve ark., 2017).

Mikrobiyomun Alzheimer Hastalığı Patogenezi Üzerindeki Potansiyel Etkisi

Bifidobacterium ve *Lactobacillus* gibi yararlı bakterilerin sayı ve çeşitliliğinin azalması ile birlikte bağırsak mikrobiyomunun patojen mikroorganizmalarla değişmesi, bağırsağın immünolojik parametrelerinde değişikliğe neden olur. Bu faktörler, bağırsak ve kan-beyin bariyerinin (KBB) bütünlüğünü bozar ve patolojik metabolitlerin beyne girmesini sağlar (Zhu ve ark., 2017; Askorova ve ark., 2020). Bununla ilgili olarak Zhuang ve arkadaşlarının yaptığı bir çalışmada, bağırsak mikrobiyotasının AH hastalarında değiştiği ve AH patogenezinde rol oynayabileceği belirtilmiştir (Zhuang ve ark., 2018). Şekil-1'de KBB ve nöro-inflamasyon ilişkisini gösteren bir özet bulunmaktadır.

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Bağırsak bakterileri, AH'nin patogenezine neden olabilecek büyük miktarlarda lipopolisakkartitler (LPS) ve amiloid peptit salgılayabilmektedir (Zhu ve ark., 2017; Askorova ve ark., 2020; Jiang et al., 2017). Bakterilerdeki amiloid peptit, yapı ve biyofiziksel olarak insan amiloidine benzer (Askorova ve ark., 2020). *Escherichia coli*, *Bacillus subtilis*, *Salmonella typhimurium*, *Salmonella enterica* ve *Mycobacterium tuberculosis* gibi birçok bakteri suçu, önemli miktarda bakteriyel amiloid peptid üretebilir (Askorova ve ark., 2020; Jiang et al., 2017). Amiloid gA'nın öncüsü olan *curli* peptidin yapısal alt biriminin, yapılarında A β 42'ye benzer böülümlere sahip olduğu ve böülümlerin toll benzeri reseptörü 2 (TLR2) tarafından tanınıldığı gösterilmiştir (Askorova ve ark., 2020).

Bakteriler tarafından salgılanan LPS'nin, insan birincil mikrogliyal hücresinde AH patogenezinde yer alan pro-inflamatuvar transkripsiyon faktörü nükleer faktör kappa beta (NF- κ B)'yi aktive edebileceğine dair kanıtlar bulunmaktadır. Bakteriyel amiloidin, GI kanalından sizabileceği ve merkezi sinir sistemi (MSS) amiloid yüküne neden olabileceği varsayılmıştır.

Bakteriyel amiloidler, mikroRNA-34a'nın (miRNA-34a) yukarı regülasyonunu indükleyerek NF- κ B sinyalini aktive edebilir. Bununla birlikte, miRNA-34a, A β 42 peptidinin birikmesini kolaylaştırabilecek TREM2'yi (mikroglia/miyeloid hücreler-2 üzerinde eksprese edilen tetikleyici reseptör) inhibe eder (Askorova ve ark., 2020; Jiang et al., 2017). TLR2'nin *curli* peptit veya insan A β 42 ile etkileşimi, kemik iliği makrofajlarının aktivasyonuna ve bunların interlökin (IL)-6 ve IL-1 β gibi pro-inflamatuvar sitokinlerin üretilmesine yol açmaktadır (Askorova ve ark., 2020). Bunu destekleyen bir çalışmada, C57BL/6J farelerine LPS uygulamasının, beyindeki A β 42 seviyesinde bir artışa ve bilişsel bozulmaya neden olduğu gösterilmiştir (Kahn ve ark., 2012).

LPS, gram-negatif bakterilerinin dış hücre duvarının ana bileşenleridir ve bağırsak boşluğundan kan dolaşımına geçmesi durumunda nöro-inflamatuvar reaksiyonlara neden olabilir (Askorova ve ark., 2020; Zhu ve ark., 2017; Jiang et al., 2017). Yapılan çalışmalarında, sporadik Alzheimer hastalarında kan plazma LPS seviyesinin normal hastalardan üç kat daha fazla olduğu gösterilmiştir. Alzheimer hastaların, artmış plazma LPS konsantrasyonu, bağırsak-bariyer fonksiyonunda bir bozukluğa, bağırsak inflamasyonuna ve geçirgenliğin artmasına neden olur (Askorova ve ark., 2020; Zhu ve ark., 2017). Hayvan çalışmalarında, 4 hafta boyunca intraventriküler LPS uygulamasının kronik nöro-inflamasyona, entorinal korteksin II ve III tabakalarındaki sinir hücrelerinin ölümüne neden olabileceği gösterilmiştir (Hauss-Wegrzyniak ve ark., 2002).

Bağırsak Mikrobiyomu ve Yaşlanma

Yaşlılık dönemi ile ilgili olarak, bağırsak mikrobiyotasının bileşimi; diyet alışkanlıkları, spesifik hastalıklar ve antibiyotik tedavisine bağlı olarak değişebilir (Mancuso ve ark., 2018). Dış etkilere yanıt olarak dalgalanmalar görülmesine rağmen, yetişkinlik döneminde bağırsak mikrobiyotasının nispeten stabil kaldığı düşünülmektedir. Bununla birlikte, bağırsak mikrobiyomunun yaşlılıkta MSS dejenerasyonu üzerinde önemli etkileri olduğu görülmektedir. Yaşlılık, hem hücresel hem de fonksiyonel seviyede beyni etkiler ve duyusal, motor ve bilişsel işlevlerde azalma ile ilişkilidir (Rogers ve ark., 2016). Bu yaşam süresi, AH için önemli bir risk faktörüdür ve mikrobiyomda belirgin farklılık yaratarak yaşa bağlı fizyolojik değişikliklere sebep olmaktadır (Rogers ve ark., 2016; Nagpal ve ark., 2018; Askorova ve ark., 2020).

Mikrobiyotada görülen disbiyoz, mikrobiyal çeşitlilikle birlikte bifidobakteri türleri ve kısa zincirli yağ asitleri (SCFA) üretiminde azalma ile ilişkili olabilir (Rogers ve ark., 2016; Nagpal ve ark., 2018). Bağırsak mikrobiyota bileşiminin yaşlılarda, *Bacteroides*, *Lactobacillus* ve *Bifidobacteria* gibi yararlı bakterilerde azalmaya neden olduğu bildirilmiştir (Jiang ve ark., 2017).

Biagi ve arkadaşlarının yaptığı bir çalışmada, *Bacteroidaceae*, *Lachnospiraceae* ve *Ruminococcaceae*'nin bulunduğu bağırsak mikrobiyonunun, yaşam boyunca insan konakçı ile ilişkili olduğu ve yaşla birlikte seviyelerinin azaldığı görülmüştür. Ayrıca, yaşılanma ile ilişkili mikrobiyotanın, subdominant türlerin artmasının yanı sıra, ortak oluşum ağlarında yeniden düzenleme ile karakterize olduğu belirtilmiştir (Biagi ve ark., 2016). Başka bir çalışmada, *Bifidobacterium* ve *Lactobacillus* seviyeleri yaşlı grupta genç bireylere göre daha düşük bulunmuştur (Askorova ve ark., 2020). Ayrıca, *Bifidobacterium*, *Lactobacillus* veya *Faecalibacterium* gibi bazı spesifik bakteriyel grupların bağırsak epitel seviyesinde inflamasyonu düzenleyebileceği bildirilmiştir (Bäuerl ve ark., 2013; Jiang ve ark., 2017). Mikrobiyotada az miktarda *Bifidobacterium*'un görülmesi, kolon mukozasındaki yapısal değişikliklerin bağırsak duvarına yapışmalarındaki azalma ile ilişkili olabilir. Bununla birlikte, bağırsakta sınırlı işlevsellik, immünolojik reaktivite ve gastrointestinal enfeksiyonlara karşı artan duyarlılığa sebep olabilir.

Yaşlı bireylerin bağırsak mikrobiyotalarında, özellikle antibiyotik kullanımı sonrası *Fusobacteria*, *Propionibacteria* ve *Clostridia* gibi proteolitik bakterilerin artışı görülmüştür. Ayrıca, *Escherichia coli* ve *Enterococcus faecalis* gibi komensal bağırsak mikroflorası için yüksek bir serum antikor seviyesi ile ilişkili olabilen artmış pro-inflamatuvlar *Enterobacteriaceae*, *Streptococcus*, *Staphylococcus* ve maya hücresi bulunmuştur (Askorova ve ark., 2020).

Alzheimer Hastalığı, Beslenme ve Mikrobiyom

Diyet Modelleri

Sağlıklı beslenme, yaşam boyu fiziksel ve zihinsel refah için kritik yaşam tarzı faktörlerinden biridir (Kim ve ark., 2020). Nörodejeneratif hastalıklar için besin bileşenleri ve risk faktörleri arasında yakın bir ilişki olduğunu belgeleyen kapsamlı çalışmalar bulunmaktadır (Gubert ve ark., 2020; Kim ve ark., 2020). Ayrıca, AH'de diyet müdahalesi için olası yollar sinir hücresi zarlarının bütünlüğü; nörotransmitterlerin yeterli sentezi; serebrovasküler fonksiyon ve bozulmamış kan-beyn bariyer fonksiyonu; ve azaltılmış nöropatik hasardır (Zhang ve ark., 2020).

Bununla ilgili olarak, yüksek oranda doymuş yağ ve şeker tüketimi ile karakterize edilen "Batı diyeti"nin oksidatif stres ve lipit peroksidasyonunu arttırarak AH ve Parkinson hastalığında nörodejenerasyonu artırdığı gösterilmiştir (Askorova ve ark., 2020; Gubert ve ark., 2020). Yüksek yağlı diyetlerde, yüksek enerji alımı hastalığın erken başlangıcı ile ilişkilendirilmiştir (Gubert ve ark., 2020). Klinik öncesi çalışmalarda, yüksek yağlı diyetlerin bağırsak mikrobiyotasını değiştirebileceği ve demans gelişimine neden olabileceği doğrulanmıştır.

Ayrıca, yüksek yağlı diyetlerin Nrf2 sinyal yolunun inaktivasyonu ile oksidatif stres ve nöronal apoptoza neden olduğu; dolayısıyla bilişsel bozukluğu teşvik ettiği görülmüştür (Askorova ve ark., 2020). Sanguinetti ve arkadaşlarının (20), yüksek yağlı diyet ile değişen mikrobiyomun beyin sağlığına olumsuz etkilerini göstermiştir. Başka bir çalışmada ise, yüksek yağlı diyetin 12 aylık APP23 farelerinde amiloid birikimini arttırdığı bulunmuştur (Askorova ve ark., 2020). Diğer çalışmalarda, artan doymuş yağ tüketiminin periferik bağıışıklık hücrelerinin MSS'ne alındığı ve inflamatuvar yanımı indüklediği gösterilmiştir (Buckman ve ark., 2014). Bu durum, nörodejenaratif hastalıkların semptomlarının artması ile ilişkili olabilir.

Bugüne kadar yapılan çalışmalarla, yüksek sebze ve meyve içeren sağlıklı diyet modellerinin AH riskini azalttığı belirtilmiştir (Zhang ve ark., 2020; Gubert ve ark., 2020). Akdeniz diyetinin ve düşük karbonhidrat alımının azalmış AH riski ile ilişkili olduğu prospektif çalışmalarla gösterilmiştir (Zhang ve ark., 2020). Yapılan bir meta-analizde, Akdeniz tipi beslenme ile daha iyi bilişsel skorlar ortaya çıkmıştır. Bu nedenle, bu diyet modeli çeşitli nörolojik hastalıklar için potansiyel terapötik tedavi olarak düşünülmektedir (Psaltopoulou ve ark., 2013).

Düzen bir yandan diyet, bağırsak mikrobiyotasının bileşimini ve işlevsellliğini doğrudan etkileyebilir. Diyet modellerinin bağırsak bakteri bileşimi üzerindeki etkisini araştıran deneySEL çalışmalar mevcuttur. Uzun süre doymuş yağ ve şeker tüketen insanlarda düşük seviyelerde *Bacteroidetes* ve artan miktarda *Firmicutes* ile ilişkilendirilmiştir (Gubert ve ark., 2020; Martínez Leo ve ark., 2020).

Akdeniz tipi beslenmenin, bilişsel sağlığa yararlı olduğu gösterilmiş ve insan bağırsak mikrobiyomunda yüksek miktarda *Bacteroidetes*, *Prevotellaceae* ve *Prevotella*; düşük konsantrasyonlarda *Firmicutes* ve *Lachnospireceae* ile ilişkilendirilmiştir (Gubert ve ark., 2020). Bununla ilgili Nagpal ve arkadaşlarının yaptığı bir çalışmada (2019), modifiye edilmiş Akdeniz-Ketojenik diyetinin yaşlılarda, AH belirteçleri ile birlikte bağırsak mikrobiyom değişimine bakılmıştır. Özellikle, *Bifidobacterium* ve *Lachnobacterium*'un Akdeniz-Ketojenik diyetinde azalırken; *Enterobacteriaceae*, *Akkermansia*, *Slackia*, *Christensenellaceae* ve *Erysipelotriaceae* arttığı görülmüştür (25). Ayrıca çalışmalarla, Akdeniz tipi beslenmeyi uygulayan bireylerin dişkilerinde artan propiyonat ve bütirat ile azalan laktat ve asetat seviyeleri saptanmıştır (Gubert ve ark., 2020; Nagpal ve ark., 2019).

Besin Bileşenleri

Omega-3

Omega-3 yağ asitleri, zincirin terminal karbonundan gelen sayımı başlatarak üçüncü pozisyondaki çift bağdan türetilen çoklu doymamış yağ asitleri (PUFA) sınıfıdır. Eikosapentaenoik asit (EPA), alfa-linolenik asit (ALA) ve dokosahexaenoik asit (DHA), en önemli üç fizyolojik omega-3'tür. Yağ asitleri, nöronal bileşen zarları, hücre zarlarının akışkanlığı, sinyal verme, nörotransmisyondan ve enzimatik aktivitelerin modülasyonu için öncülerdir (La Rosa ve ark., 2018).

Önceki bölümlerde belirtildiği gibi, beslenmenin değişmiş bağırsak mikrobiyotası ile nörodejenaratif hastalıkların gelişimi arasında etkileşim gösterdiği söylenmiştir. Omega-3'ün mikrobiyota üzerindeki etkileri ve anti-inflamatuvar özellikleri göz önüne alındığında, omega-3 takviyesinin AH'ın önlenmesi ve tedavisinde kullanılabileceği belirtilmiştir (La Rosa ve ark., 2018). Yapılan meta-analiz çalışmalarında, AH hastalarında kandaki DHA düzeylerinin yanı sıra beyin/BOS konsantrasyonlarını önemli ölçüde azalttığı açıklanmıştır (Ballegó ve ark., 2016). Ayrıca, serebral omega-3'teki azalmanın bilişsel yaşlanma ve AH'nin ilerlemesinde bir artış ile bağlantılı olduğu bildirilmiştir (La Rosa ve ark., 2018).

Omega-3 PUFA alımı, bütirat üreten bakterilerin sayısında artış sağlayarak, vücutun anti-inflamatuvar yeteneğini artırabilir. Ayrıca, omega-3'ler bağırsak alkalin fosfotaz salgılanmasını indükleyerek bağırsak mikrobiyota bileşiminde değişikliklere neden olur. Böylelikle LPS üretimi ve inflamasyon azalır (Zhang ve ark., 2020). Yapılan bir çalışmada, artan omega-3 tüketiminin, yüksek seviyelerdeki *Lachnospiraceae* ve *Ruminococcaceae* ile ilişkili olan DHA seviyelerinde artış sağladığı görülmüştür (Gubert ve ark., 2020). Balık yağı, omega-3 çoklu doymamış yağ asitleri, özellikle DHA, beyindeki β-amiloid seviyesinin azalmasını doğrudan veya α-sekretazın hidrolizini artırarak dolaylı olarak azaltır (Zhang ve ark., 2020). Yapılan çalışmalardan yola çıkarak, omega-3 desteğinin, SCFA üretimini bağırsak mikrobiyota dengesini sağlıklı duruma getirerek arttırdığı söylenebilir.

Probiyotikler

Bağırsak mikrobiyotası ile çeşitli sağlık koşulları arasındaki dinamik ilişki, bağırsak mikrobiyotasını olumlu yönde etkilemek için probiyotiklerin kullanımına olan ilginin artmasına neden olmuştur. Probiyotikler, bağırsak mikrobiyotasına fayda sağlayan canlı mikroorganizmalar olarak tanımlanmaktadır (Rieder ve ark., 2017). Probiyotiklerin temel rolü, mukozal bariyer fonksiyonunu veya bağıışıklık sistemini desteklemek ve diğer organları iyileştiren patojenik mikroorganizmaların büyümeyi sağlamaktır.

Genel olarak, *Lactobacillus salivaricus*, *Lactobacillus paracasei*, *Lactobacillus reuteri*, *Lactobacillus plantarum*, *Lactobacillus gaseri* ve *Bifidobacterium lactis* gibi farklı laktik asit bakterileri kullanılmaktadır (Szablewski ve ark., 2018). Sağlıklı beslenmenin bir parçası olarak probiyotiklerin, mikrobiyota-bağırsak-beyin döngüsünde ve nörodejenaratif hastalıklara karşı etkili terapötik bir ortam oluşturabileceği düşünülmektedir (Kim ve ark., 2020; La Rosa ve ark., 2018). Bununla ilgili olarak, probiyotik bakterilerin bağırsak mikrobiyal dinamikleri ve homeostazını etkilediği ve beyin dahil, bağırsak ve distal organların fizyolojisini etkilediği gösterilmiştir (Kim ve ark., 2020). Ancak, probiyotiklerin bilişsel bozuklıkların iyileştirilmesi üzerindeki etkileri hakkındaki veriler yetersizdir. Germ-free hayvanlarda probiyotik uygulamasının, öğrenme ve hafıza ile ilişkili bilişsel davranışları düzenleyebildiği raporlanmıştır (Abraham ve ark., 2016).

Literatürdeki birçok klinik öncesi çalışmalarında, bağırsak mikrobiyotasının davranış ile ilişkili karmaşık beyin fonksiyonlarını kontrol etmede rolü gösterilmiştir. Bununla ilişkili olarak, bağırsak mikroflorasındaki disbiyoza karşı kullanılan probiyotik takviyesinin, klinik olarak hem sağlıklı popülasyonda hem de AH'lı hastalarda bilişsel veya duygusal bozuklıkları önlemek için etkili bir yaklaşım olduğu belirtilmiştir (Mancuso ve ark., 2018). Bununla ilgili randomize, çift kör, kontrollü bir çalışmada, on iki hafta boyunca 200 mL/gün probiyotik (üç laktobasil ve *Bifidobacterium bifidum* suyu) ile tedavi edilen AH hastalarında, kognitif fonksiyon ve metabolik durumlarda iyileşme görülmüştür (D'Argenio ve ark., 2019). Başka bir çalışmada ise, probiyotik ile tedavi edilen AH'liların, bağırsak bakteri kompozisyonu ve serumdaki triptofan metabolizmasını düzenlediği, bağışıklık sisteminin aktivasyonunda rol oynadığı bulunmuştur (D'Argenio ve ark., 2019). Ayrıca, probiyotiklerin beyindeki A β seviyelerini azaltabildiği ve transgenik APP/PS1TG farelerinde AH semptomlarının ilerlemesini yavaşlatabildiği belirtilmiştir (Askorova ve ark., 2020). Bu durumlarla ilgili olarak, pro-inflamatuar mikrobiyota taksonlarının, nörotoksik olduğu düşünülen bakteriyel amiloid ve LPS salgılamasına karşı probiyotik desteğinin kullanılabileceği söylenebilir.

SONUÇ

Gut mikrobiyota, insan sağlığını ve hastalıklarını etkilediği geçmiş çalışmalarla gösterilmiştir. Mikrobiyotada bütünlük ve çeşitliliğin sağlanması, beyin fonksiyonu ve bilişsel işlev durumlarını etkileyebilir. Bu durum, bağırsak-beyin etkileşimleri ile ilişkilidir. Yapılan çalışmalarla, bağırsak disbiyozinin nörodejenaratif hastalıklarla ilişkili olduğu görülmüştür. Bağırsak mikrobiyotası, çevresel faktörler dahil olmak üzere birçok değişken tarafından etkilenen bir ekosistem oluşturmaktadır.

Yaşam tarzı faktörleri ve AH arasındaki etkileşim mekanizmasına odaklanarak, değişen modern toplumun AH prevalansındaki artışa katkısı değerlendirilmiştir. Birçok araştırmada, Akdeniz diyeti, omega-3 ve probiyotik takviyesinin bağırsak mikrobiyota ve biliş üzerinde olumlu etkilerini göstermiştir. Ayrıca, yüksek yağılı diyetin bağırsak mikrobiyonun bileşimini değiştirek AH patogenezinde olumsuz etki yarattığı belirtilmiştir. Ancak, disbiyoz ve AH arasındaki patolojinin önlenmesi ve tedavisi için kapsamlı çalışmalar yetersizdir. Bu nedenle, yeni potansiyel terapötik hedefleri araştırmak için daha fazla çalışmaya ihtiyaç vardır.

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ANTİOKSİDAN VİTAMİN VE MİNERALLERİN BAĞIŞIKLIK SİSTEMİ İLE İLİŞKİSİ

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ÖZET

Oksijenli solunum yapan canlılar; metabolizmanın işleyişi sırasında kararsız elektron yapısına sahip, organizmada toksik etki oluşturabilen molekül ve bileşikler açığa çıkarmaktadır. Serbest radikaller adıyla da bilinen bu moleküller, organizmanın hücre zarlarında ve dokularında hasara yol açmaktadır. Bu durum oksidatif stres olarak adlandırılır. Yoğun ve kronik bir şekilde yaşanan oksidatif stresle savaşan bağışıklık sisteminin yetersiz kalmaması için antioksidan özelliğindeki maddeler önem taşımaktadır. Antioksidanlar serbest radikalleri temizler, hücrelerde oluşan hasarı engeller ve savunma sisteminin etkisini artırabilme sayesinde hastalıklara yakalanma riskini düşürürler. Antioksidan maddeler kendi aralarında sistemli bir şekilde çalışarak antioksidan savunma sistemi dedikleri bir fonksiyonel organizasyon oluştururlar. Endojen antioksidanlar gibi eksojen antioksidanlar da insan sağlığı için büyük önem taşımaktadır. Antioksidan vitamin ve mineraller sadece oksidatif hasara karşı etki oluşturmaz, aynı zamanda bağışıklık sisteminde birçok yapıya katılır, yardımcı olur, değiştirir ve eksikliğinde kendisiyle birlikte bağışıklığı da bozar. A,C,D ve E vitaminleri dışarıdan alınması gereken antioksidan vitaminlerdir. Antioksidan minerallerin ise selenyum, demir, çinko, bakır ve manganez önemli bir konumda bulunduğu bilinmektedir. Bu çalışmanın amacı, antioksidan etkili vitamin ve minerallerin insan sağlığını üzerinde etki ederken kullandıkları mekanizmaları açıklamaktır.

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Anahtar Kelimeler: Antioksidanlar, Vitaminler, Mineraller, Bağışıklık

TRANSPLANTE ORGAN BİYOPSİLERİNİN YAPAY ZEKA İLE DEĞERLENDİRİLMESİ

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ÖZET

Organ reddi, artan akut organ yetmezliği riski ve azalan transplante organ ömrüne neden olabilen, transplantasyonun ilk yılında hastaların %15-20'sini etkileyen bir tablodur. Uluslararası histoloji derecelendirme kılavuzlarının kullanımı ve nitel morfolojik analizler, uygulamada gözlemciler arasında önemli ölçüde değişkenlik gösterebilmekte, verdiği sonuçların netliği ve doğruluğu sınırlı olabilmektedir. Organ nakli öncesi yapılan araştırmalar ve nakil sonrası bakım, organ reddi sıklığını önemli ölçüde azaltsa da transplantasyondan yıllar sonra bile organ reddi riski devam etmektedir. Doğru zamanda yapılan biyopsiler veya organ reddi tipinin doğru teşhisini, organ reddi tedavisinde yöntem seçimi, gereksiz tedavi kaynaklı doğabilecek olumsuz sonuçlar ve gecikmiş tedavi neticesi olarak ortaya çıkabilecek transplante organ hasarı riski nedeniyle son derece önemlidir. Dolayısıyla, organ reddi tespiti, sınıflandırması ve derecelendirmesinin standardizasyonu ciddi klinik öneme sahiptir. Son yıllarda derin öğrenme yöntemleri histolojik veriler ile eğitilerek hastalık tespiti, sınıflandırılması ve karakterizasyonunda dikkate değer performanslar elde edilmiştir. Halihazırda birçok çalışma, yapay zeka modellerinin çeşitli tıbbi görüntüleri sınıflandırmada, uzmanla birlikte, daha üstün performanslara ulaşabilme potansiyelini de göstermiştir. Ek olarak, son zamanlarda ortaya çıkan araştırmalar, yapay zekanın karar destek mekanizması olarak kullanılmasının teşiste doğruluk oranlarında ciddi artışları mümkün kılabileceğinin işaretlerini vermektedir. Bu konușmada, organ reddinin histopatolojik değerlendirilmesinde son zamanlarda ortaya çıkan yapay zeka destekli yaklaşılara genel bir bakış sunulacaktır ve kullanılan yapay zeka yöntemlerin çalışma mekanizmalarına degeinilecektir.

Anahtar Kelimeler: Dijital Patoloji, Yapay Zeka, Organ Nakli, Derin Öğrenme

EVALUATION OF TRANSPLANTED ORGAN BIOPSIES WITH ARTIFICIAL INTELLIGENCE

ABSTRACT

Organ rejection is a condition that affects 15-20% of patients in the first year of transplantation, which can lead to an increased risk of acute organ failure and reduced transplanted organ lifespan. The use of international histology grading guidelines and qualitative morphological analysis can vary considerably between observers in practice, with limited clarity and accuracy of its results. Although pre-transplant research and post-transplant care significantly reduce the frequency of organ rejection, the risk of organ rejection continues even years after transplantation.

Biopsies performed at the right time or the correct diagnosis of the organ rejection type are extremely important due to the choice of method in the treatment, negative consequences that may arise due to unnecessary treatment and the risk of transplanted organ damage that may occur as a result of delayed treatment. Therefore, standardization of rejection detection, classification and grading is of significant clinical importance. In recent years, deep learning methods have been trained with histological data, and achieved remarkable performance in disease detection, classification and characterization. Many studies have already demonstrated the potential of artificial intelligence models in achieving superior performances, together with the expert pathologist, in classifying various types of medical images. In addition, recent research indicates that the use of artificial intelligence as a decision support mechanism can enable significant increases in diagnostic accuracy. In this talk, an overview of the recently emerged artificial intelligence approaches in the histopathological evaluation of organ rejection will be presented and the working mechanisms of these approaches will be explained.

Keywords: Digital Pathology, Artificial Intelligence, Organ Transplantation, Deep Learning

THE INFLUENCE OF SILVER NANOPARTICLES MADE IN CHITOSAN AREA ON MMP-9 IN EXPERIMENTAL MODELS OF CHRONIC BRONCHITIS

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WHAT IS COPD AND CHRONIC BRONCHITIS?

According to the World Health Organization in 2017, chronic respiratory diseases (CRD) are one of the major global public health challenges in the world. According to the same data, one-sixth of all deaths in CRD are related, with (COPD) . One of the molecular mechanisms for the development of COPD and especially CB is the initial stage of cellular apoptosis, when mitochondrial populations become massive producers of ROS (reactive oxides). One of the manifestations of COPD is chronical broncitis. The CDC reported in 2017 that there were 8.4 million adolescents diagnosed with chronic bronchitis in the United States. According to the National Center for Disease Control and Public Health, 35,209 people were registered in 2017 with chronic obstructive pulmonary disease . The largest number came from chronic bronchitis. The prevalence rate per 100,000 population was 565.7, the incidence rate was -245.9.

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Metalloproteinase-9, which induces proteins of major components of the basement membrane, is involved in the control of the Broncho-alveolar system. Destructive "melting" and abnormal enlargements occur in the lung tissue, which eventually impairs the ability of this organ to function.

THE ROLE OF NANOPARTICLES IN MEDICINE

In recent years, the use of nanoparticles in biology and medicine has become increasingly widespread. Silver nanoparticles (AgNPs) have a special place among them with their unique properties. It has been established that the bactericidal activity of AgNPs depends on several parameters, such as their size, shape, and physiological stability. Typically, silver nanoparticles change in the physiological area, such as aggregation and surface inactivation, which significantly weakens the antibacterial properties. In the physiological area, the effectiveness of silver can be enhanced by the use of chitosan, a sorbent of natural origin, which is made from the crab chitin.

PURPOSE OF RESEARCH

The aim of the study was to investigate the effect of silver nanoparticles, made in the chitosan area, on metalloproteinase-9 in chronic obstructive pulmonary disease, particularly chronic bronchitis. To reach this, we set several tasks. In research, we are using an innovative method of treatment, which is relatively new in practice. During the experiment, we created a silver nanoparticle and a chitosan Nano compound by "Green Technology".

THE FIRST TASK: production of silver nanoparticles in the chitosan area, quantification of silver in the compound and study of its physical-chemical properties (fractional composition, particle size, viscosity, rheological parameters, etc.)

THE SECOND TASK: to study the action of a compound of silver and chitosan nanoparticles on rats with flak.

METHODS AND METHODOLOGY

The following methods were used in our experiment for the purpose of the study:

OBJECT OF RESEARCH

70, white adult rats (250-300 grams). During the experiment, we divided the rats into four groups:

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I. Healthy or control group

II. Rats with chronic bronchitis

III. CB rats treated with a compound of chitosan and silver nanoparticles

IV. Rats with CB who underwent standard treatment

RESULTS

1. With the Using of Nanomill (DECO-PBM-V-0.4L model), separately silver, chitosan and then their mixture were grounded.
2. There was prepared an aqueous solution of the this obtained compound
3. The aqueous solution was impacted with ultrasound (ULTRASONIC PROCESSOR, MODEL: FS-1800N)
4. A model of chronic bronchitis was obtained in rats

5. Rats with CB were treated with an experimental compound solution by inhaler, and the second group with CB was treated with standard treatment such as steroids inhalation
6. After one week for following observation, we performed biochemical analysis of their blood in rats using the ELISA technology and determined the MMP-9 level in both the diseased and control groups.

CONCLUSION

An effective compound, which was developed by us, had a positive effect on experimental rats in the treatment of chronic bronchitis.

We believe that the antioxidant properties of silver nanoparticles and chitosan will reduce the negative effects of metalloproteinases on lung tissue, which will prevent the risk of developing chronic bronchitis. This will make it possible to effectively manage the complications of CBD, reduce mortality and improve treatment costs as well as improve quality of life and ability to work. this study has not been completed, at this stage it is in process at Natishvili Morphology Institute, in a biochemistry laboratory. The final results are being analyzed at this time.

All experiments are conducted in accordance with international GLP standards. The Committee approved protocols for all experiments on rats for the Care and Use of Laboratory Animals. The principles of humane treatment of animals were observed in accordance with the legislation of Georgia and international agreements.

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EATING PATTERNS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

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ABSTRACT

Many parents of children on the autism spectrum struggle with their child's severe eating problems with little or no professional help. In part, this is simply due to the limited number of specialists dealing with eating and feeding disorders. Furthermore, within this limited number of specialists few have much understanding and experience with children who have autism spectrum disorders. A frequently suggested strategy for many children with eating and feeding disorders involves withholding food until the child is hungry enough to eat. This approach has been shown to be dangerous and not appropriate for a child on the autism spectrum. Unfortunately, professionals as well as concerned family members and friends mistakenly blame parents of children with autism spectrum disorders for their child's poor eating habits. Sometimes parents' concerns are ignored and they are told not to worry since most children go through stages of picky eating and food fads.

LINK BETWEEN DOWN SYNDROME AND INTELLECTUAL DISABILITY: A MINI REVIEW

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ABSTRACT

Most children with Down syndrome have some level of intellectual disability – usually in the mild to moderate range. People with mild intellectual disability are usually able to learn how to do everyday things like read, hold a job, and take public transportation on their own. People with moderate intellectual disability usually need more support. Many children with Down syndrome can participate in regular classrooms, though they may need extra help or modifications. Thanks to widespread special education and community programs, more and more people with Down syndrome graduate from high school, attend college and work in their communities. To help children with Down syndrome reach their highest potential, parents can seek out assistance programs as early as possible. By law, every state must provide developmental and special education services for children with Down syndrome, starting at birth with early Intervention and then continuing with public education until age 21.

GARTLAND TİP-3 SUPRAKONDİLER KIRIKLarda LATERAL YAKLAŞIMLA AÇIK REDÜKSİYON İNTERNAL FİKSASYON İLE PERKÜTAN PİNLEME CERRAHİLERİNİN ERKEN DÖNEM SONUÇLARININ KARŞILAŞTIRILMASI

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ÖZET

Amaç: Bu çalışmada Gartland tip 3 suprakondiler kırığı sonrası lateralden yaklaşımla açık redüksiyon internal fiksasyon ile perkütan pinleme sonrası erken dönem sonuçlarını karşılaştırmak amaçlanmıştır.

Materyal-Metod: 2018-2020 yılları arasında Gartland tip 3 suprakondiler kırığı sebebiyle açık redüksiyon internal tespit veya peruktan pinleme yapılmış yaklaşık 30 hasta çalışmaya dahil edildi. Bütün hastalar acil servise başvuru sonrasında ilk 6 saat içerisinde opere edildi. Çalışmaya alınan hastaların 10'u lateral mini insizyonla açık redüksiyon internal 2 adet cross pinleme yapılan, 20'si perkütan olarak 2 adet cross pinleme yapılmış hastalardan oluşmaktadır. Gartland sınıflamasına göre Tip-3 olarak belirlenen ve cerrahi uygulanan hastalar çalışmaya dahil edildi. Hastalar operasyon sonrası 4 hafta uzun kol atelle takip edildi. Atelden sonra bütün hastalar aynı merkezdeki fizik tedavi kliniğinde 21 seans olmak üzere 3 hafta programa alındı. Hastalar 4. Hafta, 8. Hafta ve 3. ayda direk grafi(XRay) ve Eklem Hareket Açıklığı(ROM) ve Flynn's kriterleri kullanılarak karşılaştırma yapıldı. Çalışmanın istatistiksel analizi Statistical Package for Social Sciences version 21.0 software for Windows (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp., USA) kullanılarak yapıldı.

Bulgular: Hastaların ameliyat esnasında yaş ortalaması, açık redüksiyon internal fiksasyon(ARİF) yapılan grupta $6,2 \pm 2,8$, kapalı redüksiyon peruktan pinleme(KRPP) yapılmış hastalarda $6,4 \pm 3,1$ olarak bulundu ($p > 0,05$). Hiçbir hastada derin enfeksiyon, redüksiyon kaybı, nörovasküler defisit görülmmedi. KRPP yapılan 2 hastada kondil-şaft açısı 55 derece ölçüldü. Hastalar Flynn'kriterlerine göre KRPP grubundaki sonuçlar 16 hastada mükemmel 12 hastada iyi ve 2 hastada kötü idi; mini-ARİF grubundaki sonuçlar 9'unda mükemmel ve 1'de iyi idi. 8. Hafta ve 3. ayda eklem hareket açıklığı(ROM) iki grupta benzerdi ve iki grup arasında istatistiksel anlamlılık yoktu ($p > 0,05$). Floroskopi açısından KRPP yapılan hastalarda fazla görülmesine rağmen gruplar arasında istatistiksel anlamlılık görülmemiştir($p < 0,05$)

Sonuç: Deplase suprakondiler kırığı olan hastalarda ARİF ile KRPP arasında erken dönemde fark görülmemiştir. Deplase suprakondiler kırıklarda intraoperatif redüksiyon zorluklarında mini lateral yaklaşım etkin ve güvenilir bir yöntemdir.

Anahtar Kelimeler: Suprakondiler kırık, Açık redüksiyon, Kapalı redüksiyon

COMPARISON OF SHORT-TERM RESULT OF PERCUTANEOUS PINNING SURGERY AND OPEN REDUCTION INTERNAL FIXATION WITH LATERAL APPROACH IN GARTLAND TYPE-3 SUPRACONDYLAR FRACTURES

ABSTRACT

Objective: In this study, we aimed to compare the early period results between open reduction internal fixation with lateral approach and percutaneous pinning after Gartland type-3 supracondylar fracture.

Materials and Methods: 30 patients between 2018-2020, who underwent open reduction internal fixation or K-wire pinning after Gartland type-3 supracondylar fractures were included in the study. All patients were operated within the first 6-hour after admission to the emergency department. Ten of the patients included in the study consisted of patients who underwent open reduction internal 2 cross-pin with lateral mini incision, 20 of them had percutaneous 2 cross pin. Patients, who were classified according to the as Type-3 Gartland classification. The patients were followed up with a long arm cast for 4 weeks postoperatively. After the splint removal, all patients were included in the physical therapy program at the same center for 3 weeks, 21 sessions. Patients were compared using direct radiography (XRay) and Range of Motion (ROM) and Flynn's criteria at 4th week, 8th week and 3rd month. Statistical analysis of the study was performed using Statistical Package for Social Sciences version 21.0 software for Windows (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp., USA).

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Results: The mean age of the patients was 6.2 ± 2.8 in the open reduction internal fixation (ORIF) group, and 6.4 ± 3.1 in the closed reduction K-wire fixation (CRPP) group ($p>0,05$). None of the patients had deep infection, loss of reduction, or neurovascular deficit. Condyle-shaft angle was measured 55 degrees in 2 patients, who underwent CRPP. According to the Flynn's criteria, the results in the CRPP group were excellent in 16 patients, good in 12 patients, and poor in 2 patients; the results in the ORIF group were excellent in 9 and good in 1. The range of motion (ROM) of the two groups was similar in the 8th week and the 3rd month, and there was no statistical significance between the two groups ($p>0,05$). Although fluoroscopy was more common in patients who underwent CRPP, no statistical significance was observed between the two groups ($p<0,05$).

Conclusion: There was no difference between ORIF and CRPP in the early period in patients with displaced supracondylar fractures,. Mini lateral approach is an effective and reliable method for intraoperative reduction difficulties in displaced supracondylar fractures.

Keywords: Supracondylar fracture, Open reduction, Closed reduction

DİZ OSTEOARTRİT TEDAVİSİNDE VAKUM İNTERFERANSİYEL AKIM TEDAVİSİ İLE KLASİK TENS TEDAVİSİNİN ETKİNLİKLERİİN KARŞILAŞTIRILMASI

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Giriş ve Amaç: Osteoartrit eklem kıkırdağı ile subkondral kemikte yapım ve yıkım olaylarındaki dengenin bozulmasıyla karakterize dinamik bir hastalıktır. 65 yaş üzerindeki yetişkinlerin yaklaşık 2/3'ünü etkiler. Diz osteoartriti ağrı ve fonksiyon kaybına neden olarak yaşam kalitesinde bozulmaya yol açar. Bu çalışmada amacımız diz osteoartriti tedavisinde vakum interferansiyel akım ve klasik TENS akım tedavilerinin etkinliklerinin karşılaştırılmasıdır.

Materyal ve Metod: Çalışmaya Batman Eğitim ve Araştırma Fiziksel Tıp ve Rehabilitasyon Kliniğine diz ağrısı yakınıması ile başvuran klinik değerlendirme sonucu American College of Rheumatology (ACR) tanı kriterlerine göre diz osteoartrit tanısı alan hastalar alındı. Araştırmaya, 40 yaş üzeri, en az 3 aydır devam eden diz ağrısı olan 80 gönüllü hasta dahil edilmiştir. 80 hasta kapalı zarf usulü 2 gruba randomize edildi. Her iki gruba 3 hafta süreyle hafta içi 5'er gün olmak üzere 15 seans fizik tedavi uygulandı. Fizik tedavi olarak 1. Gruba hotpack, ultrasound, TENS tedavisi; 2.gruba hotpack, ultrasound, VIFA tedavisi verildi. Hastaların demografik ve klinik özellikleri kaydedildi Değerlendirmeler tedavi öncesi, tedavi sonrası ve 3. Ay tekrarlandı. Hastaların ağrı düzeyi Visuel Analog Skala(VAS) ile, eklem hareket açıklığı(EHA) gonyometre ile fonksiyonel durumları Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) ile, yaşam kalitesini SF-36 yaşam kalitesi ölçü ile, tedavi başarısını subjektif olarak değerlendirmek için Global değerlendirme ölçü kullanıldı.

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Bulgular: Her iki grup yaş, cinsiyet, eğitim durumu, vücut kitle indeksi ve hastalık süresi açısından istatistiksel olarak benzer bulundu Tedavi öncesi değerlendirmelerde VAS EHA, WOMAC, SF-36 alt grup skorları arasında gruplar arasında istatistiksel olarak anlamlı farklılık bulunmamıştır ($p>0.05$). Grup içi karşılaştırmalarda, tedavi sonrası 1.haftada ve 3/ayda değerlendirilen tüm parametrelerde her 2 grupta da istatistiksel olarak anlamlı düzelmeler olduğu gözlenmiştir ($p<0.05$). Yaşam kalitesi açısından, SF-36 alt grup skorlarında her iki gruptada istatistiksel olarak anlamlı skor artışı olduğu saptanmıştır ($p<0.005$). GDÖ skorları açısından, gruplar arası karşılaştırmalarda tedavi sonrası 1.haftada yapılan en yüksek değerlendirmenin grup 2'de olduğu bulunmuşmasına rağmen her 2 gruptaki düzelmeye istatistiksel olarak anlamlıydı.

Sonuç: Çalışmamızda diz osteoartritli hastalarda VİFA ve TENS tedavisinin ağrı azalması, eklem hareket açıklığı ve fonksiyonel durumun iyileştirilmesi açısından etkili olduklarını söyleyebiliriz. Bu konuda daha yüksek hasta sayılı, daha geniş kapsamlı çalışmalara ihtiyaç duyulmaktadır.

COMPARISON OF THE EFFICACY OF VACUUM INTERFERENTIAL CURRENT THERAPY AND CLASSICAL TENS APPLICATION IN THE TREATMENT OF KNEE OSTEOARTHRITIS

Objective: Osteoarthritis is dynamic condition that characterized by the disruption of the balance and destruction events between the articular cartilage and subchondral bone formation. 2/3 of adults over the age of 65 approximately is affected. Osteoarthritis in the knee has pain and loss of function, leading to deterioration in quality of life. This study aimed to compare the efficacy of vacuum interferential flow and classical TENS application in the treatment of knee osteoarthritis.

Materials and Methods: Patients of admission Physical Medicine and Rehabilitation Clinic with knee pain and diagnosed with osteoarthritis according to American College of Rheumatology (ACR) diagnostic criteria were included in the study. Eighty volunteer patients over the age of 40 with knee pain for at least 3 months were included in the study. 80 patients were randomized into 2 groups by the closed envelope method. 15 sessions of physical therapy were applied to both groups for 3-week, 5-day each week. 1st group was applied physical therapy, hotpack, ultrasound, TENS application, and 2nd group was applied Hotpack, ultrasound, VIFA application. The demographic and clinical characteristics of the patients were recorded. Patients were evaluated before treatment, after treatment, and 3-month. The pain of the patients was measured with the Visual Analog Scale (VAS), the range of motion (ROM) was measured with the goniometer, their functional status was evaluated with the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), the SF-36 quality of life scale, and the Global Scale

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Results: Age, gender, educational status, body mass index and duration of illness were similar, which was no statically significant. VAS, and ROM, and WOMAC, and SF-36 was not different, which was not statistically significant difference between the groups in the pre-treatment evaluations ($p > 0.05$). In the intergroup comparisons, statistically significant improvements were observed in both groups in all parameters evaluated in the 1st week and 3rd month after treatment ($p < 0.05$). SF-36 subgroup scores was increased, and statistically significant between the groups ($p < 0.005$). GDS scores, although the highest evaluation made in the first week after treatment was found in group 2 in the comparisons between groups, the improvement in both groups was statistically significant.

Conclusion: In our study, we claimed that VIFA and TENS application were reduced pain, and improved range of motion with knee osteoarthritis. More comprehensive studies with higher patient numbers are needed on this subject.

Key Words: Osteoarthritis, TENS, Vacuum Interferential, Quality of Life

KKTC'DEKİ OKUL ÖNCESİ KURUMLarda ÇALIŞAN ÖĞRETMENLERİN ve AİLELERİN ÇOCUK BESLENMESİNÉ İLİŞKİN GÖRÜŞLERİNİN KARŞILAŞTIRILMASI

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ÖZET

Beslenme; canlıların büyümeye, gelişmeye, üreme, sağlıklarının korunması ve yaşamlarının devamı gibi önemli işlevleri yerine getirebilmek için gerekli besin maddelerinin alınması ve kullanılmasıdır. Çocuğa okul çağına gelinceye kadar kendi kendine yemek yemeyi öğretmek gerekmektedir. Çocuk yaklaşık bir yaşıdan itibaren kaşık tutmaya teşvik edilmeli ve okul öncesi dönemde kendi kendine yemek yiyebilmesi için gerekli destek çocuğa verilmelidir. Bu süreçte çocuklara anneleri ve öğretmenleri sağlıklı besinler vermelidir. Eğitimsiz ebeveynlerin birçoğu çocukların kulaktan dolma bilgilerle beslemektedirler. Aynı şekilde yeterli ve doğru beslenme bilgisi olmayan öğretmenler, çocuklar için kendi istedikleri doğrultuda beslenme listeleri oluşturmaktadır. Çocukların yeterli ve dengeli beslenmesi, öğretmen ve ebeveynlerin bilinçli davranışabilmesi için, her şeyden önce beslenme eğitiminin genel amaçlarının bilinmesi gerekmektedir. Bu çalışma ile Kuzey Kıbrıs Türk Cumhuriyeti'nde (KKTC) Okul Öncesi Kurumlarda Çalışan Öğretmenlerin ve Ailelerin Çocuk Beslenmesine İlişkin Görüşlerinin Karşılaştırılması amaçlanmıştır. Çalışma verileri KKTC'nin Girne İlçesi'nde kreş/okul öncesi eğitim veren okullardaki 79 öğretmen ile burada eğitim gören 42 çocuğun aileleri ile toplam 121 katılımcıyla yürütülmüştür. Veriler araştırmacı tarafından, katılımcıları ev ve kreş/okullarda ziyaret ederek gönüllü onam formu, demografik özellikleri ve ölçegin bulunduğu anket formu ile elde edilmiştir. Çalışmaya katılanların %20,7'si lisansaltı eğitime, %79,3'ü lisans ve lisans üstü mezundur. Ailelerin ve öğretmenlerin ölçek sorularına verdikleri cevaplar incelendiğinde; aileler ile öğretmenlerin dengeli ve düzenli beslenme konusundaki tutumları, besin içeriklerini anlamlandırmaya karşı tutumları, dengesiz ve düzensiz beslenme davranışına karşı tutumları, çocukların yemek yeme ilgisine karşı tutumları, çocukların içeceklerle karşı tutumları, ailelerin gelir düzeylerine göre düzenli ve dengeli beslenme davranışına karşı tutumları, ailelerin gelir düzeylerine göre besin içeriklerini anlamlandırmaya karşı tutumları, öğretmenlerin öğrenim durumu ile besin içeriklerini anlamlandırmaya karşı tutumları, öğretmenlerin öğrenim durumu ile

düzenli ve dengeli beslenme davranışına karşı tutumları arasında istatistiksel bakımdan anlamlı bir farklılık göstermemektedir. Çalışmanın sonucunda, çocukların sağlıklı beslenme konusunda aktif rol alan aileler ve öğretmenlere beslenme, uzman kişi tarafından anlatılmalıdır. Devlet eliyle, beslenme konusunda toplum bilinci arttırılmalıdır.

Anahtar Kelimeler: Diyet davranışı 1, Erken çocukluk dönemi beslenme2, Beslenme Bilgisi3, Aile etkileri 4.

COMPARISON OF NUTRITION RELATED KNOWLEDGE and PRACTICES OF PRE-SCHOOL TEACHERS AND MOTHERS; A CASE OF NORTH CYPRUS

ABSTRACT

Nutrition plays a vital role in growth and development of humans. Children should be taught to eat on their own by the time they reach school age. A child should learn to hold a spoon by the age of one , and be able to eat by himself in the preschool period. During this period families and teachers should introduce healthy foods in diet. Parents and teachers who lack sufficient nutritional knowledge fail to create adequate meal plans for children. To ensure adequate and balanced nutrition provision to children parents and teachers need to plan wisely and act accordingly. This study was planned to compare the nutrition related beliefs and practices of teachers and families towards nutrition of kindergarten students in the Turkish Republic of Northern Cyprus (TRNC).⁵³

A total of 121 people volunteered for the study, 79 were preschool teachers from Kyrenia and 42 were mothers of pre school children. The data was collected by visiting the homes and kindergartens using a questionnaire comprising of sociodemographic characteristics, and the questions pertaining to knwoledge and practices towards nutrition. 20.7% of the participants were undergraduates, 79.3% of were graduate and above. The answers were statistically analyzed for parents and teachers' attitudes towards balanced and regular nutrition, their knowledge of nutritional content, attitudes towards irregular eating habits, their perception of children's eating interest, children's attitudes towards beverages, regular and balanced nutrition behavior according to economic status of family. There was no statistically significant difference between the educational level of teachers and parents, and their knowledge of nutrients, their attitudes towards making nutrient choices, regular and balanced nutrition behavior of children. The study highlights the need of explaining nutrition to families and teachers, and creating public awareness to ensure sustainable results in developing healthy eating habits in children that last for a lifetime.

Keywords: Dietary behavior 1, Early childhood nutrition2, Nutrition Knowledge3, Family influences 4.

CHALLENGES FOR PHYSICIANS AND MANAGERS PROVIDING ANTENATAL CARE SERVICES

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SUMMARY

Purpose of this study was detection the knowledge-attitude of doctors and managers of primary health care providers towards the state program of antenatal care services and mothers and children healthcare system. Cross-sectional research was conducted. Target group, 100 physicians / managers were interviewed by direct interviews. After interview revels, that. According to the 44% of service providers, the current maternal and child health care system in Georgia does not meet the needs of mothers and children; 63% think the system needs improvement; 79% of service providers have never participated in the meetings on drafting the state program for maternal and child health, 53% have no information about the funds allocated for the maternal and child health system; 35% had organizational problems in service delivery; The interviews revealed important findings: most pregnant women often need additional research due to health conditions, which is not free and affects on the satisfaction of the pregnant women. Pregnant women of high financial status often choose clinics for supervision that do not implement a state program and also receive free program services. According to the doctors and managers providing antenatal care programs, the volume and content of the program does not meet the real needs and demands of pregnant women. The involvement of antenatal services direct providers in the creating and development of the programs is important for improvement of the pregnant problems.

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INTRODUCTION

In 1990s, after declaring the Independence, Georgia started building the novel state. Reforms had to be implemented in all the directions. The reform and reorientation of the healthcare system was initiated; Major strategic directions and targeted healthcare programs were defined, that was stipulated (considered) in the healthcare policy.

Since 1995, the Georgian government initiated implementation of the health reform. The maternal and child health was the major priority of the healthcare national policy. The reform, that had to be implemented in the healthcare sector, started with the First World Bank Georgian Healthcare Project, where maternal and child health was one of the most significant components of the project. Since 1995, implementation of the first program of the maternal and child healthcare was initiated: the state program of “Safe Motherhood and Child Survival”, Whose purpose was to monitor pregnant women, prevent pregnancy-related complications, ensure safe childbirth, and, if

necessary, seek medical attention. The state program provided 4-visit free services for pregnant women. Later, from February 2018, the 4-visit model will be replaced by an 8-visit model based on a WHO recommendation.

Antenatal services for pregnant women are provided by mono and multidisciplinary primary health care institutions in Georgia; Part of the institutions the service provided by the state program (called "State Program for Maternal and Child Health"), which is free of charge for the population of Georgia.

Pregnant women using the free program often need many additional visits and laboratory-instrumental research, which is not provided by the program, it is expensive, such a financial burden has a negative impact on the expectations and satisfaction of beneficiaries with low economic status; Medical expenses are also increasing, including out-of-pocket payments.

Maternal and child health programs is free for pregnant women citizen of Georgian.

The goal of the State Maternal and Child Health Program is to reduce maternal and neonatal mortality, reduce the number of premature births and congenital abnormalities via 1) effective patronage of pregnant;2) increasing the geographic availability and financial affordability of qualified medical assistance 3) providing necessary medicaments.

The aim of the work was to study the knowledge-attitude of doctors and managers of primary health care, who provides the pregnant services, towards the state program for antenatal care⁵⁵ monitoring and maternal and child healthcare system.

Methods and Materials was: Searching, collecting, systematization of literature sources concerning maternal and child healthcare system in Georgia as well as studying and analyses of state programs of maternal and child healthcare, at primary healthcare level during 1996-2019 years.

We have studied the awareness (knowledge) and attitude of primary healthcare personnel's-doctors and managers toward to the maternal and child healthcare system and maternal and children's state program.

The methodologic basis of the study was quantitative methods of investigation, namely: Quantitative, cross-section investigation.

The field of work was performed on the basis of randomized selection of study objects doctors/managers, employed in PHC level, all 100 respondents.

Technique of investigation was the method of direct interviewing - The instrument of the investigation was the questionnaire. General title of the questionnaire was:" Awareness and attitude of PHC staff to the state program of antenatal monitoring and maternal and child healthcare system.

RESEARCH AND FINDINGS: were studied by 100 doctors and managers employed in the primary health care (first level) institution. The age composition of the employees in the first level medical institutions was as follows: 25-29 years old was 7%, 30-35 years old -18%, 36-40 years old -23%, more than 40 years old 52% .According to the employment status (position), the staff was as follows: Director - 3.6%. Deputy Director - 5.4%, Head of Department - 8.9%, Head of Department - 2.7%, Manager - 14.3%, Doctor - 63.4%.The composition of employees according to work experience was as follows: less than 5 years - 4%, 5-10 years - 36%, more than 10 years - 60%.According to the duration of work in this position, the composition of employees was as follows: less than 1 year -1%, less than 5 years -13%, 5-10 years- 35%, more than 10 years -51% and 21% of the first level medical care providers were women's counseling, 11% - family medicine center, 8% - medical-prophylactic center, 4% - reproductive health center, 39% - women's counseling-diagnostic center near the maternity hospital, 17% - multidisciplinary Clinic Consulting-Diagnostic Center. All these institutions participated in the implementation of state programs.35% of respondents had problems while delivering the state program of antenatal care for pregnant women and 65% did not have a problem. 59% of respondents employed in primary health care facilities believe that information about the maternal and child health care system is available in Georgia, while 41% believe that it is not available. 62% of respondents employed in primary care providers said that they personally have enough information about the maternal and child health care system in Georgia, while 38% think that they do not have enough information. 53% of respondents employed in primary health care facilities are not informed and do not know how much the state spends on maternal and child health, while 47% have information and say they know how much the state spends on maternal and child health. In order. Only 31% of respondents employed in primary health care facilities said they had participated in meetings, or online surveys, or forums on the formation of a maternal and child health care system, while 69% did not. Only 21% of respondents employed in primary health care facilities participated in meetings and surveys on the formation of a maternal and child health care system, while 79% did not. 56% of respondents employed in primary health care facilities think that the current maternal and child health care system in Georgia meets the needs of mothers and children, while 44% think that it does not.63% of respondents employed in primary health care facilities think that the current maternal and child health care system in Georgia needs to be improved, while 37% think more positively and believe that it does not need to be improved. Only 26% of respondents employed in primary health care facilities think that the current maternal and child health care system in Georgia meets their needs in the field of health care, while 74% think not.

Respondents of first-degree medical care providers in Georgia rated the maternal and child health care system as follows: 9% said it was bad, 60% said it was satisfactory, 27% said it was good, and 4% said it was very good.

During last over the 20 years period was improved of antenatal monitoring parameters: the share of timely applicable for antenatal care registration of pregnant women and the share of full 4 (8) antenatal visits increased.

At receiving the antenatal services, 89,4% of pregnant, assessed as a physiological, required more than 8 -10visits, while 91,9% required additional investigations, which frequently creates the problem of financial affordability of medical services.

The discrepancy of the volume and content of maternal and child health state program services with pregnant women's needs and demands in terms of increasing financing of the program, is partly associated with low involvement of providers in the planning (development) of the program; 79% of doctors/managers of antenatal care service providers have never participated in the meetings, held for planning the maternal and child state program. They have never been asked and never expressed their ideas. 53% of the respondents, provider of pregnant antenatal services, is not informed and does not know what sums are spent by the state for maternal and child healthcare.

CONCLUSION: It is recommended to increase participation and active involvement of direct providers (doctors/managers) of maternal and child medical services in the process of program ⁵⁷ development and their effective communication with authors of the program.

It is recommended to implement at primary healthcare level, provided by a family doctor, financially secured, focused, preconceptional, mandatory investigation in order to detect extra genital and latent diseases to assess health condition and readiness of the organism for pregnancy.

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OLEOKANTAL'İN MCF-7 MEME KANSERİ HÜCRELERİ ÜZERİNE SİTOTOKSİK ETKİSİNİN BELİRLENMESİ

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ÖZET

Olekantal, zeytin yağında bulunan polifenol bileşenlerinden biridir. Birçok çalışma ile oleokantalin anti-inflamatuvar, anti-oksidan, anti-bakteriyal ve anti-kanser özelliklere sahip olduğu belirlenmiştir. Çalışmada, oleokantalin MCF-7 meme kanseri hücreleri üzerine sitotoksik etkisinin proliferasyon, damarlanma ve oksidatif stres aracılığı ile belirlenmesi amaçlandı. Deneyde, MCF-7 meme kanseri ve L929 fibroblast hücreleri 5 farklı konsantrasyondaki (0, 5, 10, 20, 40 ve 80 μ L/mL) oleokantal ile 24 ve 48 saat süre ile muamele edildi. Hücrelerin proliferasyon düzeyi MTT analizi ile belirlendi. İmmünositokimya ve hücre metastaz analizleri için her iki hücreye 3 farklı dozdaki oleokantal (0, 5, 20 ve 80 μ L/mL) 24 saat uygulandı. Süre sonunda immünositokimyasal boyama yapılarak damarlanma için VEGF ve oksidatif stres için HIF-1alfa seviyelerine bakıldı. Metastaz analizi, in vitro yara modeli aracılığıyla gerçekleştirildi ve yara kapanma yüzdesi hesaplandı. Elde edilen bulguların istatistiksel analizi sonucu doz artışına bağlı olarak MCF-7 hücrelerinin proliferasyonunun baskılandığı, VEGF ve HIF-1alfa seviyelerinin de azaldığı tespit edildi. Bunlara paralel olarak MCF-7 hücrelerinin proliferasyonunun baskılanmasıyla in vitro yara bölgесine metastaz oranında düşüş saptandı. Oleokantalin MCF-7 meme kanseri hücrelerinin proliferasyonunu, hücrelerin metastazında önemli rol oynayan VEGF ve HIF-1alfa sentezinin baskılanması üzerinden engellediği sonucuna varıldı.

Anahtar Kelimeler: Oleokantal, Meme Kanseri, Sitotoksisite, Damarlanma, Oksidatif Stres

DETERMINATION OF CYTOTOXIC EFFECT OF OLEOCANTHAL ON MCF-7 BREAST CANCER CELLS

ABSTRACT

Oleocanthal is one of the polyphenol components found in olive oil. Many studies have observed that oleocanthal has anti-inflammatory, anti-oxidant, anti-bacterial and anti-cancer properties. In the study, it was aimed to determine the cytotoxic effect of oleocanthal on MCF-7 breast cancer cells via proliferation, vascularization and oxidative stress. In the experiment, MCF-7 breast cancer and L929 fibroblast cells were treated with oleocanthal at 5 different concentrations (0, 5, 10, 20, 40 and 80 μ L / mL) for 24 and 48 hours. The proliferation level of these cells was determined by MTT assay. For immunocytochemistry and cell metastasis analysis, 3 different doses of oleocanthal (0, 5, 20 and 80 μ L / mL) were applied to both cells for 24 hours. Then, immunocytochemical staining was performed to measure the levels of VEGF for vascularization and HIF-1alpha for oxidative stress. Metastasis analysis was performed using cell scratch assay, an in vitro wound model, and wound closure rate was calculated. As a result of the statistical analysis of the data, it was established that the proliferation of MCF-7 cells was suppressed and VEGF and HIF-1alpha levels decreased depending on the dose increase. Parallel to these results, a decrease in the rate of metastasis to the in vitro wound area was detected by suppressing the proliferation of MCF-7 cells. It was concluded that oleocanthal inhibits the proliferation of MCF-7 breast cancer cells by suppressing VEGF and HIF-1alpha synthesis, which play an important role in the metastasis of the breast cancer cells.

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Keywords: Oleocanthal, Breast Cancer, Cytotoxicity, Vascularization, Oxidative Stress

PHYSICAL AND PSYCHOEDAGOGICAL RECOVERY OF MARTIAL ARTS TRAUMA

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ABSTRACT

Contemporary performance sport has become not only a spectacle, but also an expression of human biology. The number of sports enthusiasts is constantly growing, in parallel. The number of injured or traumatized athletes during training or competitions is also worryingly increasing. Most specialists indicate a close interdependence between the number and type of sports injuries and the characteristics of each sport.

Martial arts does not constitute an alternative, but a reality, a social phenomenon strongly anchored in our contemporary life. Through their complexity and originality, martial arts polarize the attention and interest of those who come in contact with its high moral principles.

Investigations conducted in various countries have focused on the development of martial arts as a method of personality formation, addressed equally to the body and spirit.

In contemporary sports training and competitions, young people practice martial arts in increasing numbers, and their desire to achieve competitive sports performance leads to a permanent increase in the number of injured athletes. These undesirable events determine particularly important implications on several levels, their knowledge being beneficial to all factors involved in sports.

These include the consequences suffered by the injured athlete, characterized by suffering, temporary interruptions of sports and daily activities, physical and mental sequelae. Therefore, the athlete must be rehabilitated and reintegrated into sports and social activity. So rehabilitation becomes a social obligation from a medical obligation.

For a more effective and soon rehabilitation of the athlete is acted by certain means, namely: medical physical recovery, mental rehabilitation, professional education - re-education and social rehabilitation.

Keywords: martial arts, recovery, sport, trauma.

Topicality: Martial arts constitute a certain possibility for the harmonious formation and development of the human personality. In contemporary sports training and competitions, young people practice martial arts in increasing numbers, and their desire to achieve competitive sports performance as quickly as possible, leads to a permanent increase in the number of injured athletes (Lantz J., 2002). These unwanted events lead specialists to study the evolution of martial arts, the positive impact and negative consequences of various sports injuries. Among them are the consequences suffered by the injured athlete, characterized by suffering, temporal interruptions of sports and daily activities, physical and mental sequelae (Theeboom M. & Vertonghen J., 2010). That is why the athlete needs a functional recovery and a quick reintegration in sports and social activity. In this connection, rehabilitation becomes not only a medical obligation, but also a social obligation.

Rehabilitation is a form of complex medical and social assistance, but at the same time unitary in conception, which takes place continuously and has as final goal the recovery of deficiencies in the productive society, its means of action aiming to obtain optimal values of the four vital parameters of any individual: morpho-functional capacity, mental state, professional training and social condition (Baciu C., 1977).

For a more effective and as soon as possible rehabilitation of the athlete, certain means are acted upon, namely: medical physical recovery, mental rehabilitation, professional education-re-education and social rehabilitation.

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Material and Methods: The present research starts from the premise that injuries from a combat sport and direct contact cannot be completely eliminated, only the knowledge and understanding of the laws of their production can lead to the establishment of milestones of training and sports conduct, resulting in reducing these unwanted events. The experimental subjects were members of the teams of the Ying Quan Sports Club - Bucharest, the School Sports Club no. 4 - Bucharest and the Prosport Roferd Foundation - Bucharest, aged between 14 and 23 years.

To solve the proposed tasks, the following methods were used: literature review, pedagogical observation, survey-questionnaire, test method, physical recovery methods - physical therapy and massage, psycho-pedagogical recovery methods - relaxation and self-relaxation.

The analysis of data from the scientific and methodological literature shows that martial arts expose practitioners to accidents, especially traumatic, through direct contact, the manifestation of strength, speed, skill, mobility, and other complex manifestations determined by the specifics of the fight. Technical training is most responsible for trauma, independent of other factors of sports

training. Martial arts practitioners undergo a great deal of physical and mental work, therefore, both during training and competitions, accidents of different severity occur. The present research shows that most accidents (74.66%) occur during training and only 24.44% of injuries occur in competitions.

The most common injuries are contusions both on the face and especially on the limbs. However, they are not the most serious or of great functional importance. Of the serious injuries that often result in sequelae, the most numerous are sprains to the elbow, knee and ankle. The survey shows that the highest percentage of accidents (43.8%) occur in the head, 9.55% - in the trunk area. Treatment in these injuries must be urgent, which requires knowledge and first aid from the coach.

Results: As a result of the study, it was found that the trauma is a strong stressor, which acted on the athlete in terms of intensity and severity of the trauma and psychological response, which we were able to perform with the two tests to detect stress and depression. After calculating the depression indices, the following were found: 55% of the subjects had mild depression; 35% - moderate depression; 15% did not have depression. In the research, we conducted a survey on a group of 15 athletes using the questionnaire "How to respond to stress", to which we obtained the following result: 60% of the subjects were within normal limits; 35% - below the normal limit; and 5% showed major stress, for which special balancing measures are required. Detection of stress and / or depression allows intervention with specialized staff to solve problems in a timely manner. "Psychological intervention" also has the role of speeding up and making recovery less stressful. At the same time, she must convince the patient to accept the pain and the severe regimen of therapy.

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The association of physical recovery methods - physiotherapy and massage with psycho-pedagogical methods, relaxation and self-suggestion - had a positive effect on the experimental group, expressed by increasing the recovery percentage by 5-15% and decreasing by 16-28% the days allocated to recovery. Also, from the surveys, we found that the methods of physical recovery, namely physical therapy (62.8%), massage (17.1%) and physiotherapy (13.8%), are the most used. Acupuncture (3.2%), climatology (1.1%) and hydrotherapy (1%) are less used methods.

Regarding psycho-pedagogical methods, mental training (41.1%), relaxation (21.8%) and positive thinking (12.75%) are the most used, and the other psycho-pedagogical methods are applied to a lesser extent: correct breathing and relaxation (10.1%), suggestion and self-suggestion (6.8%), self-hypnosis (4.8%), hypnosis (2.1%).

The replacement of some terms and exercises, from the recovery program, kinetherapeutic with exercises specific to martial arts, greatly facilitated the work of the physiotherapist, and the athlete supported the recovery program much easier.

Conclusions: The analysis of the results obtained from the application of physical recovery methods, associated with psycho-pedagogical methods, gives us the opportunity to collect information on the relationship between doctor - athlete - physiotherapist - coach, better understanding the meaning and significance for the injured athlete, his condition , hence the need to apply psycho-pedagogical methods, correlated with conventional physical methods. The survey conducted among specialists shows that 77.6% considered interdepartmental collaboration efficient and necessary, but in reality very few specialists collaborate with each other. As a result, the quality of the recovery act is often low.

The association of physical recovery methods with psycho-pedagogical ones has a positive impact on the traumatized, and the recovery program must be designed according to the age, sex, physical and mental possibilities of the athlete.

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KAPANAN MADEN SAHALARININ BULUNDUĞU BÖLGELERDE SOSYAL VE EKONOMİK SÜRDÜRÜLEBİLİRLİK VE TUZLUCA KAYATUZU MADENİ SAĞLIK TURİZMİ AMAÇLI TUZ TERAPİ MERKEZİ ÖRNEĞİ

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ÖZET

Sürdürülebilir madencilik; ancak piyasa koşulları dikkate alınarak milli kaynakların etkin ve verimli kullanılmasına yönelik stratejik plan ve programların gerçekleştirilmesiyle mümkün olabilmektedir. Stratejik planlamaya, madencilik faaliyetlerinin bütün süreçleri entegre edilmeli özellikle madencilik sonrası operasyonların üzerinde dikkatlice durulmalıdır. Olumsuz sonuçları en aza irdirmek hedeflemelidir. Bu şekilde günümüzün ihtiyaçlarını karşıtlarken sahip olduğumuz kaynakları verimli kullanmalı, gelecek nesillerinde ihtiyaçlarını karşılayabilme yeteneklerini geliştirebiliriz. Kalıcı refahın sağlanması amacı ile yeni fikirlere açık gelişmeye müsait üretim ve istihdam imkanlarının mümkün olduğunda çok insana fayda sağlayabilmeyi hedeflemiş bir anlayışla sosyal sürdürülebilirliği, gelişen istikrar ve zenginlik ile ekonomik sürdürülebilirliği ve gelişen bilinç sonrası doğanın korunması ihtiyacı ile çevresel sürdürülebilirliği ifade etmek mümkün olabilmektedir. İşte bu üç tanımla birlikte madencilik faaliyetlerinin sürdürülebilirliği doğru bir anlam kazanmış olmaktadır. Kayatuzu madeninin ve yeraltı havasının tedavi edici özellikleri gibi sahip olduğu potansiyeli kullanmak amacı ile geliştirilen yeraltı sağlık turizmi projesi bu anlamda önemli olmaktadır. Tamamlayıcı tip uygulamaları olarak ifade edilen Speleoterapi ve Haloterapi solunum yolları, kulak, burun, boğaz ve cilt rahatsızlıklarını konusunda oldukça faydalı olduğu bilinmektedir. Tuz madenciliği ile gerçekleştirilen madencilik faaliyetlerinin bölgede ekolojik ve sosyal çevre üzerindeki etkileri oldukça yüksek olmuştur. Süregelen madencilik faaliyetlerinin artışı ile yerleşim alanı için gerekli yatırımların, istihdamın, eğitimin, ticaretin ve alt yapının zamanla gelişmesine olanak sağlamıştır. Bu noktada sürdürülebilir bir refah ve güvenli bir gelecek sağlamak amacıyla tuz madenciliği sonrası için geliştirilen bu proje bölgeye önemli katkılar sağlamayı hedeflemiştir.

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Anahtar Kelimeler: Kaya Tuzu, Sağlık Turizmi, Sürdürebilirlik, Speleoterapi, Haloterapi.

SOCIAL AND ECONOMIC SUSTAINABILITY AFTER MINING OPERATIONS AND THE SAMPLE OF TUZLUCA ROCK SALT MINE THERAPY CENTER FOR HEALTH TOURISM

ABSTRACT

Sustainable mining is only possible by realizing strategic plans and programs for the effective and efficient use of national resources by considering market conditions. Strategic plans should be integrated into all processes of mining activities and particular attention should be paid to post-mining operations to minimize negative consequences. In this way while gaining the needs of today by using the resources efficiently therewithal improve ability of future generations to extract their needs. To ensure permanent welfare; Social sustainability with the open to new ideas to benefit as many people as possible from production and employment opportunities, economic sustainability with improved stability and wealth, and environmental sustainability with the need to protect nature after developing consciousness. The sustainability of mining activities has gained a correct meaning with these three definitions. The underground health tourism project, developed using the therapeutic properties of the Kayatuzu mine and underground air, is important in this sense. Speleotherapy and Halotherapy, which are expressed as complementary medicine applications, are known to be very beneficial for respiratory tract, ear, nose, throat and skin diseases. Salt mining has had a high impact on the ecological and social environment in the region so far. Increasing of the mining activities, provided the necessary investments, employment, education, trade and infrastructure for the residential area to develop over time. At this point, this project, developed for post-salt mining in order to provide a sustainable prosperity and a safe future, aims to make significant contributions to the region.⁶⁶

Key Words: Rock Salt, Health Turizm, Sustainability, Speleoterapi, Haloterapi.

THE EFFECTS OF THE PSYCHOLOGICAL CONTRACT PERCEPTION ON ORGANISATIONAL TRUST, ORGANISATIONAL IDENTIFICATION AND ORGANISATIONAL CITIZENSHIP BEHAVIOUR ON HEALTH EMPLOYEES**Damla ENVERGİL**

KKTC Sağlık Bakanlığı(Master's Thesis, Ankara, 2018.)

ÖZET

Psychological contract is one of the recently introduced concepts of organizational behaviour. It is defined as a set of mutual expectations that are expected in the minds of the parties (employees and employers) from the moment the individual participates in the organization, which may change within time, and that are not mentioned in the written labour contract that is often not spoken but which can lead to various ambiguities in the working process. The purpose of this research is to determine the psychological contract perception levels of health employees, to identify the effects of psychological contract perception levels on organizational trust, organizational identification and organizational citizenship levels, and to reveal whether the psychological contractual, organizational trust, organizational identification and organizational citizenship behaviour levels of health employees within the scope of the research differ according to individual characteristics such as age, gender, nationality, marital status, total study duration and education. Another purpose of the research is to determine the statistical relationships between health employees' organizational trust, organizational identification and organizational citizenship behaviour. In this context, a survey was distributed with face-to-face interviews with health employees working in four public hospitals operating in the TRNC and the data obtained from a total of 433 health employees were analysed. As a result of the analyses, it was found that the dimension with the highest score given by the health employees among the psychological contract sub-dimensions is the relational psychological contract dimension, and the tendency to exhibit organizational trust, organizational identification, and organizational citizenship behaviours was found to be in the middle level. In addition, the studies on health employees' perceptions of psychological contract perception and sub-dimensions and their tendency to exhibit organizational trust, organizational identification and organizational citizenship behaviors were compared according to the demographic data and statistically significant differences were found ($p < 0,05$). As a result of the conducted regression analyses, it was found that the tendency of health employees to exhibit organizational trust, organizational identification and organizational citizenship behaviours on the levels of interaction of general and relational psychological contract dimensions has positive effects.

BAZI DEMİR OKSİT NANOPARTİKÜLLERİNİN ANTİBAKTERİYEL VE ANTİBIYOFİLM AKTİVİTELERİNİN İNCELENMESİ

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ÖZET

Demir oksit nanopartikülleri, benzersiz fiziksel ve kimyasal özellikleri ile araştırmacıların dikkatini çekmiştir. Yüksek yüzey alanı-hacim oranı, mükemmel manyetik karakteri, yeniden kullanılabilir olması, yüksek biyoyumlulukları ve insanlar için toksik etkisinin olmaması sayesinde demir oksit nanopartikülleri biyoteknoloji, biyomedikal ve tıp alanında yaygın bir şekilde kullanılmaktadır. Diğer taraftan bakteriyel enfeksiyonların neden olduğu hastalıklar ve özellikle ilaca dirençli bakterilerin geliştirdiği antibiyotik direnci insan sağlığını ciddi bir şekilde tehdit etmektedir. Antibiyotik direncinden dolayı biyofilmle ilişkili enfeksiyonlarda yaşanan artış alternatif stratejilerin ortaya konmasını zorunlu kılmıştır. Nanomalzemeler bu açıdan bakterilerin hedeflenen tedavisinde gelişen ve gelecek vaat eden bir çalışma alanı olarak umut vermektedir.

Bu çalışmada sentezlenen demir oksit nanopartikülleri APTES (3-aminopropyltriethoxysilane) bağlantı molekülü ile modifiye edildikten sonra grafen oksit ile birleştirilmiştir. Elde edilen Fe₃O₄, Fe₃O₄-APTES, Fe₃O₄-APTES-GO, GO nanomalzemelerinin yapıları kızılötesi spektrokopisi (FT-IR) ve geçirimsiz elektron mikroskopisi (TEM) teknikleriyle aydınlatılmış ve S. aureus ve E. coli suşları üzerinde antibakteriyel ve antibiyofilm aktivitesi araştırılmıştır. Nanomalzemelerin bakteriler üzerindeki Minimum İnhibitor Konsantrasyonları (MİK) belirlenerek, MİK altı (sub-MİK) dozlarda biyofilm oluşumunu önleme etkileri kristal viyole mikrotitrasyon plak boyama tekniğiyle spektrofotometrik olarak değerlendirilmiştir. Ayrıca cam yüzeylerde biyofilm oluşumunun inhibisyonu Floresan ve ışık mikroskopisi altında görüntülenmiştir. Sentezlenen bazı nanomalzemelerin % 70' in üzerinde biyofilm oluşumunu inhibe etme potansiyelleri olduğu bulunmuştur.

Anahtar Kelimeler: Demir Oksit, Nanopartikül, Antibakteriyel Aktivite, Antibiyofilm Aktivite, MİK, Kristal Viyole

INVESTIGATION OF ANTIBACTERIAL AND ANTIBIOFILM ACTIVITIES OF SOME IRON OXIDE NANOPARTICLES

ABSTRACT

Iron oxide nanoparticles have attracted the attention of researchers with their unique physical and chemical properties. Iron oxide nanoparticles have been widely used in biotechnology, biomedical and medicine, owing to their high surface area-to-volume ratio, excellent magnetic character, reusability, high biocompatibility and non-toxicity for humans. On the other hand, diseases caused by bacterial infections and especially antibiotic resistance developed by drug-resistant bacteria threaten human health seriously. The increase in biofilm-related infections due to antibiotic resistance has made it necessary to introduce alternative strategies. In this respect, nanomaterials show promise as a developing and promising field of study in the targeted treatment of bacteria. In this study the synthesized iron oxide nanoparticles were combined with graphene oxide after being modified with APTES (3-aminopropyltriethoxysilane) linkage molecule. The structures of Fe₃O₄, Fe₃O₄-APTES, Fe₃O₄-APTES-GO, GO nanomaterials were characterized by infrared spectroscopy (FT-IR) and transmission electron microscopy (TEM) techniques, and antibacterial and antibiofilm activity were investigated on *S. aureus* and *E.coli* strains. By determining the Minimum Inhibitory Concentrations (MIC) of nanomaterials on bacteria, the effects of preventing biofilm formation at sub-MIC doses were evaluated spectrophotometrically using crystal violet microtiter plate staining technique. In addition, the inhibition of biofilm formation on glass surfaces was visualized under fluorescence and light microscopy. It has been found that some of the synthesized nanomaterials have the potential to inhibit biofilm formation over 70%.

Keywords: Iron Oxide, Nanoparticle, Antibacterial Activity, Antibiofilm Activity, MIC, Crystal Violet

ALMANCA ÖĞRETMENLİĞİ HAZIRLIK SINIFI ÖĞRENCİLERİİNİN UZAKTAN EĞİTİM YOLUYLA VERİLEN DİNLEME BECERİSİ DERSLERİNE YÖNELİK DÜŞÜNCELERİ

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ÖZET

Bu çalışmada Almanca hazırlık sınıfında eğitim alan öğrencilerin uzaktan eğitim yoluyla verilen dinleme becerisi derslerine yönelik düşünceleri ele alınmaya çalışılmıştır. Çalışma nitel araştırma yöntemlerinden fenomenolojik desende tasarlanmıştır. Çalışmanın araştırma grubunu Türkiye'de yer alan bir üniversitede Almanca Öğretmenliği programında Almanca hazırlık eğitimi alan yedi öğrenci oluşturmaktadır. Öğrencilerin %74,4'ü kadın öğrenciler, %28,6'sını ise erkek öğrenciler oluşturmaktadır. Öğrencilerin yaş ortalaması 19'dur. Çalışmada, Almanca hazırlık eğitimi alan öğrencilerin, uzaktan eğitim yoluyla verilen dinleme becerisi derslerine yönelik düşüncelerini inceleme amacı ile araştırmacı tarafından oluşturulan yarı yapılandırılmış görüşme formu kullanılmıştır. Çalışma kapsamında kullanılan veriler 2020-2021 eğitim-öğretim yılında toplanmıştır. Verilerin toplanmasında, korona virus salgını tehdidi sebebiyle teknolojik imkanlardan faydalanyılmıştır. Veriler katılımcılardan Zoom uygulaması yardımı ile toplanmıştır. Verilerin analizinde içerik analizi yönteminden yararlanılmıştır. Verilerin analizi sürecinde kodlar ve temalar oluşturulmuş ve katılımcıların görüşlerine doğrudan aktarım yöntemiyle yer verilmiştir. Araştırma sonuçlarına göre öğrencilerin tamamının dinleme becerisi derslerini faydalı buldukları belirlenmiştir. Öğrencilerin %71,4'ü dinleme becerisi derslerinin telaffuzlarına doğrudan katkı sağladığını; %14,3'ü Almancaya karşı kulak aşinalığı oluşturduğunu ve %14,3'ü de konu eksiklerini daha net gördüklerini ifade etmişlerdir. Araştırmada öğrencilerin %71,4'ünün ders saatlerinin artmasını gerektiğini düşündükleri ortaya konmuştur. Bu öğrencilerin %60'ı dinleme becerisi derslerinin en az iki saat daha artırılması gerektiğini; %40'ı da dinleme becerisi dersleri için özel ders saatleri konması gerektiğini belirtmişlerdir. Öğrencilerin %28,6'sı ise mevcut derslerden ve ders saatlerinden memnun olduklarını ifade etmişlerdir. Öğrencilerden elde edilen bulgular ışığında dinleme becerisi derslerine yönelik Uzaktan eğitim yoluyla verilen dinleme becerisi derslerinin uzaktan eğitim sistemine uygun hale getirilmesi önerilmektedir.

Anahtar Kelimeler: Almanca, Almanca Hazırlık Sınıfı, Uzaktan Eğitim, Dinleme Becerisi

THE OPINIONS OF THE STUDENTS IN THE PREPARATORY CLASS FOR GERMAN LANGUAGE TEACHING ON THE LISTENING COMPREHENSION CLASSES IN DISTANCE LEARNING

ABSTRACT

This study attempted to present the opinions of the students in the preparatory class of German Language Teaching with regard to distance learning listening lessons. The study has been designed according to the phenomenological method, which is one of the qualitative research methods. The research group of the study consists of seven students in a preparatory class for German as a foreign language at a university in Turkey. 74.4% of the students are female and 28.6% are male. The average age of the participants is 19 years. A semi-structured interview form created by the researcher was used in the study, which is used to examine the opinions of students in the German preparatory class about the listening comprehension lessons. The data used in the study were collected in the 2020-2021 academic year. Due to the corona virus outbreak, technological tools have been used to collect data. The data was collected from the participants using the Zoom application. A content analysis method was used in analyzing the data. During the data analysis process, codes and topics were created and participants' opinions were given through direct broadcast method. According to the results of the research, it was found that all students find the listening comprehension lessons useful. 71.4% of the students said that listening skills lessons directly contribute to the development of pronunciation; 14.3% of them stated that it helped them to become familiar with German, and 14.3% stated that it enabled them to recognize their shortcomings on a topic more clearly. The research found that 71.4% of students felt that the number of lessons should be increased. 60% of these students said that listening skills should be increased for at least two more hours. 40% of them stated that listening comprehension requires its own separate units. 28.6% of the students stated that they were satisfied with the current lessons and hours. In view of the results of the study, it is recommended that the distance learning units for listening comprehension be adapted to the distance learning system.

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Keywords: German, German Preparatory Class, Distance Learning, Listening Skill

GİRİŞ

Gelişen teknoloji ve günümüz konjonktürü en az bir yabancı dil bilmeyi gerekli kılmakta ve bu gereklilik ışığında yabancı dil eğitimi de her geçen gün daha önemli hale gelmektedir. Yabancı dil eğitimi temel dil becerilerine göre yapılmaktadır. Bu beceriler yazma, konuşma, okuma ve dinleme becerileridir. Yazma becerisini Durmuş (2013; akt. Çangal, 2020: 80) "düşünceleri; örnekler, kanıtlar gibi verilerden yararlanarak açıklayan; kimi örneklerinde günlük hayatın temel yazılı iletişimini sağlamak; kimi örneklerinde ise etkili bir dil kullanmayı amaç edinen; bunu yaparken

standart bir dilin katı yazım ve noktalama kurallarına ve de dil bilgisinin karmaşık ve çeşitli yapılarına bağlı kalarak ortaya koyan bir anlatma becerisi” olarak tanımlamaktadır. Bu açıdan yaklaşıldığındaysa yazma becerisinin en zor beceri olduğu söylenebilir (Çakır, 2010). Konuşma becerisine bakıldığında “insan beyninde karmaşık işlemler oluşturulup ses organları ile karşı tarafa gönderilen mesajın, dinleyicinin kulağıyla iştilip birtakım yollarla beyindeki ilgili merkezlerde anlamlandırılması” olarak (Özbay, 2005; akt. Günaydın, 2020: 31) tanımlandığı görülebilir. Öztürk'e (2019: 14) göre konuşma becerisi “akıcılık, anlaşılabilirlik, sözcük bilgisi, dil bilgisi, doğruluk, iletişim, uygunluk, tutarlılık” gibi alt boyutlardan oluşmaktadır. Okuma becerisi Akyol (2007; akt. Arslan, 2013: 251) tarafından “okuyucunun metni anlamaya uğraştığı, anladıklarını ve ön bilgilerini birleştirerek yeni anamlar ortaya koymaya çalıştığı, uygun bir ortamda gerçekleşen, okuyucuya yazar arasındaki bir görüş alış-verışı” olarak tanımlanmaktadır. Coşkun (2002; akt. Coşkun, 2003: 101-102) ise okumayı “görme, algılama, dikkat, hatırlama, anlamlandırma, yorumlama, sentez ve çözümleme gibi farklı zihinsel işlemlerin bir arada gerçekleştiği; insanın kendisini, çevresini ve dünyayı tanımak için bilgi ve kültür kazanmasında ve eleştirel bilince ulaşmasında rol oynayan çok önemli bir eğitim aracı ve dil becerisi” olarak tanımlamaktadır. “Dinlemenin dil becerilerinin kazanılmasında anahtar beceri niteliğinde olduğunu savunan Doğan, buna rağmen çeşitli nedenlerden dolayı dinleme becerisine gerekli önemini verilmediğini ve bu becerinin eğitimi çok az zaman ayrıldığını ileri sürmekte ve yapılan araştırmalara göre dinleme becerisinin en çok ve en sık kullanılan dil becerisi olduğunu paylaşmaktadır” (Doğan, 2012; akt. Kaya, 2020: 27). Literatür incelediğinde dinleme becerisi ile ilgili yapılmış birçok tanımlama göze çarpmaktadır. Dinleme becerisini Kesinkılıç (2002; akt. Çelebi, 2020: 23) “Herhangi bir konuda konuşmacının seslerini duymak, söylediklarını anlamak gerekli olanları ve gerekli olabilecekleri alıp saklamak için sesler üzerine dikkati yoğunlaştırmak”; Aytan (2011; akt. Özdemir, 2019: 23) “duyma mekanizmalarından geçen ve bu bilgileri kaydedip kullanılmasını sağlayan bir farkındalık; Maden ve Durukan (2016; akt. Yaşlık, 2019: 12) ise “insanın çevresinden gelen sesleri işitmeye, bu sesleri anlamlandırma ve değerlendirmeye, daha sonra uygun tepkiyi vermesi” olarak tanımlamaktadır. Tüm dil becerileri tanımlamaları bir arada değerlendirildiğinde dört dil becerisinin de dil eğitimi için önem arz ettikleri ve birbirinden ayrılmaz birer parça oldukları rahatlıkla söylenebilir.

2019 yılında ortaya çıkan Korona virüs salgını (COVID Pandemisi) dünyada tüm sektörleri etkilediği gibi eğitim sektörünü de etkilemiştir. Türkiye Cumhuriyeti devleti de pandemiye bağlı çeşitli önlemler almak zorunda kalmıştır. Bu önlemlerden bir tanesi de eğitim alanında alınmış, İlköğretim, ortaöğretim ve yükseköğretim eğitimleri uzaktan eğitim yoluyla verilmeye başlanmıştır.

“Uzaktan eğitim en genel tanım itibariyle öğreten ve öğrenenin birbirinden uzakta olduğu durumlarda gerçekleştirilen öğretim etkinliğidir (Schlosser ve Anderson, 1994; akt. Altun, 2020: 7). Uzaktan eğitim sisteminde öğrenenler ve öğretmenler farklı lokasyonlarda olduklarından dolayı bazı aksamalar da kaçınılmaz olmuştur. Bu çalışmada Almanca hazırlık sınıfında eğitim alan öğrencilerin uzaktan eğitim yoluyla verilen dinleme becerisi derslerine yönelik düşünceleri ele alınmaya çalışılmıştır. Bu bağlamda aşağıda yer alan araştırma sorularına yanıt aranmıştır:

1. Dinleme becerisi derslerini faydalı buluyor musunuz? Bu derslerdeki kazanımlarınızın neler olduğunu düşünüyorsunuz?
2. Dinleme becerinizin gelişmesi için kendiniz ekstra bir çalışma正在做吗 musunuz?
3. Dinleme becerisi derslerini yeterli düzeyde aldığınızı düşünüyor musunuz?
4. Dinleme becerinizin gelişmesi için dinleme becerisi derslerinin nasıl işlenmesini önerebilirsiniz?

YÖNTEM

Araştırmanın Modeli

Çalışma nitel araştırma yöntemlerinden fenomenolojik desende tasarlanmıştır. Yıldırım ve Şimşek (2008: 39) nitel araştırmayı “gözlem, görüşme ve doküman analizi gibi nitel veri toplama tekniklerinin kullanıldığı, algıların ve olayların doğal ortamda gerçekçi ve bütüncül bir biçimde ortaya konmasına yönelik nitel bir sürecin izlendiği araştırma” olarak tanımlamaktadır.

Fenomenolojik desen ise, “çeşitli biçimlerde karımıza çıkabilen, farkında olunan ancak derinlemesine ve ayrıntılı bir anlayışa sahip olunmayan olgulara odaklanan ve bireye tamamiyla yabancı olmayan bu olguların detaylı bir şekilde araştırılmasında” kullanılan bir araştırma desenidir (Yıldırım ve Şimşek, 2008: 78).

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Çalışma Grubu

Çalışmanın araştırma grubunu Türkiye'de yer alan bir üniversitede Almanca Öğretmenliği programında Almanca hazırlık eğitimi alan yedi öğrenci oluşturmaktadır. Öğrencilerin %74,4'ü kadın öğrenciler, %28,6'sını ise erkek öğrenciler oluşturmaktadır. Öğrencilerin yaş ortalaması 19'dur.

Veri Toplama Aracı

Çalışmada, Almanca hazırlık eğitimi alan öğrencilerin, uzaktan eğitim yoluyla verilen dinleme becerisi derslerine yönelik düşüncelerini inceleme amacı ile araştırmacı tarafından oluşturulan yarı yapılandırılmış görüşme formu kullanılmıştır. “Belirlenmiş özel bir konuda derinlemesine soru sorma, cevap eksik ya da açık değilse tekrar sorarak durumu daha açıklayıcı hale getirip cevapları

tamamlama fırsatı vermesi açısından, görüşme yöntemi avantajlı bir yöntemdir” (Çepni, 2009; akt. Akgün vd., 2016: 188). Yarı yapılandırılmış görüşme formu oluşturulmadan önce ilgili literatür taramış ve sorular alanında uzman iki akademisyenin de görüşleri alındıktan sonra kullanıma hazır hala getirilmiştir. Yarı yapılandırılmış görüşme formunda yer alan sorular şu şekildedir: (1) Dinleme becerisi derslerini faydalı buluyor musunuz? Bu derslerdeki kazanımlarınızın neler olduğunu düşünüyorsunuz? (2) Dinleme becerinizin gelişmesi için kendiniz ekstra bir çalışma正在做吗? (3) Dinleme becerisi derslerini yeterli düzeyde aldiğinizı düşünüyor musunuz? (4) Dinleme becerinizin gelişmesi için dinleme becerisi derslerinin nasıl işlenmesini önerebilirsiniz?

Verilerin Toplanması

Çalışma kapsamında kullanılan veriler 2020-2021 eğitim-öğretim yılında toplanmıştır. Verilerin toplanmasında, korona virüs salgını tehdidi sebebiyle teknolojik imkanlardan faydalanyılmıştır. Veriler katılımcılardan Zoom uygulaması yardımı ile toplanmıştır. Toplanan veriler araştırmacı tarafından deşifre edilerek yazıya dökülmüştür.

Verilerin Analizi

Verilerin analizinde içerik analizi yönteminden yararlanılmıştır. “İçerik analizinde asıl amaç verileri anlamayıpabilecek kavramlara ve bağlantılarla ulaşmaktır” (Yıldırım ve Şimşek, 2008: 259). “İçerik analizi, insanın doğası ve davranışları üzerinde dolaylı yollarla çalışmaya imkân tanıyan, sosyal bilimlerde sık sık kullanılan tekniklerden biridir” (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2014; akt. Şentürk vd., 2017: 109). Verilerin analizi sürecinde kodlar ve temalar oluşturulmuş ve katılımcıların görüşlerine doğrudan aktarım yöntemiyle yer verilmiştir.

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BULGULAR

Bu bölümde öğrencilerin araştırma sorularına verdikleri yanıtlar analiz edilmiştir. Öğrencilerin birinci araştırma sorusuna (dinleme becerisi derslerini faydalı buluyor musunuz? bu derslerdeki kazanımlarınızın neler olduğunu düşünüyorsunuz?) verdikleri yanıtlar kodlar ve temalar ışığında Tablo 1’de sunulmuştur.

Tablo 1. Birinci araştırma sorusuna yönelik bulgular

Tema	Kodlar
Evet	Telaffuz katkısı (n=5) Kulak alışkanlığı (n=1) Eksiklerin görülmesi (n=1)

Tablo 1 incelendiğinde öğrencilerin tamamının dinleme becerisi derslerini faydalı buldukları ve çeşitli kazanımlar elde ettikleri görülmektedir. Öğrencilerin %71,4’ü dinleme becerisi derslerinin

Almanca telaffuzlarına doğrudan katkı sağladığı için; %14,3'ü Almancaya karşı kulak aşinalığı sağladığı için ve %14,3'ü de dinleme becerisi derslerinde konu eksiklerini daha belirgin olarak görebildikleri için dinleme becerisi derslerini faydalı bulduklarını ifade etmişlerdir. Öğrencilerin verdikleri yanıtlardan dikkat çekici olanları şu şekildedir:

K3: “*Evet buluyorum. Almancanın aksanını daha iyi kavriyoruz ve dinleme yapmamız konuşma diline uzak kalmamamızı sağlıyor. Sözcükleri ilk dinlemeye göre daha rahat anlıyoruz. Dinleyip direkt aklimızdan çeviri yapmamız da kolaylaşıyor dolaylı yoldan düşünüp cümle kurma hızımızı da arttırmıyor*”.

K4: “*Dinleme derslerini faydalı buluyorum çünkü dinlediğimiz parçalarda duyduğumuz kelimelerin doğru telaffuzunu öğreniyoruz. Duyduğumuz kadarıyla konuşma becerimizi geliştirebiliyoruz. Bir de daha çok günlük yaşamda karşılaşabilecek durumlar dinlediğimiz için olası bir durumda iletişime geçerken biraz daha rahat oluruz diye düşünüyorum*”.

Öğrencilerin ikinci araştırma sorusuna (dinleme becerinizin gelişmesi için kendiniz ekstra bir çalışma yapıyor musunuz?) verdikleri yanıtlar kodlar ve temalar ışığında Tablo 2'de sunulmuştur.

Tablo 2. İkinci araştırma sorusuna yönelik bulgular

Tema	Kodlar
Evet	Şarkı dinleme (n=3) Kısa basit metinler dinleme (n=2) Güncel haber dinleme (n=1)
Hayır	Seviye yüksek (n=1)

Tablo 2 incelendiğinde öğrencilerin %85,7'sinin dinleme becerilerini geliştirme amaçlı ekstra bireysel çalışma aktiviteleri yaptıkları görülmektedir. Bu öğrencilerin %50'si Almanca şarkılar dinlediklerini; %33,3'ü kısa ve basit metinler dinleyerek o metinleri anlamaya çalışıklarını ve %16,7'si de güncel haberler dinlemek suretiyle dinleme becerilerini bireysel olarak geliştirmeye çalışıklarını belirtmişlerdir. Öğrencilerin %14,3'ü ise bireysel olarak dinleme becerisi çalışması yapamayacak düzeyde olduklarını belirterek ekstra bireysel bir dinleme becerisi çalışması yapmadıklarını söylemişlerdir. Öğrencilerin verdikleri yanıtlardan dikkat çekici olanları şu şekildedir:

K5: "Evet, dinleme becerimi geliştirmek için seviyeme uygun dinleme etkinliklerinin bulunduğu aplikasyonlarda alıştırmalar yapıyorum. Bu şekilde dinleme becerimin günden güne daha iyi bir seviyeye geldiğini gözlemliyorum".

K6: "Evet, yapmaya çalışıyorum. Global hareketlilikleri, ülkemde ve Almanya'da olan güncel olayların Almanca olan haberlerini izlemeye çalışıyorum. Dizi ve film izliyorum hem dinleme becerimi geliştirmeye çalışıyorum hem de kelime hzinem için faydalı olacağını düşünüyorum".

Öğrencilerin üçüncü araştırma sorusuna (dinleme becerisi derslerini yeterli düzeyde aldığınızı düşünüyor musunuz?) verdikleri yanıtlar kodlar ve temalar ışığında Tablo 3'te sunulmuştur.

Tablo 3. Üçüncü araştırma sorusuna yönelik bulgular

Tema	Kodlar
Hayır	Online verimsiz (n=4) Arka Planda (n=1)
Evet	Saat yeterli, online verimsiz (n=1) Yeterli(n=1)

Tablo 3 incelediğinde öğrencilerin %71,4'ünün dinleme becerisi derslerini yetersiz buldukları görülmektedir. Bu öğrencilerin %80'i dinleme becerisi derslerinden, uzaktan online eğitim yapıldığı için verim almadıklarını ve bu yüzden dinleme becerisi derslerini yetersiz bulduklarını ifade etmişlerdir. Bu öğrencilerin %20'si ise dinleme becerisi derslerinin diğer derslere göre daha arka planda kaldığını ve bu yüzden yetersiz olduğunu belirtmişlerdir. Öğrencilerin %28,6'sı ise dinleme becerisi derslerini yeterli düzeyde aldılarını belirtmişlerdir. Bu öğrencilerin yarısı dinleme becerisi ders saatlerini yeterli bulduklarını, fakat uzaktan eğitim sebebiyle verimin düşüğünü, diğer yarısı ise dinleme becerisi derslerini yeterli ve verimli bulduklarını söylemişlerdir. Öğrencilerin verdikleri yanıldan dikkat çekici olanları şu şekildedir:

K7: "Dinleme becerisi derslerini yeterli düzeyde aldığımı düşünmüyorum. Bunun nedeninin tüm derslerde olduğu gibi pandemi ile ilişkisi olduğunu söyleyebilirim".

K1: "Şu an zaten sık olarak tek bir hocamızla, kitap etkinliklerinde veya verdiği ödevlerle dinleme yapıyoruz. Bu tabii ki etkili oluyor. Belki bu durum online eğitim olduğu için sık değildir fakat bunun da tek bir dersle yeterli olacağını düşünmüyorum".

Öğrencilerin dördüncü araştırma sorusuna (dinleme becerinizin gelişmesi için dinleme becerisi derslerinin nasıl işlenmesini önerebilirsiniz?) verdikleri yanıtlar kodlar ve temalar ışığında Tablo 4'te sunulmuştur.

Tablo 4. Dördüncü araştırma sorusuna yönelik bulgular

Tema	Kodlar
Ders saatlerinin artması	En az 2 saat artırılmalı (n=3) Sadece dinleme için özel ders saatleri konmalı (n=2)
Memnunum	Yeterli (n=2)

Tablo 4 incelendiğinde öğrencilerin %71,4'ü dinleme becerilerinin gelişmesi için dinleme becerisi ders saatlerinin artırılması gerektiğini düşünmektedirler. Bu öğrencilerin %60'ı ders saatlerinin en az iki saat daha fazla işlenmesi gerektiğini; %40'ı da sadece dinleme becerisi için özel ders saatleri konması gerektiğini ifade etmektedirler. Öğrencilerin %28,6'sı ise dinleme becerisi derslerinin yeterli ve verimli olduğunu savunarak bir önerilerinin olmadığını belirtmişlerdir. Öğrencilerin verdikleri yanıldan dikkat çekici olanları şu şekildedir:

K1: “*Derslerde hepimiz söz hakkına sahibiz ve yapılan dinleme etkinliklerine zaman zaman yanılışak da veya eksik cevaplarım olsa da katılıyoruz. Fakat dinleme becerisinin daha faydalı olması için haftada en az 1 veya 2 dersin dinleme etkinliği için ayrılmاسının etkili olacağını düşünüyorum*”.

K5: “*Dinleme becerisi derslerin olabildiğince yüz yüze yapılmasını fakat online yapılmak zorundaysa da ses sisteminin ona göre düzenlenmesi gerektiğini düşünüyorum. Ayrıca dinleme becerisi ders saatlerinin artırılması ve derslerde daha çok alıştırma yapılması dinleme becerimi geliştirmemde bana daha çok yarar sağlayacaktır*”.

SONUÇ ve ÖNERİLER

Bu çalışmada, Almanca Öğretmenliği hazırlık sınıfı öğrencilerinin uzaktan eğitim yoluyla verilen dinleme becerisi derslerine yönelik düşüncelerinin incelenmesi amaçlanmıştır. Bu amaca bağlı olarak öğrencilere; (1) Dinleme becerisi derslerini faydalı buluyor musunuz? Bu derslerdeki kazanımlarınızın neler olduğunu düşünüyorsunuz? (2) Dinleme becerinizin gelişmesi için kendiniz ekstra bir çalışma yapıyor musunuz? (3) Dinleme becerisi derslerini yeterli düzeyde aldiğinizı düşünüyorsunuz? (4) Dinleme becerinizin gelişmesi için dinleme becerisi derslerinin nasıl işlenmesini önerebilirsiniz? şeklindeki araştırma soruları yöneltilmiştir. Araştırma sonuçlarına

göre öğrencilerin tamamının dinleme becerisi derslerini faydalı buldukları belirlenmiştir. Öğrencilerin %71,4'ü dinleme becerisi derslerinin telaffuzlarına doğrudan katkı sağladığını; %14,3'ü Almancaya karşı kulak aşinalığı oluşturduğunu ve %14,3'ü de konu eksiklerini daha net gördüklerini ifade etmişlerdir. Çalışmada öğrencilerin %85,7'sinin dinleme becerilerini geliştirme adına bireysel çalışmalar yaptıkları belirlenmiştir. Bu öğrencilerin yarısının dinleme becerilerini geliştirmek amacıyla Almanca şarkılar dinledikleri; %33,3'ünün kısa ve basit metinler dinledikleri ve %16,7'sinin de güncel haberleri takip ettikleri sonucuna ulaşmıştır. Öğrencilerin %14,3'ünün ise dinleme becerilerini geliştirme amaçlı bireysel bir çaba göstermedikleri saptanmıştır. Çalışmanın bir diğer sonucu olarak öğrencilerin %71,4'ünün dinleme becerisi derslerini yeterli düzeyde almadıklarını belirttikleri tespit edilmiştir. Bu öğrencilerin %80'inin dinleme becerisi derslerini uzaktan eğitim sisteme bağlı olarak yetersiz gördükleri, %20'sinin de dinleme becerisi derslerinin diğer derslere oranla daha arka planda kaldığını belirttikleri belirlenmiştir. Öğrencilerin %28,6'sının ise dinleme becerisi derslerini yeterli düzeyde aldıları tespit edilmiştir. Araştırmada öğrencilerin %71,4'ünün ders saatlerinin artması gerektiğini düşündükleri ortaya konmuştur. Bu öğrencilerin %60'ı dinleme becerisi derslerinin en az iki saat daha artırılması gerektiğini; %40'ı da dinleme becerisi dersleri için özel ders saatleri konması gerektiğini belirtmişlerdir. Öğrencilerin %28,6'sı ise mevcut derslerden ve ders saatlerinden memnun olduklarını ifade etmişlerdir.

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Öğrencilerden elde edilen bulgular ışığında dinleme becerisi derslerine yönelik aşağıda yer alan maddeler önerilmektedir:

- Hazırlık eğitiminde verilen dinleme becerisi derslerine ayrılan sürenin artırılması,
- Hazırlık eğitimi veren öğretim elemanlarının öğrencilere bireysel çalışabilmeleri adına materyal temin etmeleri,
- Uzaktan eğitim yoluyla verilen dinleme becerisi derslerinin uzaktan eğitim sistemine uygun hale getirilmesi,
- Müfredatta dinleme becerisi derslerine diğer beceriler kadar ağırlık verilmesi.
-

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THE IMPACT OF PRONUNCIATION LEARNING STRATEGIES ON IRANIAN EFL LEARNERS

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ABSTRACT

Pronunciation, as being one of the essential components of a language, plays key roles in language learning and language use. Many studies have already been performed regarding pronunciation learning and its importance; yet, not adequate attention has been given to strategies and strategy use until recently. To this end, the difference between the learners using pronunciation learning strategies intuitively and those using the pronunciation learning strategies instructed them by an EFL teacher was distinguished and it was also determined which pronunciation strategies were efficient to EFL learners. Their ages ranged from 14-15 of female students. For the present study Multi Staged Cluster Random Sampling was used. In order to study the difference between the groups that used pronunciation learning strategies and those did not use the strategies, the hypothesis normality of the variables was studied. To this end, Kolmogorov Smirnov was used. The research has revealed the most increasing mean was related to those learners, which had used the first strategy (looking at teacher's mouth moving, trying to recall and imitate a teacher's mouth movements) and then the second one (self-evaluating, recording oneself to listen to one's pronunciation to improve it). Finally the less increasing was related to the third one (noticing contrast between native and target language pronunciation). The implication of the study is related to the pronunciation learning strategies indicating the practicality of three most useful strategies to ease both teachers' and students' task in EFL classes to improve pronunciation learning.

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Key words: EFL teacher ,EFL learner, pronunciation strategy.

Introduction

Strategic learning and pronunciation learning are both areas of study that have recently received wide-spread attention in second language research (Peng, Chen, Wang, & Wang, 2018). Strategic learning research has sought to advance the understanding of how students tackle difficult language learning tasks using learning strategies (Akyol, 2013). On the other hand, the field of pronunciation learning research has attempted to discover which areas of pronunciation are most beneficial for instructors to teach (Rose, Briggs, BoggsSergio, & Ivanova- (2018).Little crossover between these two fields has taken place, so second language researchers have yet to discover how second language learners tackle difficult pronunciation learning tasks through the use of learning strategies.

Kelly (1969) states that pronunciation is the "Cinderella" area of foreign language teaching. He stated that linguists have studied grammar and vocabulary much longer than pronunciation. For this reason, grammar and vocabulary have been much better understood by most language teachers than pronunciation. Christensen and Warnick (2006) mention that one of the reasons we learn a language is to "develop relationships" with members of the target culture. If we are able to 'communicate,' but our speech is full of mistakes and poor pronunciation, it is less likely that native speakers will be eager to spend time with us.

Han (1963) stated that good pronunciation is the basis of spoken language proficiency. Therefore, it stands to reason that we should pay more attention to this aspect of the spoken language and effectively help students to learn pronunciation in order to assist them and native speaking interlocutors to be as comfortable as possible when talking in the target language.

One way to help students learn how to effectively acquire pronunciation is through the employment of language learning strategies. If language learners effectively apply learning strategies towards other linguistic skills, then one shots that learners also could use strategies to attempt to acquire native-like pronunciation as well. Another way to investigate the effect of strategies learning on pronunciation learning is to examine the use of pronunciation learning strategies intuitively by language learners.

Few studies have examined the difference between spontaneous learning strategies of EFL learners in pronunciation and strategies trained by EFL teachers. Therefore the gap is currently so large for several reasons. First, language learning strategies has only recently been examined in light of pronunciation learning and much research is still needed to determine what pronunciation learning strategies exist (Petersen, 2000). Second, no categorization exists how pronunciation strategies can be organized in to pedagogically researched groupings. Third, no study has examined to what extent students' ability to develop and use pronunciation learning strategies differs from actual pronunciation skill. The fourth one is that a few studies have examined the difference between spontaneous learning strategies of EFL learners in pronunciation strategies trained by EFL teachers. Thus, the purpose of this study is to find the difference between pronunciation learning strategies used by EFL learners intuitively and strategies used by EFL teachers. Hence, another gap of the study was to examine its role on pronunciation learning, which remains quite dark.

The researchers' suggestion was to find the difference between control and experimental groups and distinguish the most practical and efficient pronunciation strategies to be used in EFL classes. Thus, the purpose of this study was to find the difference between pronunciation learning strategies used by EFL learners intuitively and the strategies trained by EFL teachers. Moreover, to find the most practical and efficient pronunciation strategies is the other purpose of this research.

Literature review

Overview

The focus on language as communication has brought a remarkable change in teaching pronunciation (Celce-Murcia, Brinton & Goodwin, 1996). According to Bailey (cited in Celce-Murcia et al., 1996) witness from both empirical and personal experience have shown that there is a point level of intelligible pronunciation for non-native speakers, and if learners fall below this level, they will have oral communication problems, no matter how proficient they are in grammar and vocabulary knowledge. The importance of pronunciation thus, urges the claim for strategies, techniques, and approaches which are beneficial for pronunciation instruction.

Language Learning Strategy

To know what language learning strategies are and how they help language learners, it is necessary to define what language learning strategies are. The most commonly accepted definition in L2 acquisition(SLA) comes from Oxford (2002) who defines language learning strategies as " specific actions, behaviors, steps, or techniques that learners use to improve their L2 skills"(p. 124). In early seventies, research devoted to examine the characteristics of successful language learners and language learning strategies they apply, became very voguish (Stern, 1975; Naiman, 1978; Oxford, 1994; Griffiths, 2003; Griffiths, 2008). Rubin (1975) was the first to study language learning strategies in depth. Rubin observed that a good language learner needs three things in particular: aptitude, motivation, and opportunity. Rubin noticed that good language learners are highly motivated and are actively engaged in learning. Rubin claimed that good learners will use different strategies. The use of these strategies make the tasks meaningful and fun.⁸²

Pronunciation Strategies

Brown supports claims made by Rubin (1975), that good language learners understand what their goals are to learn a L2. Brown stated that those learners also know that pronunciation is a large part of achieving success in L2 acquisition. He also states that subjects must take risks in order to improve pronunciation and notice that pronunciation is not a skill to be learned in isolation, but a skill related to other aspects of language. Peterson (2000) claimed that language learning strategies and pronunciation are not just In need of research, but that strategy instruction is required for successful language learning. Peterson is the first to begin to categorize pronunciation strategies (a classification of Strategies) like Oxford's (1990). Shown below are seven of Peterson's twenty strategies that are related to the current study.

Table 2.1.

Seven of Peterson's (2000) Twenty_ One Strategies

1. Trying to recall and imitate a teacher's mouth movements.
 2. Pronouncing a difficult word over and over.
 3. Practicing words using flash cards.
 4. Forming and using hypotheses about pronunciation rules (keep the mouth tight when forming words)
 5. Noticing contrasts between native and TL pronunciation.
 6. Self- evaluating, with its specific tactic of recording oneself to listen to one's pronunciation.
 7. Using humor to lower anxiety.
-

Peterson showed that not all of the strategies fit exactly in to Oxford's framework, that there needs to be additional criteria added to Oxford's frame work. Derwing and Rossiter (2002) expanded the knowledge of pronunciation learning strategies by researching adult immigrants' that used their own pronunciation learning strategies. Derwing and Rossiter discovered that the difficulty for the learners lies in the fact that

all of them realized they had pronunciation problems. Derwing and Rossiter noticed that during these times of segmental difficulty or" communication breakdown" (2002, P. 156), learners use the following strategies.

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Table 2.2.

Derwing and Rossiter's (2002) Strategies

1. paraphrased their speech
 2. Self- repetition
 3. Spelled the word
 4. Adjusted their volume of speech
 5. Spoke clearly
 6. Showed speech rate
 7. Avoidance and appeals for help
-

What is unique about derwing and Rossiter's study is that it was the first to obtain responses about pronunciation strategies from learners who were registered in pronunciation specific classes.

Table 2.3.

Strategy Usage in Osburne's (2003) Study

-
1. Monitor global articulatory structure
 2. Monitor local articulatory gesture of single sound
 3. Focus on individual syllables
 4. Focus on sounds below syllable level
 5. Focus on prosodic structure
 6. Focus on individual words
 7. Focus on paralanguage
 8. Focus on memory or imitation
-

While Osburne's study contributed to pronunciation strategy research, it failed to provide details as to which strategies or combination of strategies were applied by successful learners.

Internal Studies

More recent study performed in 2016 in Iran by Pourhosein Gilakjani and Marzban, uncovered why English pronunciation is ignored by EFL teachers in their classes? Despite the fact that English Pronunciation is important for oral communication, it is sometimes forgotten in language teaching. This is because teachers may feel more uncertain about pronunciation than about grammar and lexis and they are worried that they lack enough knowledge to aid their learners effectively. Kelly (2002) states, "learners who always mispronounce a series of phonemes make a lot of problems for the speakers of other languages to understand". This can be dissatisfying for those who have good grammar and lexis knowledge but have solemn problems in understanding and being understood by English speakers.

This study examined Iranian teachers' views towards English pronunciation instruction. A quantitative method was used to collect data by an instrument. The researchers used a questionnaire as the instrument of this study. One hundred teachers participated in this study. Data was gathered and analyzed. The finding indicated that lack of time, motivation, resources, materials, and educational facilities like computer technologies prevented teachers from teaching pronunciation in their classes. They should be equipped with these factors that can increase their success in teaching pronunciation. Based to Wong (1993), many ESL learners and teachers indicate that it is useless to spend time on pronunciation because it would be very difficult for learners to hear the differences between ship and sheep. Wei and Zhou (2002), stated that English pronunciation was regarded as "the Cinderella of language teaching" in Mexico and a little focus was placed on teaching this important skill.

In the same year, 2016, Haghghi and Rahimi studied the effect of minimal pairs Practice on Iranian Intermediate EFL learners' pronunciation accuracy. Practice would have an influence on Iranian intermediate

English as a foreign language on Learners' pronunciation accuracy. For this aim, thirty Iranian intermediate EFL learners at Simin Institute shared in the experiment of the study. The selection of participants was done from among 150 EFL learners at intermediate level. In order to make them homogenized, an SPT was used. A pre- test of pronunciation accuracy was administered to both groups. Then the experimental group received 5 sessions of teaching L2 pronunciation as well as Minimal Pairs practice (MPP) while the control group received a placebo, teaching L2 pronunciation via the existing method. After the training again the same test was handed out as post- test to both groups. The data obtained from the test were analyzed and they showed that Iranian EFL learners in the experimental group performed better and received higher score in pronunciation.

Many EFL learners master the elements of language such as syntax, morphology, or even semantics to the levels of almost native- like competence but often fail to master phonology. In a society like Iran, English is not the second language. However, when regarding language learning in an academic setting, teaching pronunciation is obligatory. According to Jones (2012) the listener may not understand the speaker, if the production of speech is not apparent grammatically, or phonetically. In Iran the importance of pronunciation teaching is discounted, the pronunciation skill is not explicitly taught. According to Defrancis (1989), correspondence of spoken and written English is complex. Lack of Standardization of the spelling until the middle of the eighteen century was the important factor between Spoken and written language.

Rangriz and Marzban studied the effect of letter-sound correspondence in 2015 on improving Iranian EFL learners' pronunciation. Due to non-correspondence between spelling and pronunciation in English, it is clear that Iranian EFL learners often mispronounce English words. To get the result, 60 male and female EFL learners were chosen through convenience sampling. The participants' age ranged from 18 to 22.

They were divided randomly in equal size and gender in to two groups of experimental and control. One of the prominent characteristics of the instruction was the use of transcribed scripts along with scripts and their audios. To collect the data, a part of Core Phonics Survey was applied. The result of the T-Test uncovered that as developing letter- sound awareness, Iranian EFL learners pronounced the words more accurately. The results for experimental groups in pronunciation progress were significant as compared to those of the control group.

Seddighi in Shiraz University, Iran in 2012, studied EFL pronunciation errors through L1 transfer. It uncovered that L2 pronunciation errors are often created by the transfer of well-established L1 sound system. The study examined some of the important phonological differences between Persian and English. This study also discussed several problematic areas of pronunciation facing Iranian learners of English. To reach such a goal, thirty EFL learners were randomly selected from three levels of beginning, intermediate, and advanced students enrolled for the fall term in 2008 in one of the private institutes in Shiraz. Their pronunciation of a list of 40 words and 8 sentences were analyzed through read- a loud Task followed by an interview. The result of the data analysis indicated that EFL learners at three levels deal with considerable problems in areas that are absent in their mother tongue. In order to identify the difficulties encountered by EFL learners, the teacher should incorporate pronunciation teaching in classroom syllabi so that they would become conscious of the differences in the sound system of the two languages.

Nikbakht, (2011), represented the developing status of pronunciation teaching and presented the current perspectives on pronunciation learning and teaching, accompanied by innovative approaches and techniques. In this era, pronunciation had either a character as a subject that language teachers performed to avoid (Fraser, 2006; Macdonald, 2002) or it was taught implicitly depending mainly on the learner's

capability of imitating the sounds and rhythms without any explicit instruction involving intuitive-imitative approach of teaching pronunciation (Celce- Murcia et al., 1996). This study argued that pronunciation teaching methodologies have changed over decades Since the Roform Movement. The rigorous status of teaching pronunciation appeared first in the Audio Lingual Method and continued in the communicative language teaching methods; however, the ways of teaching pronunciation have explicitly a long history. In this study, the researcher examined the most influential factors, the knowledge of which can facilitate both the teaching and the acquisition of pronunciation in pronunciation learning. The study discussed a number of suggestions for teaching pronunciation and mentioned that the teaching of pronunciation can be more effective and facilitative in the EFL classrooms by offering some state-of—the-art teaching approaches to pronunciation accessible to EFL environment, associated with a set of techniques. Finally, the study figured the innovative approaches and gave a new insight in to pronunciation instruction.

Beh- Afarin, Moradkhan and Monfared, (2009), attempted to examine whether teaching pronunciation through oral dialogues promotes pronunciation of Iranian EFL learners and if there is any statistically significant difference between pronunciation average score of the subjects under investigation.

Three classes of intermediate learners, after being assured of their homogeneity, were randomly assigned to treatment (14 students), control (9 students), and placebo (10 students) groups. Learners in the treatment group had to respond to the teacher by recording their voices using a voice recorder for two to five minutes. Learners in the placebo group had to record their voices in a form of monologue and learners of the control group did pronunciation practice and activities as an ordinary need of the course. The recorded oral dialogues between the teacher and the learners were related to the units of their course book. The teacher then had to respond by giving the feedback in the forms of recast to emphasize learners' mispronunciation. Brown's (2006) scale for pronunciation rating was used by two trained raters. The data was analyzed through One Way ANOVA and it was unveiled that the learners in the treatment group had better pronunciation achievement.

As the review of literature uncovered, very little research if any, has discovered the effect of pronunciation learning strategies on pronunciation of EFL learners. In addition, very little research has discovered the difference between control group and experimental group using the pronunciation learning strategies.

The study discovered the explicit instruction of pronunciation learning strategies and its Effect on pronunciation development and also distinguished the difference between control groups and experimental groups. The control groups had not been given any instruction, but the experimental groups had received explicit training. Additionally, very little research has distinguished the most practical and efficient pronunciation strategies to be used in EFL classes to ease both learners' and teachers' task.

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The last important factor is related to the number of participants, which consisted of 336 participants in the present study, which in the previous studies the population of the participants wasn't as many.

External Studies

Feedback is "one of the most powerful influences on learning and achievement"(Hattie Timperely, 2007.p.81). Feedback may be powerful in the case of pronunciation development because many ESL students have problems noticing the particular aspects of English they are pronouncing on their own (Derwing & Munro, 2005; Harmer, 2007). Feedback can aid learners notice their errors, which can help acquisition (Counselman, 2015). Due to the influence of feedback on learning in general, researchers have investigated feedback techniques. (Elis, 2001; Hattie & Timperely et.al, 2007).

Among the external studies, one most recent study has been conducted in 2016 by Christin which reported on the development, implementation, and effectiveness of a procedure which, Stephen

designed to provide obvious, frequent pronunciation feedback on ESL learners' spontaneous oral production of English. The procedure developed in this research borrowed elements from two other procedures: One described by Celce – Murcia, Brinton, and Goodwin (2010) and one developed by Hartshorn, Evans, Meril

Sudweeks, Strong- Krause, and Anderson (2010). The feedback procedure was examined with 29 intermediate to advanced adult learners in an intensive English program to find out whether or not the feedback treatment led to gains in pronunciation improvement. The learners also were examined to determine if they felt the effectiveness of the procedure.

In 2016 in Brigham Young University, Taylor explored the weight of pronunciation in a speaking proficiency test as a second language (ESL) Intensive English Program (IEP) in America. As an integral part of speaking, beliefs, Practices, and findings of pronunciation teaching have experienced changes over the decades (Morley, 1991). Most studies dealt with speaking have focused on intelligibility, comprehensibility, and accent of speaking, to address the role of pronunciation in oral communication. However, the degree to which pronunciation is weighed in determining speaking proficiency levels is not obvious. (Higgs & Clifford, 1982, Kany, 2013). Thus the study investigated the relationship between pronunciation and speaking proficiency ratings in vowels, consonants, word stress, sentence stress, intonation and rhythm of 226 speaking samples from English learners were collected at Brigham Young University's (BYU) English Language Center (ELC). The study confirmed that supra segmentals clarified more variance than segmentals in English proficiency, and among those supra segmental features, only the ratings of Sentence Stress Increased with the proficiency levels without overlapping proficiency levels.

In 2015, Monteiro observed that pronunciation is considered of less importance in teaching English in Cape Verdean in Sao Vicente Island. The Cape Verdean school program does not concentrate on pronunciation but it gives Importance to grammar learning. This research clarified the phonological systems of English and CVSV, emphasizing the difference between them, and critiques current approaches to teaching EFL, in general, pronunciation and specifically to Cape Verdean English language learners. The study recommended a strategy to CVSV students to take in teaching English pronunciation. The phonological analysis of this study was based on observation made by the author during her teaching. (9/3/2012 to 20/6/2012).

Lepore (2014) at university of Alabama, explored students' motivation to develop pronunciation skills while participating in shared conversations called interpersonal audio discussions, because research has recommended that learners desire pronunciation instruction in hopes of achieving native- like pronunciation(Gilakjani & Ahmadi, 2001; Harlow & Muyskens, 1994; Drewlow & Theobald, 2007) and that social environments are beneficial In improving proficiency in a second

language (Atkins.2002; Aubry, 2009; Duce & Lomica, 2009; Fitrth & Wagner, 1997; Kramscha Whiteside, 2007; Lee, 2014; Lord 2008; Pica, 1994b; Smith, Alvarez- Torres & Zhao, 2003; Warschauer, 1996). Participants in the present study were registered in a second- term French course where they focused on pronunciation- skills in a web- based software called Voice Thread. Through two questionnaires, journal entries, and assessment activities, students self-reported about the effects of taking part on perceptions of pronunciation continuously. Data was analyzed through a mixed method approach.

Results indicated that students had more positive opinions of performance on pronunciation- comrade related tasks as well as higher L2 self – confidence associated with pronunciation after participation. In addition, finding revealed how increased interactivity in Voice Thread affected students' motivation in pronunciation. The study's results detailed that participation in Voice Thread increased students' awareness of their performance in pronunciation through creating a feedback- supported environment not only to pronunciation development but also to self – motivation.

According to Taner, (2012) the effect of the variables; culture, motivation and level of instruction on pronunciation have been examined. Many studies have proved that students' pronunciation improves as they go through levels of Instruction (e.g. Face 2006, Rose 2010). Thus the relationship between these three variables (i.e., motivation, cultural sensitivity and levels of instruction) and their effect on pronunciation were studied in this study. The study included 102 adult learners of Spanish as a foreign language from four levels of instruction (e.g. 1st, 2nd, 3rd years and graduation majors). The participants took part in a brief oral interview Similar to ACTFL'S Oral Proficiency Interview and completed a background questionnaire, The Survey of Motivational Intensity (Gardner 1985), and the Intercultural Development Inventory(IDI) as a measure of cultural sensitivity. Multiple regression analysis examined the relationship that cultural sensitivity, motivation, level of instruction, and experience abroad have with pronunciation. The results of the multiple regression analysis showed that level of instruction is the main factor in pronunciation ratings.

Chiba (2012) conducted a study in which ten Japanese university students took part in a 12- week English pronunciation instruction, in which the learners practiced segmentals and suprasegmentals in controlled activities with a focus on the accuracy (focus on forms) and practiced them in meaningful communication contexts while concentrating on pronunciation (focus on form). The received 20 hours of pronunciation instruction. The participants read a diagnostic passage before and immediately after the instruction. Ten Japanese EFL students were employed as a control

group. Ten native speakers of English rated the comprehensibility and the accentedness of the utterance produced before and after the instruction by the learners in the experimental and the control group. The results revealed that the experimental group progressed in terms of comprehensibility while the control group did not. As for accentedness neither group proved any improvement.

In 2010, the Japanese Ministry of Education, Culture, Sports, Science and Technology suggested a five- year strategic plan to acquire "Japanese with English abilities". The proposal performed anticipated high school graduates to have basic conversations on daily topics, and collage by Robins graduates use English at work. The government felt the absence for higher levels of communication proficiency in English among Japanese citizens. Eight years later, the governmental commission acknowledged the goals were not fully met and made five revised proposals for improving Japanese students' English fluency, but it didn't clarify the causes for the lack of anticipated outcomes (Commission on the Development of Foreign Language Proficiency, 2011). As the commission proposed, promoting awareness of the need of English in this global society and modifying university entrance exams would encourage students to feel motivated to learn English as a tool for communication, but there is an urgent necessity for changes in the current English classrooms to enhance students' communication skills.

Haslam (2010), aimed to find out whether language aptitude and language strategies predict pronunciation gains in second language (L2) acquisition. The second goal was to determine whether these factors differed depending on whether learning happened in an English context as a second language (ESL) or English as a foreign language (EFL). ESL students in the United States and one hundred EFL students in China were asked to take 86 Pimsler language aptitude test. The top 15 or 16 and lowest 15 or 16 scores on this test were asked to complete a test of pronunciation proficiency and a pronunciation inventory at the beginning and the end of a 10- week speaking class in which they were registered. The pre and post pronunciation test were rated and pronunciation proficiency gains in global foreign accent, fluency, comprehensibility and accuracy were compared to both the Pimsler test scores and use of pronunciation strategies before and after treatment. Results signified that general language aptitude didn't predict pronunciation gains regardless of type of setting (ESL or EFL). The findings for this study suggested that pronunciation strategies seemed to play a great role in pronunciation improvement than language aptitude and were fruitful in both ESL and EFL settings.

In 2008, Liu examined the usefulness of integrating commercial pronunciation software in to an ESL pronunciation class of learners at university level. The study partially repeats Seferoglu's (2005) research design and tried to confirm her findings through a revised methodology.

Participants in this study were 18 international graduate students from various departments of the Iowa State University in the U.S. Students were charged to two experimental groups which received traditional classroom pronunciation Software respectively, for six weeks. A pretest and posttest using the same picture- description task were conducted in an attempt to search for changes in the students' overall pronunciation quality from six native speaker raters. The group receiving software- integrated training did not show significant pronunciation progress after the treatment. Neither the two groups showed significant difference in their pretest and posttest scores. Thus the results did not verify Seferglu's findings. In addition, the students' reflection on the received instruction was analyzed to find which features of the two types of pronunciation instruction were considered most fruitful and least useful by the language learner.

As the review of literature revealed, very little research if any, has investigated the difference between intuitive pronunciation learning strategies of EFL learners and pronunciation learning strategies instructed to EFL learners by EFL teachers. Additionally, the most practical and efficient strategies were distinguished in this research.

Method

Design of The Study

In this study the researchers applied quantitative method, pre-test, intervention (treatment), post-test. In this study the researcher applied quantitative method, pre-test, intervention (treatment), post- test.

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Participants

The participants of this study were 366 Iranian intermediate EFL learners studying at Sama non-profit School, Nemoone Basij non- profit school, and Simaye Noor non- profit school, which are not ordinary schools. Based on Cochran formula 336 were chosen from 366 as the convenience sampling participants of this study. Hence, thirty of them were abandoned for this research. The number of female students studying in grade 9 in Zanjan Province is 7000, consisting district 1 and 2. For the present study Multi Staged Cluster Random Sampling was used. In Zanjan there are 110 junior and senior high schools in two districts, which district 2 was selected for the study. Among the ordinary and private Schools, three non-profit female junior high schools, Sama, Simaye Noor, and Nemooneh Basij were selected for the present study that are the only non-profit junior high shools in district 2. They were selected among female students, ages ranging from 15 to 16. The participants had been placed at the intermediate level based on the Nelson Proficiency Test. They studied prospect 3 in ninth grade of junior high school. Three hundred 66 intermediate EFL learners took Nelson Proficiency test to be homogenized. Before tests, they were persuaded that their Performance on the tests would be calculated as part of their class activity.

The scores of 336 Students were located on standard deviation below and above the mean (± 1 SD), and their scores ranged from 28-36, which 30 of the participants were excluded, based on Cochran Formula. As a result, these participants were considered to be roughly at the same proficiency level.

Instruments

In this research 3 instruments were utilized:

1. Nelson Proficiency Test
2. Teacher- made pronunciation test as a pre-test
3. Teacher-made pronunciation test as a post- test
4. Teacher-made questionnaire to distinguish the most efficient pronunciation strategies

In pre-test the participants were asked to respond multiple-choice pronunciation test, in which EFL learners were proficient enough to recognize the phonetic symbols, as the Administration of Nelson Proficiency test revealed this fact. In the post- test another multiple-choice pronunciation test was administrated, knowing that the post-test was with the same difficulty level and the same number of items.

Both teacher-made pre-test and post-test were evaluated by eight experts to distinguish the reliability of the tests, then they were administrated to the participants to distinguish the intuitive pronunciation learning strategies of EFL learners used before instruction.

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Pronunciation Pre-test, a teacher made-test

Researcher made pre-test to measure the pronunciation of EFL learners using their intuitive pronunciation strategies for the control and experimental groups, in which every class was considered as one group. For this study three schools of 336 students of Sama non-profit Junior High School, Nemoone Basij Junior High School, and Simaye Noor were chosen. In every school, there were four ninth grade classes, in which, one

class was chosen as a control group randomly and the other three were assigned as experimental groups. The teacher- made test was given to eight experts that would help the researcher to develop a reliable assessment instrument, to measure the intuitive pronunciation of EFL learners. It was determined which items were essential. Its content Validity was estimated by Lawsh CVR (Content Validity Ratio) for each item. Ten questions were Excluded (table 3.3). According to Lawsh Formula, each item's CVR must not be lower than 0.42 unless it is known not to be valid. (Appendix A)

$$\text{CVR} = (\text{Ne} - \text{N} \div 2) / \text{N} \div 2$$

Table 3.2

Content Validity Ratio of Questionnaire According to Lawsh Formula

Questions	Number of experts	CVR	Validity
1	8	0.8	Valid
2	3	-0.2	Invalid
3	8	1	Valid
4	9	0.8	Valid
5	8	0.6	Valid
6	8	0.6	Valid
7	8	0.6	Valid
8	2	-0.3	Invalid
9	7	0.4	Invalid
10	9	0.8	Valid
11	5	1	Valid
12	8	0.6	Valid
13	7	0.4	Invalid
14	8	0.8	Valid
15	6	0.2 -	Invalid
16	6	0.8	Valid
17	4	-0.2	Invalid
18	4	0.8	Valid
19	8	0.6	Valid
20	4	-0.2	Invalid
21	8	0.6	Valid
22	8	0.6	Valid
23	3	-0.4	Invalid
24	7	0.8	Valid
25	2	-0.5	Invalid
26	8	0.8	Valid
27	7	0.4	Invalid
28	7	1	Valid
29	5	0.8	Valid
30	8	0.6	Valid

As it is shown in table 3.2., ten items of pronunciation questions were excluded and twenty of them were included. The scoring system was from 20, for each item 1 point was calculated.

Intervention (strategy usage adopted from Osburn's (2003) Study, Derwing and Rossiter's (2002) strategies, and Peterson's (2000) strategies)

As the researcher indicated in chapter 2, pronunciation strategies were adopted from Osburne's (2003) study, Derwing and Rossiter (2002) and Peterson's (2000) strategy which were trained by EFL teacher for experimental groups in four classes. It should be noted that 9 strategies were shortened out of 22 strategies, choosing the most practical and efficient strategies to be used in the

context of Iran. One strategy was trained for every experimental group. As it was mentioned previously, 3 schools were chosen, each had 4 classes of ninth grade. In each school one class was considered as a control group randomly, and the other three classes of each school as experimental groups, for each one pronunciation strategy was instructed. As a result there were 3 experimental groups in each school. Altogether 3 strategies were taught for the experimental groups. The control group did not receive any instruction, and they used their own pronunciation learning strategies in both pre-test and post-test.

The nine pronunciation strategies are as follows:

1. Trying to recall and imitate teacher's mouth movement
2. Pronouncing a difficult word over and over
3. Forming and using a hypotheses about pronunciation rules (keep the mouth tight when forming words, specially around the lips)
4. Self- evaluating with its specific of recording oneself to listen to one's pronunciation)
5. Using humor to lower anxiety
6. Noticing, feedback
7. Noticing contrast between native and TL pronunciation.
8. Avoidance and apples for help
9. Focus on individual words

Among the nine strategies, first the most efficient strategies were chosen by EFL learners, using a teacher- made questionnaire and at the end one strategy was assigned to be the most efficient one to be applied in EFL classes.

Post-test

A multiple choice test was designed by the researcher to test the effect of pronunciation learning Strategies of EFL learners after the intervention of EFL teacher. As it was pointed above, one pronunciation learning strategy was trained to every experimental group. As a whole, three pronunciation learning strategies were instructed. Like pre-test, post-test items were also given to eight experts to measure the validity of each item, and its content validity was estimated by Lawsh (CVR Content Validity Ratio). Out of 25 questions, 5 were excluded (Table 3.3). According to Lawsh Formula, each item's CVR must not be lower than 0.42 unless it is known not to be valid. (Appendix B)

$$\text{CVR} = (\text{Ne-N: 2}) / \text{N: 2}$$

Table 3.3

Content Validity Ratio of Questionnaire According to Lawsh Formula

Questions	Number of experts	CVR	Validity
1	8	0.8	Valid
2	3	-0.3	Invalid
3	8	1	Valid
4	9	0.8	Valid
5	8	0.6	Valid
6	8	0.6	Valid
7	8	0.6	Valid
8	2	-0.4	Invalid
9	7	0.4	valid
10	9	0.8	Valid
11	5	1	Valid
12	8	0.6	Valid
13	7	0.4	valid
14	8	0.8	Valid
15	6	0.2 -	valid
16	6	0.8	Valid
17	4	-0.2	Invalid
18	4	0.8	Valid
19	8	0.6	Valid
20	4	-0.2	Invalid
21	8	0.6	Valid
22	8	0.6	Valid
23	3	0.6	valid
24	7	-0.4	invalid
25	2	0.8	valid

Procedure

Initially, the participants were justified about the research and what EFL teacher expected them to do during the research and then adapted Nelson Proficiency Test to homogenize the participants. Consequently, 336 participants that their scores were located on standard deviation below and above the mean (+ 1 SD) and their scores ranged from 28-36 were separated as the participants of this study. On the next process, teacher-made questionnaires were given to the participants to choose the most efficient strategies, those which had been so useful to the learners to help them to develop their pronunciation and that can be used in EFL classes. Then the researcher administrated a pre-test to test EFL learners' intuitive pronunciation learning strategies. (appendix c)

Teacher-made pre-test was evaluated by eight experts to test the reliability of the test and then the tests were assigned to EFL learners to distinguish the spontaneous learning pronunciation strategies before treatment. The teacher designed multiple-choice questions consisting 20 items, which one point was served for every item. The required time for the completion of the pre-test and both post-test was 20-25 minutes. The participants were given the opportunity of one month to use the strategies treated them. As mentioned before the number of the participants were 336 which were divided in to 4 groups, each group included 84 students, one control group and three experimental groups. The number of the participants were 100 in Simayeh Noor, which had four classes of grade 9 and in every class there were 25 students. Among the four classes of this school one class was considered as a control group and the other three were selected as experimental groups randomly. There were 120 students in Sama in grade nine which every class had a number of 30 students. In this school like the previous one, one group was selected as a control group and the other three were selected as experimental groups randomly. In Nemoone Basij there were 116 students, including 29 students in every class which one group was selected as a control group and the other three as experimental groups. The teacher trained one strategy for every experimental group in every school, regarding that the same strategies were trained to experimental groups in other schools, but the control groups didn't receive any.

Totally, three pronunciation learning strategies were taught by the teacher. It should be mentioned that the strategies were trained by only one EFL teacher to eliminate the effect of interference of the different strategies used by EFL teachers, which took about 15 minutes in every class to do so.

Data Analysis

After the collection of the data, to analyze the obtained data and to answer the research questions By SPSS, Kolmogorov-Smirnov analysis was used to study the difference between experimental groups (trained the pronunciation strategies) and control group (not to be trained the pronunciation Learning strategies). And then One Way ANOVA was used between groups and within groups to see the difference between three experimental groups. To measure the effect of motivation and cultural Sensitivity on pronunciation of EFL learners, Pearson Correlation was used. Finally, multiple regression was applied to determine which factors, if any, were predictors of higher pronunciation scores.

Results

This study tried to see the difference in pronunciation between a group that used learning strategies and a group that didn't. With regards to the pronunciation scores, there was a meaningful significance between the groups that used pronunciation learning strategies and those which didn't

use the strategies. To measure the above hypothesis, first the hypothesis normality of the samples were studied.

To this end, Kolmogorov - Smirnov was used. H₀ and H₁ of this test is as follows:

H₀: The sample is distributed normally.

H₁: The sample isn't distributed normally.

The results of the test have been recorded in the following table:

Table 4.1. The normality of the variables of pre-rest of control and experimental groups

Test result	decision	Sig	variables
Distribution is normal	Not rejected zero hypothesis	0.896	Pronunciation scores in control group-pretest
Distribution is normal	Not rejected zero hypothesis	0.256	Pronunciation scores in control group-post test
Distribution is normal	Not rejected zero hypothesis	0.129	Pronunciation scores in experimental group 1-pre test
Distribution is normal	Not rejected zero hypothesis	0.2	Pronunciation scores in experimental group1-post test
Distribution is normal	Not rejected zero hypothesis	0.276	Pronunciation scores in experimental group 2 pre test
Distribution is normal	Not rejected zero hypothesis	0.811	Pronunciation scores in experimental group 2 post test
Distribution is normal	Not rejected zero hypothesis	0.161	Pronunciation scores in experimental group 3 pre test
Distribution is normal	Not rejected zero hypothesis	0.112	Pronunciation scores in experimental group post test
Distribution is normal	Not rejected zero hypothesis	0.2	Cultural sensitivity
Distribution is normal	Not rejected zero hypothesis	0.2	Motivation

Considering the obtained sig quantities in the above table, which were all higher than 0/05, H₀ meaning the normality hypothesis of the discussed variables, is not rejected in a meaningful level 0/05.

Thus, in the test of hypothesis, parametric methods were used. For the first hypothesis, variance Analysis was used. The zero hypothesis H_0 and H_1 can be written like this:

H_0 : The mean of pronunciation score is the same in four studied groups.

H_1 : The mean of pronunciation score is not the same in four studied groups.

First the comparison between four studied groups was tested. The results were recorded in the following table.

Table 4.2

Descriptive

pre

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	84	12.6536	2.27852	.24861	12.1591	13.1480	8.00	17.10
e1	84	13.3071	1.86197	.20316	12.9031	13.7112	10.00	18.10
e2	84	13.2488	2.24947	.24544	12.7606	13.7370	10.00	18.10
e3	84	12.7036	2.06435	.22524	12.2556	13.1516	9.00	16.90
Total	336	12.9783	2.13205	.11631	12.7495	13.2071	8.00	18.10

ANOVA

pre

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	30.428	3	10.143	2.256	.082
Within Groups	1492.363	332	4.495		
Total	1522.791	335			

As seen in variance table, sig quantity was higher than 0.05. Therefore H_0 means the quality of the hypothesis for the mean of four groups in pre- test is not rejected in the 5% error level. It means that there isn't a meaningful difference between the mean of pronunciation scores on the studied four groups in 5% error level. Now the comparison between the mean of four studied groups was accomplished.

The results has been recorded in the following table:

Table 4.3

Descriptive

post

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
control	84	12.4893	2.72596	.29743	11.8977	13.0809	6.00	17.50
e1	84	17.0571	1.68754	.18413	16.6909	17.4234	13.80	19.80
e2	84	15.0643	2.40364	.26226	14.5427	15.5859	10.20	19.20
e3	84	13.7339	2.01919	.22031	13.2957	14.1721	11.15	17.15
Total	336	14.5862	2.80378	.15296	14.2853	14.8870	6.00	19.80

ANOVA

post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	962.433	3	320.811	63.738	.000
Within Groups	1671.060	332	5.033		
Total	2633.493	335			

As seen in the above variance analysis, the sig quantity was less than 5%. Thus, HO meaning the hypothesis of equality of four means of the group is rejected in the 5% error level. Therefore, there is a meaningful difference between the mean of pronunciation scores of four studied groups in post-test. The groups were compared by LSD (prosecution test). The results of the test has been recorded in the following table:

Table 4.4

Multiple Comparisons

Dependent Variable: post

LSD

(I) cod	(J) cod	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
control	e1	-4.56786*	.34618	.000	-5.2488	-3.8869
	e2	-2.57500*	.34618	.000	-3.2560	-1.8940
	e3	-1.24464*	.34618	.000	-1.9256	-.5637
e1	control	4.56786*	.34618	.000	3.8869	5.2488
	e2	1.99286*	.34618	.000	1.3119	2.6738
	e3	3.32321*	.34618	.000	2.6422	4.0042
e2	control	2.57500*	.34618	.000	1.8940	3.2560
	e1	-1.99286*	.34618	.000	-2.6738	-1.3119
	e3	1.33036*	.34618	.000	.6494	2.0113
e3	control	1.24464*	.34618	.000	.5637	1.9256
	e1	-3.32321*	.34618	.000	-4.0042	-2.6422
	e2	-1.33036*	.34618	.000	-2.0113	-.6494

*. The mean difference is significant at the 0.05 level.

Considering the sig column it can be concluded in the above table that there is a meaningful difference between the mean of all groups two by two. For the comparison between the mean of Scores in pre-test and post-test, the comparison of the mean of dependence test has been used, which the results were recorded in the following table:

Table 4.5

Paired Samples Statistics

cod		Mean	N	Std. Deviation	Std. Error Mean
control	Pair 1	12.6536	84	2.27852	.24861
		12.4893	84	2.72596	.29743
e1	Pair 1	13.3071	84	1.86197	.20316
		17.0571	84	1.68754	.18413
e2	Pair 1	13.2488	84	2.24947	.24544
		15.0643	84	2.40364	.26226
e3	Pair 1	12.7036	84	2.06435	.22524
		13.7339	84	2.01919	.22031

Cod	Paired Differences						t	Df	Sig. (2tailed)			
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference								
				Lower	Upper							
con trol	Pair 1 pre post	.16429	1.88166	.20531	-.24406	.57263	.800	83	.426			
	Pair 1 pre post	-3.75000	2.54934	.27816	-4.30324	-3.19676	-13.482	83	.000			
	Pair 1 pre post	-1.81548	2.72713	.29755	-2.40730	-1.22365	-6.101	83	.000			
	Pair 1 pre post	-1.03036	1.93297	.21090	-1.44984	-.61088	-4.885	83	.000			

As it is seen in the above table, there isn't a significant difference between the mean of scores in control group in pre-test and post-test, but in 3 experimental groups between the mean of scores in Pre-test and post-test, there is a meaningful significance, so that the mean of scores has been increased in post-test in a meaningful way compared to pre-test. The first strategy has had more effect on pronunciation of EFL learners compared to other two strategies. To test this hypothesis, the results of the tests of first Hypothesis has been used. As seen in the previous table, the change of mean of pronunciation scores of the experimental groups has reached from 13/31 in pre-test to 17/06 in post-test, meaning that, it has increased 28%, (looking at teacher's mouth moving, trying to recall and imitate a teacher's mouth movements). For the learners which had used the second strategy (self-evaluating, recording oneself to listen to one's pronunciation to improve it), the mean of scores has reached from 13/25 in pre-test to 15/06 in post-test, meaning that it has Increased 15%. For the learners using the third strategy, (noticing contrast between native and target language pronunciation), the mean of scores has reached from 12/70 in pre-test to 13/73 in post-test, meaning it has increased 8%. Thus, the most increasing is related to those learners, which had used the first strategy and then the second one.

Discussion

Since the experimental groups outperformed the control groups in post-test, using pronunciation learning proved to develop pronunciation learning of EFL learners. The treatment consisted of 3 experimental groups receiving one strategy instruction for every group, totally 3 strategies were trained to experimental groups. But the control groups didn't receive any instruction. With regards to the pronunciation scores, there was a meaningful significance between the groups that used pronunciation learning strategies and those didn't use the strategies.

To measure this hypothesis, first the hypothesis normality of the samples were studied. Considering the obtained sig quantities, H₀ was accepted in a meaningful level 0/05. To test this hypothesis, variance analysis was also used. The study indicated that there was a meaningful difference between the mean of all groups two by two. For the comparison between the mean of scores in pre-test and post-test, the comparison of the mean of dependence test was used, which showed there wasn't a significant difference between the mean of scores in control group in pre-test and post-test, but in three experimental groups between the mean of scores had been increase in post-test in a meaningful way compared to pre-test.

However, the present study found significant pronunciation gains to be made in the shortest time period. As mentioned previously, Derwing et al. (1998) found statistically significant gains made in ESL (English as a second language) students' pronunciation in a period of twelve weeks. The present study also found statistically significant gains in pronunciation after one month of treatment.

Previous studies had sought to identify pronunciation strategies (Derwing et al. & Miller, 2002; Osburn, 2003; Rossiter & Vitanova 2002), categorized pronunciation strategies according to well-known strategies inventories (Peterson, 2000), or determined which strategies correlated with pronunciation proficiency (Eckstein, 2007). However, the present study tried to teach the strategies to EFL learners to be used in EFL classes in making pronunciation gains.

Although some strategies seemed to predict pronunciation gains in global foreign accent or fluency, some of them seemed to predict pronunciation gains in accuracy and comprehensibility. Many studies have found that those who acquire an L2 after childhood will likely exhibit an accent and that the strength of the accent may depend on the age the learner began acquisition of L2 (Flege, Mackay & Piske, 2001). Many researchers assert that learners after a certain age never gain native-like pronunciation in an L2 (Bongaerts, 1999).

However, more recent researchers claim that the effects of age depend more upon the state of L1 development than neurological processes (Bialystok, 1997; Dekeyser, 2003; Delaney, 1987, 1988; Flege, Munro, & Mackay, 1995; Oyama, 1979).

The EFL learners who have been studied in this research, didn't have many problems with accuracy or comprehensibility, as they had started language learning from childhood in language institutes. The strategies that EFL learners needed in this research were particularly related to fluency gains, Such as: *Trying to recall and imitate a teacher's mouth movement. Or noticing contrast between native and target language pronunciation.*

According to the results of the control and experimental groups, the first strategy had more effect on pronunciation of EFL learners compared to other two strategies. As mentioned in previous chapter, the first strategy proved to be most efficient to EFL learners, which was (*trying to recall and imitate a teacher's mouth Movements*). The second strategy as also mentioned in chapter 3 was (*self-evaluating with its specific of recording oneself to listen to one's pronunciation*). And the third strategy was (*noticing contrast between native and TL pronunciation*). To test this hypothesis, the results of the first hypothesis has been used. The change of mean of pronunciation scores of the experimental groups had reached from 13/31 in pre-test to 17/06 in post-test, meaning that, it had increased 28%. For the learners which had used the second strategy, the mean of scores had reached from 13/25 in pre-test to 15/06 in post-test, (it had increased 15%). Finally, for the learners using the third strategy, the Mean of scores had reached from 12/70 in pre-test to 13/73 in post-test, (it had increased 8%).

Therefore, the most increasing was related to those learners, which had used the first strategy and then the second one. In terms of pronunciation strategy research, the finding of the present study supported claims made by Brown (2008), who stated that effective language Learners know the language goals they are trying to achieve. However, the current study was, if so, the first to offer empirical evidence to support these claims.

The current study isn't in line with previous study conducted by Eckstein (2007). For Eckstein (2007), examined the strategic learning of pronunciation through the use of pronunciation learning strategies that were linked to pronunciation acquisition theory. But it's in line with the study Performed by Robins (2010). The study conducted by Robins examined the effect of pronunciation strategy usage by using PAC (Pronunciation Acquisition Construct). In doing so, significant gains were found in contextualized pronunciation. Additionally, subjects who used the strategy "think of benefits" were found to show higher levels of pronunciation gain in a non-contextualized pronunciation environment.

Findings from the present research confirmed previous research in L2 oral proficiency by showing that those with higher gains use more strategies than those with lower gain scores. The implications of this question have merit to teachers, EFL learners and, speech specialists. EFL learners can increase their awareness of strategies and more efficiently and put them into practice. Speech specialists can also benefit from this study by prioritizing strategies based on EFL learners' needs.

Conclusion

This study sought to understand the impact of pronunciation strategies using by EFL learners intuitively and the strategies trained them. After analysis of the data and examination of the results, it was found that there was a meaningful significance between the groups that that used

pronunciation learning strategies and those didn't use the strategies. And it showed there wasn't a significant difference between the mean of scores in the control group in pre-test and post-test.

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Appendix A

Choose the best answer for each question which has the same sound in the slashes.

1. /i:/

- idiot mean lip breakfast

2. /ə/

- easy enter locked adding

3. /ʃ/

- church think wish vision

4. /æ/

- ache date apple hare

5. /ð/

- this through udder dense

6. /eɪ/

- wait either ample sapling

7. /ʌ/

- shoe should moon puppy

8. /ɔ/

- show wish change leisure

9. /əʊ/

- row (argument) sow (pig) now row (a boat)

10. /ɔɪ/

- ought should house annoy

11. /ʊ/

- wood mood mop using

12. /ð/

- this thing shoot

13. /æ/

- cat car con

14. /ɪ/

- tip tea type

15. /aɪ/

- bike bear black

16. /f/

- thin shin chin

17. /ʃ/

- feet treat sheet

18. /ʊə/

tour

cow

fair

19. /ʌ/

cup

cap

cape

20. /ɪə/

dire

dare

deer

Appendix B

Choose the word A, B, C or D in each group that has the underlined part pronunciation differently from the rest.

- | | | | |
|------------------------|-----------------------|---------------------|---------------------|
| 1. A. <u>act</u> or | B. <u>p</u> anda | C. <u>c</u> andle | D. <u>gr</u> aceful |
| 2. A. <u>a</u> head | B. <u>b</u> eat | C. <u>in</u> crease | D. <u>h</u> eat |
| 3. A. <u>h</u> oney | B. <u>h</u> andle | C. <u>h</u> onest | D. <u>h</u> abit |
| 4. A. <u>s</u> um | B. <u>b</u> utton | C. <u>j</u> ust | D. <u>d</u> uty |
| 5. A. <u>w</u> ood | B. <u>ch</u> oose | C. <u>bo</u> ot | D. <u>f</u> ood |
| 6. A. <u>ca</u> tches | B. <u>ph</u> ones | C. <u>co</u> urses | D. <u>pla</u> ces |
| 7. A. <u>m</u> ethod | B. <u>ca</u> mel | C. <u>le</u> ss | D. <u>re</u> ject |
| 8. A. <u>em</u> pty | B. <u>nast</u> y | C. <u>fry</u> | D. <u>sleepy</u> |
| 9. A. <u>wr</u> ite | B. <u>wr</u> iter | C. <u>wr</u> iting | D. <u>wr</u> itten |
| 10. A. <u>appal</u> ed | B. <u>iron</u> ed | C. <u>pick</u> ed | D. <u>serv</u> ed |
| 11. A. <u>sto</u> ne | B. <u>top</u> | C. <u>pock</u> et | D. <u>mod</u> ern |
| 12. A. <u>leath</u> er | B. <u>everyt</u> hing | C. <u>sevent</u> h | D. <u>theat</u> re |
| 13. A. <u>pill</u> | B. <u>bride</u> | C. <u>brick</u> | D. <u>shift</u> |
| 14. A. <u>mu</u> ch | B. <u>match</u> | C. <u>chemist</u> | D. <u>chos</u> en |
| 15. A. <u>tow</u> | B. <u>elbow</u> | C. <u>grow</u> | D. <u>fowl</u> |
| 16. A. <u>boat</u> | B. <u>climb</u> ing | C. <u>dustbin</u> | D. <u>labor</u> |
| 17. A. <u>glove</u> | B. <u>move</u> | C. <u>prove</u> | D. <u>improv</u> e |
| 18. A. <u>flew</u> | B. <u>threw</u> | C. <u>grew</u> | D. <u>few</u> |
| 19. A. <u>plough</u> | B. <u>ground</u> | C. <u>souvenir</u> | D. <u>southern</u> |
| 20. A. <u>soldier</u> | B. <u>already</u> | C. <u>dirty</u> | D. <u>podium</u> |

Appendix C**The questionnaire related to 9 pronunciation Strategies**

Dear Students, choose the strategies of your own interest to improve your pronunciation learning.

1. Trying to recall and imitate a teacher's mouth movements.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

2. Pronouncing a difficult word over and over.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

3. Forming and using hypothesis about pronunciation rules.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

4. Self –evaluating with its specific of recording oneself to listen to one's pronunciation.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

5. Using humor to lower anxiety.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

6. Noticing, feed back.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

7. Noticing contrast between native and TL pronunciation.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

8. Avoidance and appeals for help.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

9. Focus on individual words.

- A. Strongly disagree B. Disagree C. Strongly agree D. Agree

پرسشنامه مربوط به نه اسندرانژی تلفظ

1- نگاه کردن به دهان معلم که در حال حرکت است . (سعی در بداد آوردن و تقلید جایجایی دهان معلم)
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

2- تلفظ کردن یک کلمه سخت چندین بار .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

3- کمک گرفتن از دیگشنبه .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

4- خود آزمایی , ضبط کردن صدا برای گوش کردن به تلفظ مان برای بهبود بخشیدن به آن .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

5- استفاده از شوخ طبیعی برای کم کردن اسندرس .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

6- توجه کردن و دردافت بازخورد .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

7- استفاده از اجتناب و پرهیز و درخواست کمک .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

8- تم رکز کردن بر کلمات جدأگانه (اندرادی) .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

9- توجه به فرق بین تلفظ افراد بومی و تلفظ غیر بومی .
الف) کامال مخالفم ب) کامال موافقم ج) کامال موافقم د) موافقم

THE RELATIONSHIP BETWEEN THE EFL LEARNERS' INTERPERSONAL INTELLIGENCE, THE FREQUENCY AND TYPES OF INFORMAL FALLACY AND EVIDENCE IN ARGUMENTATIVE WRITING

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ABSTRACT

The present study was an investigation of the relationship between the EFL learners' interpersonal intelligence, the frequency and types of informal fallacy and evidence in argumentative writing. Few studies have been conducted to investigate this issues. To this end, 356 second grade female senior state high school students in Zanjan/Iran from 4 senior high schools of Zanjan were selected through multistage cluster random sampling (MCRS) method and based on Cambridge placement test (2010), 130 students proved to be upper-intermediate and participated in this correlational study. The main data collection stage took place during 1 month. The students provided their answers to the quantitative component of this study which was McKenzie's MI Questionnaire in order to identify their interpersonal intelligence profile.

The informal fallacies based on Johnson' (1998) definitions and four types of evidence categorized in Hoeke and Hustinx (2003) were identified and counted within language learners' argumentative writings. The evaluation of the arguments was also conducted based on Walton, Reed and Macagno (2010). In order to analyze the research questions, descriptive statistics were used and in order to test the hypotheses a Spearman correlation was employed. Based on the results achieved from the first research question, there was a significant negative correlation between Iranian upper-intermediate EFL learners' interpersonal intelligence and the frequency of informal fallacies. Based on the results achieved from the second research question, there was a significant negative correlation between Iranian upper-intermediate EFL learners' interpersonal intelligence and the frequency of evidences.

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Keywords: Argumentative Writing, Evidence, Interpersonal Intelligence, Informal Fallacy.

TARGET LANGUAGE CULTURE IN ELT

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ABSTRACT

The role and status of culture in language teaching has always been a challenging issue for teachers. Their conception and opinion may be very different regarding the meaning of culture and the possibilities of incorporating cultural content into the language teaching process. These differences can result from their previous experience as language learners, from what they have learnt along their training process, from the various possibilities they have had to come into direct contact with the target culture. The cultural content taught in language classes may also be influenced by the extent of differences between the native and target cultures. This study focuses on the introduction of the topic of culture in language teaching into the curriculum of Language teaching methodology for teacher trainees. For this purpose the recommendations and principles stated in the specialized literature regarding culture in foreign language teaching will be examined, and we will reflect on what the ideal content of a course related to the teaching of this topic should be.

GRAHAM SWIFT'S NOVELS' TITLES SHARED WITH SONGS

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ABSTRACT

The purpose of this paper is to show and analyse the similarities between some titles of Graham Swift's novels and those of songs. Some titles of Graham Swift's novels suggest in the minds of readers titles of well-known songs. For example, *Wish You Were Here* is also the title of a song by Pink Floyd. *Out of This World* is also the title of a song by The Cure, and earlier by Ella Fitzgerald, while *Here We Are* is also the title of a song by Gloria Estefan. The paper will examine the relationship between the same titles, as well as between the theme of the lyrics and the theme of the novels. In the song *Wish You Were Here* by Pink Floyd, the main theme relates to the difficulty of distinguishing right from wrong. Keywords such as fears, ghosts, and wars in the song echo the same concerns in the novel. What is more, the novel is about a couple that grows apart and no longer communicates. Lack of communication is the theme of the song. The song *Out of This World* is about memories, which is also the main concern of the novel. The song *Here We Are* is concerned with the short time two lovers spend together, a theme which is found in the novel in relation with two of its characters. The consequences of using the same titles for novels as for the songs are an increased lyrical pattern for the readers that know them. This can explain how Swift manages to create his lyrical novels, starting from readers' associations with other poetic texts, in this case song lyrics.

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Keywords: Emotions, Intertextuality, Empathy, Lyrical Novel

1. INTRODUCTION

Some of Graham Swift's novels share their titles with songs. Swift's novel *Out of This World* was first published in 1988. Two songs with the same title can be identified: *Out of This World* by The Cure, released in 2000, and *Out of This World* by Ella Fitzgerald, released in 1959. The novel *Wish You Were Here*, first published in 2011, shares its title with the song by Pink Floyd, released in 1975, as well as with the song by Rednex, released in 1995. The novel *Here We Are*, first published in 2020, has the same title as the song by Gloria Estefan, released in 1989 in the US and in 1990 in the rest of the world. What is also interesting is that, by examining the song lyrics, they resonate with Swift's novels that have the same titles. Since the songs have been released before the novels with the same titles were published, it is natural to assume that Swift may have been inspired by them to some extent. Perhaps the songs were played around during the time, and they have

resonated with Swift's description of the characters' emotions. So far, in Swift's autobiographic writings and in his interviews, no details regarding the similarities of his novels' titles with these songs were mentioned. No studies regarding these similarities of titles among Swift's novels and songs have been found previously to writing the present paper.

This paper will explore the intertextual connections among the novels and the songs. They can be regarded as resonating at some points with the characters' stories and emotional states. One reason for the similarities of content, not only title, can be related to sharing similar means of emotional expression from a cultural point of view. Certain words and phrases, as well as states of mind and concerns, are around us during a certain time and we relate to them, as well as resort to them to express ourselves. Swift's characters make no exception. At the same time, these titles all consist of phrases that are frequently used in everyday life. Another reason for the similarity in content could be due to the universal expression of feelings in the lyrics as well as during the poetic moments in the novels. However, the similarities are striking, and various moments in the novels can find their correspondent in the songs. The readers can form associations between novel and song, and notice how the plot resonates with the song lyrics. The parallels with the songs can help readers experience at a deeper level the poetic aspects of Swift's lyrical novels. His novels are composed of lyrical monologues, where the characters express themselves.

2. RESEARCH AND FINDINGS

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2.1. Intertextual Relationships Among Novels and Songs

The lyrical novel, in Graham Swift's case, consists of the mixing of genres, intertextuality (relying on past literature helps readers associate the characters' experience with the lyrical mode), and subjectivity. What is more, the narrator situated outside the *fabula* in the lyrical monologues through which the characters express their emotions and stories, refrains from expressing a direct opinion within the story. The characters' inner reflections are available to the reader by means of confession. The absence of an omniscient narrator allows the readers to judge the characters for themselves. The lyrical monologue allows readers to sympathize with the characters. (Drobot, 2014)

Intertextuality means that "any text is essentially a mosaic of references to or quotations from other texts; a text is not a closed system and does not exist in isolation." (Macey, 2001: 203-204)

In the novel *Out of This World*, the character Sophie holds her lyrical monologue having sometimes her therapist as a listener. This absence of someone close to talk to reflects the conflictual relationships among the characters. According to Winnberg (2003: 10), in Postmodernism, "the narrator must continue to speak in order to literally survive; that is, the narrator only exists in terms of the fiction she is producing, and at the point the production of

discourse ends, the narrator ends.” The characters’ stories are created from a subjective view, through the lyrical monologue of various characters, whose stories no longer exist the moment they stop telling the reader their perspective on various happenings. The song by Ella Fitzgerald has a portion which reflects the story of Sophie, regarding her estrangement from her father, as well as her wishing to reconcile with him:

“After waiting so long
For the right time
After reaching so long for a star
All at once from long and lonely night time
And despite time, here you are

I cry, ‘Out of this world’
If you said we were through
So let me fly out of this world
And spend the next eternity or two
With you” (Fitzgerald, 1959)

Sophie feels troubled regarding her relationship with her father, Harry Beach, due to his frequent absences. In his turn, her father had a conflicting relationship with his own father, rebelling against his empire of arms and becoming a photojournalist instead. The issues of communication in their family are very well expressed by the fragment from the song lyrics above, even more so as the lyrics also contain the phrase “Out of This World”: “You know, a long time ago, they’d have thought what we’re doing now was magic. Impossible! Out of this world! They’d have thought only gods could fly up into the sky. And now we get into these things and stow our luggage and fasten our seat-belts – and say: How about something to keep us amused?!” (Swift, 1988: 167) Flying, mentioned in the lyrics, will be the means by which father and daughter will see each other, as Sophie will fly by plane to visit him: “You think it’s a long time to be on a plane? Another six hours.” (Swift, 1988: 166) In Ella Fitzgerald’s song (1959), the last stanza can be interpreted as a moment of revelation in Sophie’s story: that of the wish to reconcile, seen as a solution to all dilemmas expressed while in therapy. This moment of revelation that ends the song has as a correspondent the moment of revelation in the novel where, in the end, Sophie concludes her story by showing herself very enthusiastic about her decision to take the plane and to visit her father.

The song (1959) suggests waiting for a long time to reconcile, and it also suggests going through memories (“despite time, here you are”), aspects that can also be found in the novel.

For the couple in Swift's novel *Wish You Were Here*, the songs with the same title by Rednex and Pink Floyd are both relevant, regarding the communication problems and also the wish of Ellie and Jack to reconcile.

The lyrics of the Pink Floyd song also refer to the couple's struggling with what is good and wrong, as they evaluate each other's feelings and their own. Reference to war which was present in their lives through the man's brother as a way hero is present in the lyrics:

“So, so you think you can tell
Heaven from hell?
Blue skies from pain?
Can you tell a green field
From a cold steel rail?
A smile from a veil?

Do you think you can tell?
Did they get you to trade
Your heroes for ghosts?
Hot ashes for trees?
Hot air for a cool breeze?
Cold comfort for change?
Did you exchange
A walk-on part in the war
For a leading role in a cage?

How I wish, how I wish you were here
We're just two lost souls
Swimming in a fish bowl
Year after year
Running over the same old ground
What have we found?
The same old fears
Wish you were here” (Pink Floyd, 1975)

In the lyrics readers of Swift's novels might identify keywords such as ghosts, heroes, change, war, and cage. Together, these words recall the experience with the brother who died during the war, whose absence is not accepted by Jack, as part of the grieving process. The cage resonates with the characters' experiences of isolation and not feeling understood by the person next to them. For instance, Ellie feels disconnected emotionally from Jack, as Jack is in his own world where his brother is still alive: “And he should never have said that thing, at the start, about St Lucia. Then Ellie would be with him now. He'd seen the same look come into her eyes then—as if,

strangely, now Tom was dead, she could no longer rely on his absence. And hadn't he just proved her right? The simple word was ghost." (Swift, 2011: 178)

In the lyrics of Rednex, we can find a stanza that can be related to both the couple in Swift's novel, but also to the missing brother of Jack:

"I miss your laugh, I miss your smile
I miss everything about you
Every seconds like a minute
Every minute's like a day
When you're far away" (Rednex, 1995)

Missing someone can be due to the separation by death but also due to the separation caused by misunderstandings.

The lyrics of *Here We Are* by Gloria Estefan can be associated to the story of the couple Ronnie and Evie. The lyrics are about a couple in love, whose love story's end is foreshadowed, then confirmed later in the song:

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"Here we are
Face to face
We forget, time and place
Hold me now
Don't let go
Though it hurts and we both know
The time we spend together's gonna fly" (Estefan, 1989)

The foreshadowing can be related to the way that the story goes from present to past in the novel. As a result, the reader knows part of the story but not all. The love story of Ronnie and Evie does not end in them remaining together; instead, Evie will marry Jack, Ronnie's friend. After Ronnie disappears in the magic act as well as in real life, readers find out that Evie has kept the costume from the time she was Ronnie's assistant. This can be a sign that she had still been thinking about him, as suggested by the story in the lyrics

"Here we are

Once again
But this time we're only friends
[...]
And all the love I feel for you
Is something I should hide
When I have you close to me
The feelings so sublime
That there's nothing I can do
To keep from loving you, no no no" (Estefan, 1989):

The lyrics can be associated with the characters' having to accept what happened in their past and the situations that have remained without answers, such as what had happened to Ronnie.

The fact that the song lyrics resonate with the stories and with the characters emotions can be related to the similar experiences of music listeners. At some point, certain song lyrics resonate with their issues and emotional states. The songs are written so that the artists can express themselves. They manage to put into words the same experiences anyone can go through at some moment in their lives, such as, in the examples in Swift's novels, estranged persons willing to get close again, and remembering a past love story.

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2.2. Emotional Response to Song Lyrics

Ransom (2015: 3) draws attention to the way in which music and emotion are interrelated: "Music's dynamic ability to influence emotion has been well studied (Bharucha et al., 2006; Clark, 2013; Juslin, 2001; Juslin, 2003; Levitin, 2007, & Västjäll et al., 2012). From mood regulation (Bharucha et al., 2006) to rumination (Zullow, 1991) to self-expression (Juslin & Sloboda, 2001)." However, the connection is strong not only when it comes to music, but also to song lyrics. Ransom (2015: 9) argues for a connection between art and positive psychology as follows: "Fields like art therapy, music therapy, and narrative medicine have all contributed to relieving, and in some cases healing, mental and physical illness."

These effects of well-being come from sympathizing with the emotions present in the lyrics. They are also the result of an apparent communication through identifying someone feeling the same, while going through a similar experience. It could be regarded as a cathartic effect.

Listeners respond to song lyrics just like in proposed by the process of reader-response criticism. Reader-response criticism focuses on the way that readers react to various texts. According to Tyson (2006: 154), "what a text is cannot be separated from what it does". Two main beliefs make up reader response criticism: "1) [...] the role of the reader cannot be omitted from our

understanding of literature and 2) [...] readers do not passively consume the meaning presented to them by an objective literary text; rather they actively make the meaning they find in literature” (Tyson, 2006: 154).

The fact that readers are active is assumed by the theory of intertextuality, which allows them to resort to their previous experiences of past literary texts. However, readers may not resort only to past or other literary texts, but also to everything that goes on around them in terms of culture, such as mindsets, values, and even songs. The songs' and novels' titles contain phrases that are also used on a daily basis, but they can be frequently associated with a various context and art form. Since songs, just like poems, can be memorable due to the listeners' sympathizing with the experiences, fragments from the lyrics and even titles can stick to mind. Once readers have the previous experience of encountering the respective phrase in songs, they can start reading the novel with the expectations of finding a similar experience there with the one described in the song. While the songs can be open to imagine any kind of stories fitting a basic plot, it is easy for readers to fit in the story plot in the novel with the one suggested by the lyrics. Readers will also be brought into a lyrical frame of mind beginning with the novel's title. Thus, Swift can only benefit from enhancing the readers' expectations for lyrical moments.

3. CONCLUSIONS

- The lyrical novel, in the case of Graham Swift, benefits from bringing forward the poetic mode through the associations readers of the time can make with the songs with the same titles. A lyrical mode is created through the correspondence of the stories in the song lyrics and in the novel. The effect is similar to associating a song to lyrical moments in films. However, in the case of the novel, the link is done by the writer, but by the readers' active participation, as they bring in their own background in their associations with previous songs lyrics.
- Just as in the case of the experience of identifying listeners' emotions and life situations with those in songs, the moments when the characters have lyrical reflections, as well as their stories, match with the experiences and emotions in the song lyrics.
- Graham Swift's characters experience lyrical moments and emotions during various life moments to which readers can relate, as most of them are universal, being related to relationships issues. The possibility of association with song lyrics can also stand as a proof for the universality of emotions expressed in Swift's novels.

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SKIING VOCABULARY IN ARTIFICIAL AUXILIARY LANGUAGES

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ABSTRACT

In this paper I will look at skiing terms in artificial auxiliary languages (henceforth AALs), i.e. languages which have been deliberately created as a means of communication among speakers of different natural languages. The most successful language of this type is Esperanto, but there are hundreds of other such languages. Because many of them were not fully developed, a large number of AALs, e.g. Sona, lack vocabulary relating to skiing (at least in publicly available materials). The Esperanto word for ‘ski’ (the noun) is *skio*. Many or most other AALs have (basically) the same word, e.g. Mondlango *skio*, Romanova *sci*, Sambahsa *ski*. This is not a surprise, since many AALs were largely based on Esperanto and/or on major European languages (as Esperanto is). An exception is the *a priori* (built from scratch) language Kah, whose word is *shoya*. On the other hand, another *a priori* language, Suma, has a clearly borrowed word for ‘ski’, *ski*. The Slovio word for ‘ski’, *lizxa*, is very similar to the Russian word for it, *лыжса*, while the Lango word, *narto*, closely resembles the Latin and Polish words with this meaning, *narta* (in both languages).

Relatively few AALs include much more vocabulary relating to skiing, but Esperanto does have some terms, including *slalomo* ‘slalom’, as do SPL and some others.

Keywords: skiing, artificial languages, Esperanto.

INTRODUCTION

Artificial languages are languages which have been deliberately created, unlike languages which arose and evolved naturally (*natural languages*), such as Turkish and English. Artificial languages which are intended as a way for speakers of different natural languages to communicate are *artificial auxiliary languages* (henceforth AALs). In this paper I will look at skiing terms in such languages. (I will only consider skiing on snow, i.e. I will not deal with water skiing.)

By far the most successful AALs is Esperanto, but there are hundreds of others. (Most of the more recent ones were not serious attempts, but I have included them anyway; they may still be of interest.) Because many of them were not fully developed, a very large number of AALs, e.g. Pasifika and Sona, lack vocabulary relating to skiing (at least in publicly available materials). In fact, even some AALs which have been given a fairly large vocabulary, e.g. Sasxsek, do not seem to have a work for ‘ski’.

WORDS FOR ‘SKI’ (THE NOUN)

The Esperanto word for ‘ski’ (the noun) is *skio* (-*o* is the suffix for nouns in this language). Many or most other AALs (of those which have a word for ‘ski’) have (basically) the same word, as shown below:

Arlipo *skio*

Atlango *skiro*

Aiola *skio*

Ido *skio*

Interlingua (IALA) *ski*

Linguna: *sqí(o)*

Lingwa de Planeta *ski*

Lingua Franca Nova (or Elefen) *sci* (which also means ‘skiing’ (the noun))

Mondlango *skio*

Neo *ski(o)*

Occidental/Interlingue *ski*

Romániço (not an AAL, strictly speaking, although it has been labelled as such) *schio* Romanova *sci*

Sambahsa *ski*

Sermo *ski*

Uropi *skij*

This is not a surprise, since many AALs were largely based on Esperanto and/or on major European languages (as Esperanto is), and some of these languages do not differ much in their words for ‘ski’, e.g. English *ski*, French *ski*, Spanish *esquí*. To my knowledge, the only publicly available source on Eurolengo is Jones (1972); its glossary does not give a word for ‘ski’, but the words for ‘skiing’ and ‘skier’ are *skiant* and *skior* respectively (p. 98). From this one could infer that Eurolengo’s word for ‘ski’ is the same as that of English. Similarly, the Nordienisk verb for ‘to ski’ is *skien*; since *-en* is a verbal ending in this language, it would appear that the noun meaning ‘ski’ in this language (if there is or were one) would be the same as the English word.

An exception to this pattern is the *a priori* (built from scratch, i.e. not based on natural languages) language Kah, whose word is *shoya*; likewise for another *a priori* language, Kotava, whose word is *lorspa*. On the other hand, another *a priori* language, Suma, has a clearly borrowed word for ‘ski’, *ski*. This word might have been chosen so that it could form a pair with the word for ‘skate’, *ska* – in this language there are many pairs of words with related meanings, which differ only in a vowel, e.g. *pamo* ‘man’, *pimo* woman’.

There are also exceptions from some *a posteriori* AALs (these are AALs based on one or more natural languages). The Slovio word for ‘ski’, *lizxa*, is very similar to the Russian word for it, *лыжса*. This is not surprising, since Slovio draws largely on Russian and is partly aimed at speakers of Slavic languages. Interslavic, which is also meant for Slavic speakers, has a similar word for ‘ski’, *lyža/лыжса*.

The Lango word, *narto*, resembles the (very late) Latin word for ‘ski’, *narta*, and the Polish word for it, *narta*. SPL (or SIMP-LATINA) is a simplified version of Latin; its word for ‘ski’ is *narta*. Kali-sise, a mainly *a posteriori* AAL, has two nouns meaning ‘ski’, *sanate-lanase-sisi-sinata*, which breaks down as “[freeze+{long-object}+movement+tool]”, (<https://arkaia.gitlab.io/www.langmaker.com/kalisiselexicon.htm>), and *sanate-nasini*, “[freeze+vehicle]” (ibid.). The length of these words is due to the small number (400) of roots in the language; unlike Esperanto and similar languages, many of these roots are not based on roots of European languages.

WORDS FOR ‘TO SKI’

To some extent, discussing verbs meaning ‘to ski’ in AALs is not very interesting, as the forms of these words, and their relation to nouns meaning ‘ski’, depends on morphological requirements (or the lack of them) in a particular AAL. For example, the Interlingua (IALA) verb is *skiar*, containing one of the infinitive suffixes of the language, *-ar*; in Interlingua, verbs must have a verbal ending of some sort, and so the verb could not have the same form as the nouns, which, one will recall, is *ski* in this language. On the other hand, in Lingwa de Planeta *ski* is both a noun and the verb ‘to ski’; the same is true of Lingua Franca Nova’s word *sci*.

The Aiola word for ‘to ski’ is *skiiare* (https://web.archive.org/web/20071006134425fw_/http://www.aiola.org/English-Aiola%20Glossary.doc) The infinitive ending in this language is *-are*; it is not clear why an extra <i> is present in this word.

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OTHER SKIING TERMS

Few AALs include much more vocabulary relating to skiing, but Esperanto and some others have a word for ‘slalom’, as shown below; they show little or no variation:

Words for ‘slalom’

Esperanto: *slalomo*

Lingua Franc Nova: *slalom*

Sambahsa: *slalom*

Several languages also have a term for ‘cross-country skiing’; they differ somewhat in which roots they contain, i.e. in how they are built.

Terms for ‘cross-country skiing’

Kah: *anushoya tunu lasa* ‘cross country skiing’ (*anushoya* ‘skiing’, *tunu* ‘to cross, go across’, *lasa* ‘terrain’)

Lingua Franca Nova: *corsa de sci* ‘cross-country skiing’ (from *corsa* ‘race’)

Sambahsa: *drahski* ‘cross-country skiing’ (presumably from *drah* ‘to run’)

There is a relatively large number of skiing terms in SPL, including *cáliga nartatória* ‘skiboot’ (from *caliga* ‘boot’), *báculum nartatórium* ‘skipole’, *iacca nartatória* ‘ski jacket’ (from *iacca* ‘jacket’), and *desultura nartatória* ‘ski jump (the object, not the act)’.

Sambahsa also has the terms *alpin ski* ‘alpine skiing’, *skibehnden* ‘ski binding’, *steighijadh* ‘ski lift’ (presumably from *steigh* ‘path; to get/go (up)’ and *ijadh* ‘device’), and *wintersport station* ‘ski resort’.

Note also Lingua Franc Nova *scieria* ‘ski slope, piste’, *sci savaje* ‘off-piste skiing, backcountry skiing’, *sci tra distantia longa* ‘long distance skiing; to ski long distance’, and *telemarc* ‘telemark’.

There is also a word for ‘telemark’ in Esperanto, *telemarko*.

Kali-sise has the word *piske-nasini* ‘ski lift, gondola’, which breaks down as “[{high-object}+vehicle] (<https://arkaia.gitlab.io/www.langmaker.com/kalisiselexicon.htm>)

Romániço has the term *schii-bastono* ‘ski pole’ (*bastono* ‘stick’, *schiiger* ‘to ski’; http://www.romaniczo.com/vocabulados/en_dicionario.html)

Kah has the following terms:

vangia na nushoya ‘ski lift’ (from *na* ‘of’, *nushoya* ‘to ski’, and *vangia* ‘elevator’)

moila na nushoya ‘ski slope’ (*moila* ‘slope’)

ashoya na vunu ‘downhill skiing’ (perhaps *ashoya* is an error for *anushoya*, but note *shoyanum* ‘snowboarding’ and *ashoyanum* ‘snowboarding’; *vunu* ‘to go down’, from *vu* ‘down’ and *nu* ‘go’)

(Sources for Kah include the *Kayako na Bobos/Pocket Dictionary*, formerly available at <http://www.kwesho.com/kayanyo.html>, the *Kah to English Dictionary* (<http://www.kwesho.com/dictionary-k-e.html>), and the *English to Kah Dictionary* (<http://www.kwesho.com/dictionary-e-k.html>)).

CONCLUSION

On the one hand, we see some uniformity among AALs with respect to their words for ‘ski’. On the other hand, there is some significant variation: a small number of AALs seem to have borrowed Slavic or other words, and some *a priori* AALs have completely different words. A few AALs have some other skiing terms.

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THE STUDY OF VOCABULARY AWARENESS EFFECT ON INTERMEDIATE LANGUAGE LEARNERS' DEPTH OF VOCABULARY KNOWLEDGE IN GENUINE PERSIAN TEXTS

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ABSTRACT

Every single day, we use spoken and written words to communicate thoughts, ideas and emotions. Sometimes, we are successful in communication, and sometimes we are not quite successful. We can say what we mean by use of good vocabulary knowledge. Facing with a written text, a good vocabulary is a very important tool. By having a good knowledge of vocabulary, you will be able to choose the best appropriate word. The purpose of the present study was set out to investigate the effects of vocabulary awareness on depth of vocabulary knowledge. In order to measure the effects of vocabulary awareness instruction on students' depth of vocabulary knowledge, a Word Associates Test (WAT) was administered to both groups in pretest and post test. After comparing the mean scores of pre test and post test results, it was revealed that vocabulary awareness instruction group outperformed the control group in reading comprehension performance, but not in depth of vocabulary knowledge, so vocabulary awareness instruction does not influence participants' depth of vocabulary knowledge.

Keywords: vocabulary awareness, depth of vocabulary knowledge, language learners

TASARRUF DAVRANIŞINI ANLAMAK ÜZERİNE BİR ÇALIŞMA: ÜNİVERSİTE ÖĞRENCİLERİİNİN TUTUMLULUK VE MATERYALİST DAVRANIŞLARI

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ÖZET

İktisat bilimi, bireylerin tasarruf ve tüketim davranışlarını açıklamak için psikoloji gibi farklı disiplinlerden yararlanmıştır. Bu çalışma psikolojik unsurların üniversite öğrencilerinin tasarruf ve tüketim davranışlarını nasıl etkilediği sorusuna yanıt bulmayı amaçlamaktadır. Çalışmada öğrencilerin materyalist ve tutumluluk davranışlarına odaklanılmıştır. Veriler 2020 yılında Ankara Yıldırım Beyazıt Üniversitesi'nde eğitim gören 263 öğrenciden Ocak-Şubat ayları arasında alınmıştır. Anket 6 ölçekte oluşturulmuştur ve toplamda 38 soru içermektedir. Ayrıca ankette 5'li Likert ölçeği kullanılmıştır. Anketin ölçekleri sırası ile tutumluluk, materyalizm, tasarruf davranışı, aşırı harcama davranışı, ailenin etkisi ve ekonomik zorlukların etkisini içermektedir. Altta yatan faktörleri belirlemek için ilk önce faktör analizi uygulanmıştır. Rotasyon yöntemi için Varimax seçilmiştir ve temel bileşenler analizi çıkarım yöntemi olarak seçilmiştir. Faktör analizi sonucunda dört ayrı tutum ve özellik bulunmuştur. Bunlar; oto-kontrol, müsrif tutum, gösterişçi tutum ve ekonomik zorlukların etkisi. Ayrıca sosyo-ekonomik ve demografik değişkenler ile tutumların ve özelliklerin öğrencilerin tasarruf ve tüketim davranışlarını ne yönde etkilediğini bulmak için lojistik regresyon analizi uygulanmıştır. Sonuçlar otokontrole sahip öğrencilerin tasarruf etme olasılıklarının daha yüksek olduğunu göstermiştir. Öte yandan bulgular müsrif ya da gösterişçi tutuma sahip olan öğrencilerin harcama davranışlarında bulunma olasılığının daha yüksek olduğunu göstermektedir. Dahası, ekonomik zorlukların ve ebeveynlerin gelirinin, öğrencilerin tasarruf ya da harcama davranışlarında bir etkisi olmadığı bulunmuştur. Ayrıca, gelecekte Türkiye ekonomisi hakkında karamsar bekentilere sahip olan öğrencilerin harcama davranışlarında bulunma olasılığının daha yüksek olduğu, aksine, bu konuda iyimser düşüncelere sahip olan öğrencilerin ise tasarruf davranışında bulunma olasılığının daha yüksek olduğu gözlemlenmiştir. Ancak, Türkiye ekonomisi hakkında bugünkü iyimser ya da kötümser bekentilerin öğrencilerin tasarruf veya harcama davranışlarında rol oynamadığı bulunmuştur.

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Anahtar Kelimeler: Materyalizm, Tasarruf Davranışı, Tutumluluk, Üniversite Öğrencileri

A STUDY IN UNDERSTANDING THE SAVING BEHAVIOR: FRUGALITY AND MATERIALISTIC BEHAVIOR OF COLLEGE STUDENTS

ABSTRACT

Economics has benefited from different disciplines such as psychology in order to explain saving and consumption behaviors of individuals. This study aims to answer the question of how psychological factors affect the savings and consumption behaviors of college students. The study focused on students' materialistic and frugal behaviors. The data were taken from 263 students studying at Ankara Yıldırım Beyazıt University in 2020 between January and February. The questionnaire consists of 6 scales and contains 38 questions in total. In addition, 5-point Likert scale was used in the questionnaire. The scales include frugality, materialism, saving behavior, overspending behavior, the effect of the family, and the impact of economic hardship. Factor analysis was applied first to determine the underlying factors. Varimax was chosen for the rotation method and principal component analysis was chosen as the extraction method. As a result of the factor analysis, four different attitudes and characteristics were found. These are self-control, lavishness, pretentiousness, and the impact of economic hardship. In addition, binary logistic regression analysis was applied to determine how socio-economic, demographic variables, attitudes, and characteristics affect students' saving and consumption behaviors. The results showed that students with self-control are more likely to save. On the other hand, findings revealed that students who are lavish or pretentious are more likely to engage in spending behaviors. Moreover, the impact of economic hardship and parents' income were found to have no effect on students' saving or spending behaviors. Also, it is observed that students with pessimistic expectations about Turkey's economy in the future are more likely display spending behavior, on the contrary, students who have optimistic expectations in this regard are more likely to show saving behavior. However, it is found that today's pessimistic or optimistic expectations about Turkey's economy have no role in students' saving and spending behaviors.

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Keywords: College Students, Frugality, Materialism, Saving Behavior

SOMUT OLMAYAN KÜLTÜREL MİRAS İLE YUMUŞAK GÜC İLİŞKİSİ ÜZERİNE BİR İNCELEME: DESTANLAR ve ULUSLARARASI İLİŞKİLERE ETKİLERİ

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ÖZET

Toplumları etkileyen ve zaman içinde onlara şekil veren kültürün bir önceki nesilden sonrakilere aktarılması kültürel miras olarak tanımlanmaktadır. Bir toplumun en kıymetli hazinesi ve ona kimlik kazandıran en temel unsurlardan biri olan kültür, somut ve somut olmayan olmak üzere ikiye ayrılmaktadır. Somut olmayan kültürel miras ise bu unsurun önemli bir tamamlayıcı ögesi konumundadır. Somut olmayan kültürel miras bir toplumun sahip olduğu gelenek-görenek, sözlü yapıtlar ya da folklorik alışkanlıklarından oluşmaktadır. Sözlü yapıtlar arasında yer alan ve bir ulusun tüm varlığını; üzüntü, mutluluk, sevinç ve heyecanlarını nesilden nesile aktaran, duygular ve düşüncelerini anlatan destanlar da yine somut olmayan kültürel miras unsurlarındandır.

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Yapılan literatür taramasında kültür ve kültürel miras ile ilgili çok fazla sayıda çalışma yapıldığı görülmüştür. Bu çalışmalar incelendiğinde kültürel miras ve uluslararası ilişkiler arasındaki ilişkiye yönelik yapılan çalışmaların son derece kısıtlı olduğu görülmüş olmakla birlikte mikro ölçekte bakıldığından somut olmayan kültürel miras uluslararası ilişkilerin birleştiği multidisipliner bir çalışmanın olmadığı saptanmıştır. Oysa ki yirminci yüzyıl sonrasında Joseph Nye tarafından geliştirilen ve günümüz literatüründe etki alanına sahip “yumuşak güç” kavramı dahilinde somut olmayan kültürel mirasın önemli bir konumu bulunmaktadır. Öyle ki Nye yaptığı çalışmalarla bir devletin askeri müdahale ya da ekonomik yaptırımlar yerine, cazibesini kullanarak uluslararası ilişkilerde güç kazanabileceğini iddia etmektedir. Bu bağlamda kültürü, bir ülkenin cazibesini etkileyen unsurlardan biri olarak tanımlamaktadır. Bu noktadan hareketle toplumların kültürel yapısını oluşturan destanlar gibi somut olmayan kültürel miras öğeleri de yumuşak güç kapsamında değerlendirilebilir.

Anahtar Kelimeler: Yumuşak Güç, Somut Olmayan Kültürel Miras, Destan.

ABSTRACT

Culture, which is the most precious treasure of a society and one of the most basic elements that give it an identity, is divided into two as concrete and intangible. Intangible cultural heritage is an important complementary element. Intangible cultural heritage consists of traditions, oral works or folkloric habits of a society. Epics that convey their sadness, happiness, joy and excitement from generation to generation and tell about their feelings and thoughts are also one of the intangible cultural heritage elements.

As stated before, culture and cultural heritage are the subjects of many scientific studies. However, in the literature reviews conducted, although the existence of studies on the relationship between cultural heritage and international relations is extremely limited. On the other hand, the intangible cultural heritage occupies an important position within the concept of "soft power", which was developed by Joseph. Nye claims in his studies that a state can gain power in international relations by using its charm instead of military intervention or economic sanctions. It defines culture as one of the factors affecting the attractiveness of a country. From this point of view, intangible cultural heritage elements such as epics that form the cultural structure of societies can also be evaluated within the scope of soft power.

Key Words: Soft Power, Intangible Cultural Heritage, Epic.

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1. Somut Olmayan Kültürel Miras Kavramı

Toplumların oluşumunda son derece önemli bir role sahip olan kültür birçok bilim dalına ya da disipline konu olmuş ve hatta temel teşkil etmiş bir kavram olma özelliği taşımaktadır. TDK tarafından hazırlanan Büyük Türkçe Sözlükte kültür, yaşam biçimi, bir topluma ait özgün düşünce ve sanat eserlerinin tümü şeklinde açıklanırken tarım ve biyoloji gibi alanlara da atıfta bulunulmaktadır. Bu kullanımlardan da anlaşılacağı üzere kavramın oldukça yaygın bir kullanım alanı bulunmaktadır.

Kültürün en önemli özelliklerinden biri de nesilden nesile aktarılmasıdır. Zaten kültürel miras kavramı da aktarılma esnasında ortaya çıkmaktadır. Kültürel miras ilk kez 1972 yılında UNESCO liderliğinde oluşturulan ve BM üyesi devletler tarafından imzalanan "Dünya Kültür ve Doğal Mirasının Korunması Hakkında Sözleşme" ile literatüre girmiştir. Sözleşmede kültürel ve doğal miras tanımına yer verilmektedir. Bu çerçevede kültürel miras, anıtlar ve beldeler olmak üzere iki ana başlıkta ele alınmaktadır. Söz konusu tanımlama yapıılırken özellikle üstün evrensel değer vurgusu da yapılmaktadır (Sönmez, 2008: 25-26).

Diğer taraftan söz konusu sözleşme kapsamında kültürel miras algısının daha çok nesne/obje/mimari yapı olarak ele alınması, bu alanda çalışan birçok uzman ve akademisyenin de tepkisini çekmiştir. Akabinde kültürel mirasın yapılardan ve objelerden oluşmadığına yönelik çalışmalar gerçekleştirilmeye başlanmıştır (Oğuz, 2013: 7). 2003 yılı itibarıyle UNESCO tarafından “Somut Olmayan Kültürel Mirasın Korunması Sözleşmesi” kabul edilmiştir. Söz konusu sözleşme aynı zamanda somut olmayan kültürel mirasın korunması ile ilgili olarak kabul edilmiş ilk çok taraflı metin olma özelliğini de taşımaktadır (<https://www.unesco.org.tr/Pages/181/177/>).

“Somut olmayan kültürel miras” insan topluluklarının ve bazen bireylerin, sahip oldukları kültürel mirasın bir uzantısı olarak kabul ettikleri uygulamalar, anlatımlar, bilgi ve beceriler ile bunlara ilişkin araçlar ve kültürel mekanlar olarak tanımlanmaktadır. Sözleşme amaçları şu şekilde sıralanmaktadır (Somut Olmayan Kültürel Mirasın Korunması Sözleşmesi, 2003);

- a) Somut olmayan kültürel mirası korumak;
- b) İlgili toplulukların, grupların ve bireylerin somut olmayan kültürel mirasına saygı göstermek;
- c) Somut olmayan kültürel mirasın önemi konusunda yerel, ulusal ve uluslararası düzeyde duyarlılığı artırmak ve karşılıklı değerbilirliği sağlamak;
- d) Uluslararası işbirliği ve yardımlaşmayı sağlamak.

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Bu kapsamında, sözleşme ile bir taraftan somut olmayan kültürel mirasın korunmasına yönelik önlemlerin alınması gündeme alınırken diğer taraftan bu alanda gerçekleştirilebilecek işbirliği sağlanmıştır. Böylece kültürlerarasındaki hoşgörünün artırılmasına yönelik vurgu da yapılmaktadır. Bu noktada somut olmayan kültürel mirasın kültürlerarası etkileşimde dolayısıyla uluslararası ilişkilerin yürütülmesinde de önemli bir yeri olduğunu ifade etmek mümkündür.

2. Yumuşak Güç ve Somut Olmayan Kültürel Miras Ögesi Olarak Destanlar

II. Dünya Savaşı ile birlikte propaganda faaliyetlerinin artmasının ardından Soğuk Savaş döneminde hükümetler dış ülkelerin kamularına yönelik etkinlikler gerçekleştirmeye başlamışlardır. Tüm bu gelişmeler, uluslararası ilişkiler alanında “kamu” kavramının gittikçe daha da önemli bir konuma yerleşmesine neden olmuştur. Öyle ki diplomatik faaliyetlere kamu da yeni bir aktör olarak eklenmiş ve kamu diplomasisi adı altında yepyeni bir alan oluşmuştur.

Tüm bu gelişmelere paralel olarak bir ülkenin başka ülkelerin nezdinde sahip olduğu cazibe ile ilişkili olarak uluslararası ilişkilerde yeni bir güç tanımı ortaya çıkmıştır. Bu tanım ilk kez Joseph Nye tarafından ortaya atılan yumuşak güç kavramı olup devletlerin askeri güç ya da ekonomik

yaptırımlar dışında da belli bir oranda güce sahip olmalarından yola çıkmaktadır. Özette bir devletin başka bir devlete zor kullanmadan istediklerini yaptırabilme gücü, yumuşak güç olarak tanımlanmaktadır (Nye, 2004: 5).

Yumuşak güç zaman zaman sadece halkla ilişkiler etkinliği ya da imaj yönetimi faaliyetlerinden oluşan bir sürece indirgense de bu doğru bir yaklaşım değildir. Uluslararası alanda yürütülen güç mücadelelerinde var olan rekabet yumuşak güç için de geçerlidir. Ancak bu noktada güç unsuru zorlayıcı önlemler yerine karşı tarafta hayranlık uyandırarak ikna edici unsurlar olarak ön plana çıkmaktadır (Ünalı, 2019: 138). Kültür kavramı söz konusu unsurların en önemlilerinden bir tanesidir ki kültür ve kültüre ilişkin olan tüm faktörler de yumuşak güç unsurları arasında yer almaktadır. Nitekim kültür, "University of Southern California Center on Public Diplomacy ve Portland" tarafından gerçekleştirilen ve ülkelerin yumuşak güç kapasitelerini ölçmeyi hedefleyen ankette yer alan beş değişkenden birisi olarak belirlenmiştir.

Kültürel miras da kültür kavramının bir parçası olarak yumuşak gücün tesis edilmesinde önemli bir role sahiptir. Ülkelerin sahip oldukları ve kültürlerine ait maddi olmayan her türlü enstrüman, karşı tarafta cazibe uyandırma potansiyeli taşımaktadır. Somut olmayan kültürel miras, devletlerin yumuşak güç potansiyelinde önemli bir yere sahiptir. Bunun en belirgin kanıtlarından biri ise Somut Olmayan Kültürel Mirasın Korunması Sözleşmesi kabul edilmesinden itibaren ilk 10 yıl içinde 171 devlet tarafından imzalanmıştır (Schreiber, 2017: 48).

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Somut olmayan kültürel miras öğeleri arasında görsel, işitsel ya da duyusal değerler, başyapıtlar ve eserler yer almaktadır. Bunlardan biri de destanlardır. Destanlar UNESCO tarafından hazırlanan Somut Olmayan Kültürel Miras Listesi'nde yer almaktadır. Destanlar, somut olmayan kültürel mirasın en kıymetli, en önemli öğelerinden biridir. Tarihle ilişkili olmasının yanı sıra abartılı anlatımı ve olağanüstü kişilerin varlığı destanların en belirgin özelliklerindendir. Destanlar ayrıca zaman içinde dilden dile aktarılırken zamanla ilk söyleyenin unutulduğu manzumelerden oluşmaktadır (Yıldız ve Arslan Kalay, 2016: 7).

Destanların en önemli özelliklerinden biri de ait olduğu milletin kahramanlıklarının anlatıldığı metinler olmasıdır. Bu anlatım sırasında söz konusu kültüre ait çeşitli değerler, kimlik özellikleri ve motiflerden bahsedilmektedir. Destanlar bir millete ait çeşitli kültürel kodlar içerirken aynı zamanda milletin devamlılığını da sağlayan söylem niteliği taşıyan unsurlardan biridir.

Destanlar ortaya çıkış veya oluş şekillerine bağlı olarak iki başlık altında incelenmektedir. Birincisi, zamanla söyleneni unutulan, toplumu etkileyen önemli bir olay ya da durumun, şair tarafından manzum destan olarak anlatılan doğal destanlardır. Bu destanlar her söyleyenin

kendinden bir parça eklemesi ile anonim hal alır ve dilden dile söylenenerek halk dilinde yaşamını sürdürmeye devam eder. Bu destan türünde bazen de bir şair söylenen tüm varyantları toplayarak yeniden düzenlemektedir. Bu destanlara örnek olarak Homeros'un İlyada ve Odesyasını verilebilir. İkincisi ise toplumu etkileyen bir olayın nesir veya manzum olarak bir şair tarafından anlatılmasıyla oluşan yapma destanlardır. Yapma destanları doğal destanlardan ayıran en önemli iki fark, yapma destanlarda destan yaratan kişinin söylediği şekilde kalır ve söyleyen ya da yazan asla unutulmaz. Bu destana Finlilerin Kalavela Destanı örnek verilebilir.

Dijk ve arkadaşlarına göre (2003) toplumsal ilişkilerin geliştirilmesi noktasında söylemler son derece önemli bir role sahiptir. Bu açıdan ele alındığında destanlar bir metin olma ve söylem özelliği taşımaktadır. Dolayısıyla, destanlar toplumlar arasında ilişki kurma ve geliştirme özelliği olan araçlar olarak kabul edilmektedir.

Destanlar ile hedef kitledeki bireylere ilgili ülkenin kimlik özellikleri, gelenekleri ve tarihi gibi kültürel özellikleri sanatsal bir yolla aktarılmaktadır. Destanlar farklı kültürleri karşı tarafa tanıtma ve anlatma görevi görse de aynı zamanda ortak tarihi olan ya da soydaşlık başına sahip milletler içinde birleştirici güç de sahip olduğunu ileri sürmek mümkündür.

3. Sonuç

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Kültür ve alt bileşenleri bir toplumun millet kimliği kazanması için gerekliliklerden biridir. Bu kapsamında o topluma ait değerler ve kimlik özellikleri tarihi unsurlar ile harmanlanarak bir yaşam biçimini oluşturmakta ve bu yaşam biçimini zaman içinde o toplumu şekillendiren bir faktör halini almaktadır. Somut olmayan kültürel miras ise kültür olgusunun önemli bir çıktısıdır.

Somut olmayan kültürel miras öğelerinden biri olan destanlar uluslararası ilişkilerde yumuşak güç tesisiinde etkin bir araç olma özelliği taşımaktadır. Söylemlerin topluluklar arasında ilişki geliştirme özelliği de dikkate alındığında destanların bu alandaki önemi daha da ortaya çıkmaktadır. Bu gerçekten hareketle, ülkelerin yumuşak güç kullanımında izledikleri politikaya somut olmayan kültürel mirasa ait unsurları dahil etmeleri daha etkin ve verimli sonuçlar almalarını sağlayacaktır. Destanların ve destanlarda yer alan motiflerin söz konusu politikalara dahil edilmesi yumuşak güç tesisi açısından yeni bir enstrüman olarak ele alınabilir.

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DESIGNING AN EDUCATIONAL PERFORMANCE EVALUATION FOR IRANIAN ENGLISH TEACHERS: PERFORMANCE OF TEACHERS BASED ON THEIR GENDER DIFFERENCES AND TEACHING EXPERIENCE

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ABSTRACT

This study aimed to design a model for evaluating Iranian English teachers' performance. Besides, it was aimed to examine and compare the performance of teachers based on their gender differences and teaching experience. To the first aim, the Delphi technique was used to develop a questionnaire. In the first round, 25 experts including university lecturers and experienced instructors in the field of English teaching were asked to answer open-ended questions regarding important issues in the evaluation of an English teacher. Then the related themes emerged. Using emerged themes, a questionnaire including 100 questions was designed and measured on a linear scale (1= not important to 5= absolutely essential). After calculating the frequency of each item, the results were resent to the panel to rate the questions. In the last phase, three criteria including 1- the mean 4 and more, 2- standard deviation less than 1, 3- less than 10 percent of the participants do not answer to the item were considered to decide on the final questions and components of the questionnaire. The questionnaire was distributed using Google form. 150 questionnaires were filled correctly and analyzed using SPSS 22. Overall, it was seen that there was not any significant difference between teachers' performance based on gender difference and teaching experience. The findings of the present study might have some implications for researchers, instructors, language teachers, school administrators, and the ministry of education.

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Keywords: Evaluation, EFL teacher, Gender, Performance, Teaching experience

Introduction

Education is one of the main issues that each country needs to invest in it due to its key role in human teaching and social development. Efficient and qualified education systems make efforts to instruct educated and skillful individuals. Every education program is developed to create a quality learning environment for students and learners using high academic standards. High academic standards require effective teaching and learning which can be achieved through safe learning environments in schools and institutes, well-established academic standards, regular attendance, effective teachers, update facilities and so on (Jackson Public Schools (JPS), 2013).

Among all of the factors, teachers' performance is considered one of the important factors which plays a pivotal role in effective teaching and quality learning (Khaksefidi, 2015). In other words, teachers' role is so important that can lead to academic standards. Effective, high-skilled, and motivated teachers can improve teaching and learning (Santiago & Benavides, 2009). According to Galluzzo (2005), the quality of teachers is a key element in student learning. Teacher performance and quality in teaching is a matter of importance in different areas of education and student learning. One of the challenging roles of teaching in education relates to language teaching in general and English language teaching specifically. Borg (2006) stated that being a foreign language teacher is different from other areas of teaching due to the content. Some research studies emphasized the role of language teachers and indicated that teachers' pedagogical skills, creativity, behaviors, enthusiasm, management, and fairness are considered as key characteristics of effective language teachers (Al-Thumali, 2011; Çelik, Arik, & Caner, 2013; Looney, 2011; Martin, Yin, & Mayall, 2006). Regarding the importance of effective teaching and the key role of teachers in education, there should be some standards and criteria that measure and evaluate the efficiency of teachers' performance.

The need to conduct the present study was derived from the following reasons. However, there is a vast literature on teacher evaluation in different areas of education, few studies have investigated and scrutinized how the performance of EFL teachers in both schools and institutes can be evaluated comprehensively.

Second, reviewing the literature on teacher performance shows that there is an absence of an objective instrument that evaluates teacher quality comprehensively. In other words, one of the most prevalent ways of teacher evaluation is observation all over the world. But it should be taken into account that there are many different strategies such as portfolios, self-evaluation, student evaluation of teachers, peer evaluation, and parent evaluation that can be used to evaluate teacher performance (Borg, 2018; Richards, Li, & Tang, 1998). In addition, using different sources for collecting evidence provides a more comprehensive tool of evaluation.

The next need for the present study emerged from the context of teaching. In the ministry of education in Iran, there is not any written standard for EFL teacher evaluation; however, there is a structure of general standards for all teachers that does not appear to fulfill performance evaluation of EFL teachers (Ministry of Education, 2018). Since each subject matter of study in schools is different from each other, it is necessary for administrators, policymakers, school principles to propose appropriate and thorough instrument in order to evaluate teacher performance of each school subject distinctively. English language teaching as one of the subject matters in-school program of Iranian schools require to be paid meticulous attention.

Furthermore, it was found by the researcher that Teacher Education Center in Iran does not have any course, planning, workshop, or training on the standards of effective and quality teacher, i.e. teacher students are not exposed to standards and criteria that show the quality of effective teachers, especially EFL teachers. Therefore, designing and proposing a model or an instrument that can present a rubric for teacher evaluation seems to be crucial. EFL teaching includes various important aspects affecting student learning which require to be addressed in teacher evaluation process.

Additionally, there are some studies that emphasize the importance of the academic development of teachers. Studies on teacher evaluation stated that teaching is the core performance by teachers and effective teaching is not just instruction and testing (Khaksefidi, 2015; Vinhais & Abelha, 2015). Similarly, Al-Thumali (2011) emphasized that quality teachers could improve the academic performance of students.

It can be perceived that education in all fields, especially EFL teaching and learning requires some factors which can result in effective instruction and skillful educators. To this end, teachers and instructors play a pivotal role. However, teachers themselves need to be educated and assessed in order to perform their best for better results in training and instructing successful students and learners. Thus, presenting a model to evaluate the performance of the EFL teachers can be regarded as an effective way to meet this requirement. The present study aimed to propose an evaluation model for EFL teachers in the Iranian context and compare the performance of teachers based on their gender and teaching experience.

Research Questions

Regarding the purpose of the study, following questions were raised and investigated.

Qualitative research question:

1. What are the most notable areas for assessing EFL teachers' performance in the light of quality standards?

Quantitative research questions:

2. Are there any statistically significant differences between Iranian EFL teachers' performance and years of teaching experience?
3. Are there any statistically significant differences between Iranian EFL teachers' performance based on their gender?

Research Hypotheses

H01: There are not any statistically significant differences among Iranian EFL teachers' performance based on their gender.

H02: There are not any statistically significant differences among Iranian EFL teachers' performance and years of teaching experience

Literature Review

Teacher Education

Education presents a significant function in training and preparing individuals for better living in societies. In other words, it has been stated that education includes teaching and learning methods utilized in schools and educational institutes similar to schools. Additionally, it is thought that the education system is a way of transmitting values and knowledge of societies (Mukerhji, 2019).

As it can be inferred, teacher education requires both pre-service and in-service development. It is important for teachers, students to be instructed about theories and practices of teaching before starting their profession. After graduation and while serving as teachers, it is required not only to gain the recent changes in approaches, methods, materials, assessment, and evaluation approaches for teachers but also to track their own teaching and evaluate their own performance based on quality standards. Rahman, Jumani, Akhter, Chisthi, and Ajmal (2011) believed that if teachers could not keep pace with changes in educational and pedagogical developments, they will not perform effectively. In other words, they stated that teacher training provides knowledge of the subject matter, skills of teaching, scientific methods, and academic qualification. Similarly, Irvine (2018) emphasized that the impact of individual teachers on the academic achievement of students is undeniable; therefore, it is of utmost importance that teachers be prepared for such a critical duty. In another finding, it was proposed that teacher professional knowledge and development including pre-service preparation and ongoing development strongly correlates with student achievement (Burroughs, Gardner, Lee, Guo, Touitou, Jansen, & Schmidt, 2019). They also stated that a good command of professional knowledge or the same subject matter and curricular knowledge influences teaching quality in the classroom.

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English Language Teacher Education

Some studies emphasized the need for effective and qualified teachers for better academic achievement of students (Jyoti Sankar, 2018; Khanjani, Vahdany, & Jafarigohar, 2017). Then it was argued that effective teachers should spend pre-service and in-service education in order to be

ready to provide effective instruction and teaching program in the classroom (Rahman, Jumani, Akhter, Chisthi, & Ajmal, 2011). Language teachers, especially English language teachers like all teachers should be prepared for teaching in language classroom.

English Teacher Education Program in Iran

In Iran, teacher education program is held in universities (Teacher Training University) and higher education institutes. Content of education program for preparing teachers is designed by Ministry of Education. English textbooks are designed by the Ministry of Education, as well (Atai & Mazlum, 2013). Teachers attend this pre-service program to gain related knowledge to teach in schools and institutes. Aghaalkhani and Maftoon (2018) stated that autonomy and creativity have not been paid enough attention in teacher education programs in Iran; however, there is a consistent education program that provides standardized curricula and methodology for student teachers and teachers. Among various fields of study, English teacher education program has been neglected not only in training autonomous and creative teachers but also in involving teachers in program development and planning (Baniasad-Azad, Tavakoli, & Ketabi, 2016). Also, Atai and Mazlum (2013) stated that Iranian teachers believed that their personal experiences are more useful than what they gain from the in-service programs while education planners believed that the mentioned programs are sufficient and helpful for teachers.

Teacher evaluation techniques

In order to evaluate teacher performance, it is necessary to collect related data. For this aim, several techniques and instruments have been presented and used by researchers so far. Studies have pointed out that using different techniques of data collection not only for teacher evaluation but also in all research studies results in high validity, reliability, and fairness (Arabzadeh, 2016; Mackey & Gass, 2015).

Methodology

Design of the study

This study has exploited both qualitative and quantitative methods. In other words, a mixed-method design was used to collect data. In a qualitative method, data were collected using the Delphi technique. In a quantitative method, participants were asked to fill in a questionnaire, and results were compared based on gender and teaching years' differences. Also, the present study included research variables. Independent variables of the study were gender and years of teaching experience. The dependent variable was the evaluation of EFL teacher performance. It means that EFL teachers performance was compared and examined based on their gender and teaching experience.

Participants

In the present study, the population was Iranian EFL teachers and experts. Participants were selected using a convenient sampling method. The reason for selecting participants by convenient sampling was due to the design of the study, especially the qualitative section which required multiple rounds of questioning and interviewing. Since the present study used the Delphi technique to collect qualitative data, it was important to make sure of experts' availability for different rounds of designing questionnaires. Therefore, the accessibility of the participants was taken into account. In addition, limitation in time was another factor that resulted in using convenient sampling in the study. In the first phase of the study, 25 experts participated in the study. The experts participating in the qualitative study included university professors, instructors, and experienced teachers.

In a quantitative study, after designing the questionnaire, 162 EFL teachers filled in the questionnaires. It is worth mentioning that questionnaire was designed using Google Survey and the link of the questionnaire was sent to EFL teachers by email and social media communities such as Linked in. Overall, 150 questionnaires were found correctly and completely filled with the participants

Instruments

In order to design an educational model for evaluating EFL teacher performance, previous literature of teacher evaluation on the teacher effectiveness, quality education and teachers, teacher characteristics, and extant conceptual frameworks were studied and used to design a questionnaire. Then the designed questionnaire was used as an instrument to examine EFL teacher performance.

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Procedure

The present study was conducted to present a validated and comprehensive model for EFL teachers' performance evaluation in the Iranian context. Critics to the current evaluation system in Iran (Navidinia, Reza Kiani, Akbari, & Ghaffar Samar, 2015) believe that it is essential to have a comprehensive instrument for evaluating EFL teacher performance. Therefore, a model in the form of a questionnaire designed to show the domains and characteristics of an effective evaluation tool. First of all, the requirements of the evaluation model were considered from the related literature. According to Kennedy (2010), English teacher performance evaluation should seek to perceive the reason of teacher activities in the classroom. In other words, teacher development requires to understand the exact teaching method that teachers need in their classrooms and pay attention to the teaching context completely. In the qualitative section of the study, the Delphi technique was used. The Delphi method is a forecasting process framework based on the results of multiple rounds of questionnaires sent to a panel of experts.

Several rounds of questionnaires are sent out to the group of experts, and the anonymous responses are aggregated and shared with the group after each round (Chisa, K, 2020).

Data collection

In the first round of qualitative study, 25 experts were asked to answer open-ended questions on the important characteristics of an English teacher and its duty in Iranian schools and institutes. Participants were asked to refer to as many suggestions as they can. Then the answers of the respondents were analyzed and the repetitive items were omitted. Also, the answers were categorized and common themes were searched. Analyzing answers to open-ended questions resulted in the following themes: 1- language skills including listening, speaking, writing, and reading and language subskills including grammar and vocabulary 2- assessment 3- content knowledge 4- classroom management 5- professional development. Using emerged themes, a new questionnaire including 100 questions was designed and measured on a linear scale. After the distribution of questionnaires and calculating the frequency of each item of the questionnaire, the results and each individual's answer were resent to the panel to rate the questions based on their importance for the third and last round. In the last phase of the qualitative study, two criteria including 1- the mean 4 and more, 2- standard deviation less than 1, 3- less than 10 percent of the participants do not answer to the item due to its vagueness or any other reason were considered to decide on the final questions and components of the questionnaire. The researcher prepared the final model of evaluation which include a questionnaire. The final version of the questionnaire included 76 questions which were rated based on the Likert scale . Then the designed questionnaire was used in the quantitative section of the study.

In the quantitative study, the researcher designed an online questionnaire using Google survey (https://docs.google.com/forms/d/1p_Z1tx5ArmwuGGmoAEFqzipXtr7OWbDMXRdZZ_zFZaWE/edit) and sent the link of the questionnaire to Iranian EFL teachers using email and social media such as Linked in. Then the results from the questionnaires were compared based on gender and teaching experience of the teachers. In fact, Iranian EFL teachers evaluated their own performance. Then their self-evaluation was compared. In the first comparison, female and male teachers' responses were compared. Secondly, the questionnaire results were compared between teachers with five years of teaching experience and teachers with more than five-year experiences. Previous studies (Gatbonton, 1999; Tsui, 2003) reported that that experienced teachers are considered those who have been teaching English more than five years (Rezaee & Sarani, 2017).

Data Analysis

In this study, a mixed-method design including qualitative and quantitative study was conducted.

In the qualitative study, experts' and teachers' responses to open-ended questions were analyzed and emerged items were investigated using the Delphi technique. In this phase, descriptive statistics including, mean, standard deviation, and percent were used to gain the final questions of the model. In addition, the reliability of the questionnaire was calculated by Cronbach Alpha.

In a quantitative study, results from the questionnaire study were submitted to SPSS software. Then the differences of the results based on respondents' gender and teaching experience were analyzed using independent samples t-test.

Results

Descriptive Results

In order to know more about research variables, it is necessary to describe data before analyzing them. Descriptive statistics including central and distribution indices were introduced for each research hypothesis separately. Also, indices such as demographic characteristics, frequency, and percentage were presented in this section.

Demographic characteristics of a sample

In this section, demographic characteristics of sample based on gender were presented first. Table 1 is related to the descriptive statistics of respondents based on their gender differences.

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Table 1
Descriptive Statistics of Sample Based on Their Gender

		Frequency	Percent	Cumulative	
				Valid Percent	Percent
Valid	Female	71	47.3	47.3	47.3
	Male	79	52.7	52.7	100.0
	Total	150	100.0	100.0	

As Table 1 shows, there were 71 female and 79 male participants in the present study. More than half of the respondents, i.e. 53% were male, and the rest of the participants (47%) were female.

Table 2
Descriptive Statistics of Sample Based on Their Teaching Experience

Frequency	Percent	Valid Percent	Cumulative Percent	
83	55.3	55.3	55.3	Less than 5 years
67	44.7	44.7	100.0	More than 5 years
150	100.0	100.0	Total	

As the table above indicated, the number of participants with less than 5 years teaching was 83 while the number of participants with more than 5 years of teaching 67. 45 percent of participants had less than five years of teaching experience while 55 percent had more than 5 years of teaching experience.

Delphi technique

As it was mentioned before, the present study was conducted to present a model in the form of a questionnaire for evaluating Iranian EFL teachers' performance. To this end, the Delphi technique was used to collect related data and design a questionnaire. In the first phase of the Delphi technique, 25 experts including university professors and experienced instructors in the field of English language teaching were asked to answer five open-ended questions. Questions were mainly related to the performance of English teachers and factors which might be effective in the evaluation of English teacher performance. After collecting information of the open-ended questions, the researcher read the responses to find general themes and categories. After finding and categorizing reoccurred themes, general domains of teacher performance evaluation were emerged. The general domains included language skills, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development. In the second phase, a questionnaire was designed using emerged domains. The designed questionnaires included 100 questions. After designing a questionnaire, respondents were asked to answer the questionnaire on a Likert scale 1: not at all important 2: slightly important 3: moderately important 4: very important 5: absolutely essential. Then the responses were analyzed and the results were provided in Appendix A.

Participants rated the questions based on their degree of importance. Also the mean and standard deviation of each question were calculated. The results were resent to each participant for the final round of the Delphi technique. In the last phase of the Delphi technique, participants were asked to fill in the questionnaire while they could see their own responses and the mean of each question.

The results of this phase of the technique was measured according to the following criteria: 1- the mean 4 and more, 2- standard deviation less than 1, 3- less than 10 percent of the participants do not answer to the item due to its vagueness or any other reason were considered to decide on the final questions and components of the questionnaire. Finally, the last version of the teacher performance evaluation questionnaire was designed. Appendix B. According to the results of Appendix B, the items which had the mean more than 4, standard deviation less than 1, and were responded by more than 10 percent of the participants were included in the final version of the questionnaire. In other words, questions with a mean less than 4 and a standard deviation above 1 were removed from the questionnaire. According to the mentioned criteria, the final questionnaire included 76 questions which is presented in Appendix C. Another descriptive statistic of this section was related to the mean, standard deviation, maximum, and minimum of questionnaire categories as following:

Table 3 Central and Distribution Indices of Questionnaires Variables

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis	144
Listening	150	21.19	2.68	12	25	-0.48	0.39	
Speaking	150	25.19	3.31	14	30	-0.44	-0.06	
Reading	150	17.03	2.47	7	20	-0.84	0.91	
Writing	150	17.15	2.23	10	20	-0.67	0.06	
Vocabulary	150	21.01	3.10	11	25	-0.64	0.09	
Grammar	150	16.61	2.48	8	20	-0.67	0.32	
Designing and Performing Instruction	150	87.78	11.92	47	105	-0.72	0.26	
Assessment	150	33.33	4.84	17	40	-0.64	0.39	
Familiarity of Students	150	29.23	4.03	18	35	-0.33	-0.44	
Content Knowledge	150	20.83	3.02	15	25	-0.26	-0.88	
Classroom Management	150	34.52	3.93	21	40	-0.54	-0.03	
Professional Development	150	323.87	37.14	209	385	-0.58	0.02	
Valid N	150							

As it can be seen, the value of skewness and Kurtosis are in the range of (-2, 2); therefore, it can be concluded that the distribution of the data is almost normal. In this section of this chapter, inferential statistics are presented.

Reliability Statistics

In order to estimate the reliability of the questionnaire, Cronbach's alpha was used. Table 4 indicates the results of the test.

Table 4

Reliability of the Questionnaire

Cronbach's Alpha	N of Items
.982	76

Since $\alpha = 0.982 > 0.07$, the questionnaire has high reliability.

Inferential Statistics

This section of the results includes two parts. First, normality of the variables is examined by Kolmogorov-Smirnov test. Then research hypotheses are tested by Pearson correlation and regression in order to examine the relationship between dependent and independent variables.

Normality of variables

In order to examine the normality of variables, Kolmogorov-Smirnov test was used. The results of the test are presented in Table 5.

Table 5 This section of the results include two parts. First, the normality of the variables is examined by the Kolmogorov-Smirnov test. Then research hypotheses are tested by Pearson correlation and regression in order to examine the relationship between dependent and independent variables.

Normality of variables

In order to examine the normality of variables, Kolmogorov-Smirnov test was used. The results of the test are presented in Table 5.

Table 5.
Kolmogorov-Smirnov Test for Normality of Variables

variable	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)	Test result
Listening	1.243	0.091	Acceptance of the H_0 hypothesis
Speaking	1.316	0.062	Acceptance of the H_0 hypothesis
Reading	1.335	0.058	Acceptance of the H_0 hypothesis
Writing	1.235	0.098	Acceptance of the H_0 hypothesis
Vocabulary	1.306	0.066	Acceptance of the H_0 hypothesis
Grammar	1.224	0.105	Acceptance of the H_0 hypothesis
Designing and Performing Instruction	1.152	0.140	Acceptance of the H_0 hypothesis
Assessment	1.283	0.074	Acceptance of the H_0 hypothesis
Familiarity of Students	1.071	0.201	Acceptance of the H_0 hypothesis
Content Knowledge	1.327	0.061	Acceptance of the H_0 hypothesis
Classroom Management	1.294	0.070	Acceptance of the H_0 hypothesis
Professional Development	1.013	0.256	Acceptance of the H_0 hypothesis

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Regarding the significant values of Table 5 which were $p > 0.05$, it is concluded that the null hypothesis, i.e. normal distribution of the population is confirmed.

Testing research hypotheses

H01: There are not any statistically significant differences among Iranian EFL teachers' performance based on their gender.

Because of normality of variable, Independent sample T-test was used. The results are presented in Table 6.

Table 6

Independent Sample T-test of Teacher Performance Based on Gender

Independent Samples Test

	Levene's Test for Equality of Variances							t-test for Equality of Means	
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Performance	Equal variances assumed	2.599	0.109	0.149	148	0.882	0.910	6.094	-11.134 12.952
	Equal variances not assumed		0.151	146.865		0.880	0.910	6.031	-11.010 12.828

It can be seen from the Levene test of equality of variances that $\text{Sig} = 0.109 > 0.05$; therefore, equality of variances is accepted. Also, results from the t-test showed that $\text{Sig} = 0.882 > 0.05$; therefore, the first null hypothesis is accepted. In other words, there is not any significant difference between male and female teachers' performance. The difference between male and female teachers' performance on each category of the questionnaire has been shown separately in Table 7.

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Table 7

Independent Sample T-test of Teacher Performance Based on Gender for Questionnaire Categories

		Levene's Test for Equality of Variances				t-test for Equality of Means				95% Confidence	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Interval of the Difference	Lower	Upper
Listening	Equal variances assumed	0.05	0.82	-0.71	148.00	0.48	-0.31	0.44	-1.18	0.55	
	Equal variances not assumed			-0.71	141.57	0.48	-0.31	0.44	-1.19	0.56	
Speaking	Equal variances assumed	0.99	0.32	-1.03	148.00	0.31	-0.55	0.54	-1.62	0.51	
	Equal variances not assumed			-1.03	148.00	0.31	-0.55	0.54	-1.62	0.51	
Reading	Equal variances assumed	0.91	0.34	-0.79	148.00	0.43	-0.32	0.40	-1.12	0.48	<u>148</u>
	Equal variances not assumed			-0.78	139.19	0.44	-0.32	0.41	-1.12	0.49	
Writing	Equal variances assumed	0.54	0.47	-0.28	148.00	0.78	-0.10	0.37	-0.83	0.62	
	Equal variances not assumed			-0.29	146.72	0.78	-0.10	0.37	-0.83	0.62	
Vocabulary	Equal variances assumed	0.57	0.45	-0.34	148.00	0.73	-0.17	0.51	-1.18	0.83	
	Equal variances not assumed			-0.34	146.82	0.73	-0.17	0.51	-1.18	0.83	
Grammar	Equal variances assumed	2.58	0.11	0.75	148.00	0.45	0.31	0.41	-0.50	1.11	
	Equal variances not assumed			0.76	146.63	0.45	0.31	0.40	-0.49	1.10	

Designing and Performing Instruction	Equal variances assumed	4.45	0.04	0.42	148.00	0.68	0.82	1.96	-3.04	4.68
	Equal variances not assumed			0.42	144.96	0.67	0.82	1.93	-2.99	4.63
Assessment	Equal variances assumed	2.66	0.11	0.69	148.00	0.49	0.54	0.79	-1.02	2.11
	Equal variances not assumed			0.69	147.05	0.49	0.54	0.78	-1.01	2.09
Familiarity of Students	Equal variances assumed	0.52	0.47	0.36	148.00	0.72	0.24	0.66	-1.07	1.55
	Equal variances not assumed			0.36	147.99	0.72	0.24	0.66	-1.06	1.54
Content Knowledge	Equal variances assumed	0.73	0.40	-0.42	148.00	0.68	-0.21	0.50	-1.18	0.77
	Equal variances not assumed			-0.42	147.30	0.68	-0.21	0.49	-1.18	0.77
Classroom Management	Equal variances assumed	1.78	0.18	1.05	148.00	0.30	0.67	0.64	-0.60	1.94
	Equal variances not assumed			1.06	147.28	0.29	0.67	0.64	-0.59	1.93
Professional Development	Equal variances assumed	2.66	0.11	0.69	148.00	0.49	0.54	0.79	-1.02	2.11

According to the T-test results, the value of Sig for listening, speaking, reading, writing, vocabulary, grammar, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development were 0.48, 0.31, 0.43, 0.78, 0.73, 0.45, 0.68, 0.49, 0.72, 0.68, 0.30, and 0.49 respectively. All of the Sig values are more than 0.05; therefore, null hypotheses are accepted. In other words, there are not any significant differences among male and female participants' performance in each mentioned category. In the following, the results of H02 are presented.

H02: There are not any statistically significant differences among Iranian EFL teachers' performance and years of teaching experience. Due to the normality of data, independent samples t-test was used. The results are presented in Table 8.

Table 8
Independent Sample T-test of Teacher Performance Based on Teaching Experience
Independent Samples Test

Performance		Levene's Test for Equality of Variances				t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Equal variances assumed		0.02	0.89	-1.54	148.00	0.13	-0.68	0.44	-1.54	0.19	
Equal variances not assumed				-1.56	145.51	0.12	-0.68	0.43	-1.53	0.18	

As Table 8 indicated above, the result of the Levene test confirmed equality of variances, i.e. $\text{Sig}=0.89>0.05$. In addition to this, the T-test showed that $\text{Sig}=0.13>0.05$. Thus the null hypothesis is accepted. In other words, there is not any significant difference between less experienced teachers (less than five years) with experienced teachers (more than five years). In the following, the results of the second hypothesis are presented for each category of the questionnaire.

Table 9

Independent Sample T-test of Teacher Performance Based on Teaching Experience for Questionnaire Categories

		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Listening	Equal variances assumed	0.02	0.89	-1.54	148.00	0.13	-0.68	0.44	-1.54	0.19
	Equal variances not assumed			-1.56	145.51	0.12	-0.68	0.43	-1.53	0.18
	Equal variances assumed	0.12	0.73	-1.10	148.00	0.28	-0.59	0.54	-1.67	0.48
Speaking	Equal variances assumed			-1.09	136.29	0.28	-0.59	0.55	-1.68	0.49
	Equal variances not assumed									
	Equal variances assumed	1.40	0.24	-1.49	148.00	0.14	-0.60	0.40	-1.40	0.20
Reading	Equal variances assumed			-1.52	147.98	0.13	-0.60	0.39	-1.38	0.18
	Equal variances not assumed									
	Equal variances assumed	1.47	0.23	-2.69	148.00	0.01	-0.96	0.36	-1.67	-0.26
Writing	Equal variances assumed			-2.74	147.78	0.01	-0.96	0.35	-1.66	-0.27
	Equal variances not assumed									
	Equal variances assumed	0.02	0.89	-2.74	148.00	0.01	-1.36	0.50	-2.35	-0.38

		Equal variances assumed							
		Equal variances not assumed	-2.75	143.73	0.01	-1.36	0.50	-2.34	-0.38
		Equal variances assumed	0.01	0.91	-1.80	148.00	0.08	-0.73	0.40
Grammar		Equal variances not assumed							
		Equal variances assumed	-1.81	144.71	0.07	-0.73	0.40	-1.52	0.07
Designing and Performing Instruction		Equal variances not assumed							
		Equal variances assumed	0.22	0.64	-2.32	148.00	0.02	-4.47	1.93
		Equal variances not assumed							
		Equal variances assumed	-2.33	143.63	0.02	-4.47	1.92	-8.27	-0.67
Assessment		Equal variances not assumed							
		Equal variances assumed	0.94	0.33	-2.58	148.00	0.01	-2.01	0.78
		Equal variances not assumed							
		Equal variances assumed	-2.63	147.86	0.01	-2.01	0.76	-3.53	-0.50
Familiarity with Students		Equal variances not assumed							
		Equal variances assumed	0.21	0.65	-2.22	148.00	0.03	-1.45	0.65
		Equal variances not assumed							
		Equal variances assumed	-2.23	143.38	0.03	-1.45	0.65	-2.74	-0.16
Content Knowledge		Equal variances not assumed							
		Equal variances assumed	0.00	0.98	-1.84	148.00	0.07	-0.91	0.49
		Equal variances not assumed							
		Equal variances assumed	-1.85	142.58	0.07	-0.91	0.49	-1.88	0.06

	Equal								
	variances	2.67	0.11	-1.05	148.00	0.29	-0.68	0.64	-1.95
	assumed								
Classroom									
Management	Equal								
	variances								
	not								
	assumed								

As it can be seen, the values of Sig in Levene test for equality of variances in the subcategories including listening, speaking, reading, writing, vocabulary, grammar, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development were 0.89, 0.73, 0.24, 0.23, 0.89, 0.91, 0.64, 0.33, 0.65, 0.98, 0.11, 0.12 respectively. All of the values are above 0.05; therefore, equality of variances is accepted. Additionally, the results of T-test indicated that the values of $\text{Sig} = 0.13, 0.28, 0.14, 0.08, 0.07, 0.29, 0.29 > 0.05$ for subcategories including listening, speaking, reading, grammar, content knowledge, classroom management, and professional development respectively. In other words, there were not any significant differences between less experienced teachers (less than five years of teaching) with experienced teachers (more than five years of teaching) in their performance regarding listening, speaking, reading, content knowledge, classroom management, and professional development. However, the values of $\text{Sig} = 0.01, 0.01, 0.02, 0.01, 0.03 < 0.05$ for writing, vocabulary, designing and performing instruction, assessment, and familiarity with student's subcategories were not confirmed. In other words, it was concluded that there are slightly significant differences between less experienced teachers (less than five years of teaching) with experienced teachers (more than five years teaching) in their performance regarding writing, vocabulary, designing and performing instruction, assessment, and familiarity with students.

Discussion

Qualitative Study

First of all, this study was conducted to design a model for evaluating Iranian EFL teachers' performance. Results from the Delphi technique in different rounds showed that the most important and effective domains in evaluating the performance of English teachers are language skills, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development. Language skills (mean 4.02) mainly included questions related to the ability of teachers in teaching listening, speaking, writing, and reading. Also, vocabulary and grammar teaching was found to be important areas for evaluation of teacher performance. This finding was consistent with previous studies in the

literature (Al-Thumali, 2011; Çelik, Arıkan, & Caner, 2013; Khaksefidi, 2015; Richards, 2010; Van Driel & Berry, 2012; Zamani & Ahangari, 2016). In these studies, like finding of this study, it was emphasized that effective English teachers need to be competent in teaching language proficiency (Richrds, 2010) or they should possess linguistic knowledge (Khaksefidi, 2015). Designing and performing instruction (mean 4.12) was the second theme found important for evaluating teachers. According to this part, it was expected that an English teacher provides a proper lesson plan, be familiar with different teaching methods, use creative ways, encourage creativity in thinking, promote problem-solving, be able to use various ways of error corrections, facilitate learning, and so on. Al-Khairi (2015) mentioned this and stated that giving clear instruction is important to English teacher quality. Also, Khaksefidi (2015) mentioned creativity, lesson plan, error correction as important characteristics of an effective English teacher in line with what mentioned above. Assessment (mean 4.440) was also found to be one of the important factors which should be taken into account in English teacher performance evaluation. It was found that teachers should know about different ways of student assessment and use assessment in a way that helps learners in better learning. These findings are in agreement with (Al-Khairi, 2015; Al-Thumali, 2011; Barnes & Lock, 2013; Çelik, Arıkan, & Caner, 2013; Khaksefidi, 2015; Soleimani & Zanganeh, 2014; Van Driel & Berry, 2012; Wei & Hui ,2019; Zamani & Ahangari, 2016). As it was found in this study, mentioned previous studies believed that testing, scoring, assessing, and giving feedback are factors that help learners in better learning and effective teachers should know how to run them in their classroom. Another important domain referred to familiarity with students (4.24). Results indicated that knowing students including personality traits, their learning problems, their mental status, their background, and their mental, physical, emotional, and social qualities is an important factor which teachers should prepare themselves with it. This finding further supports the idea by Çelik, Arıkan, and Caner (2013) who believed the behavior of teachers at all educational levels assists learners to gain academic achievements. This finding was also in parallel with David and Macayan (2010) in which they believed that teacher performance is an indicator of teacher effectiveness which does not include instruction and other approaches used in the classroom, i.e., it includes the teacher role as a whole person in the community of the classroom. Similarly, Zamani and Ahangari (2016) showed that effective teachers pay attention to students' opinions, let them express themselves, and help them make confident. The fifth domain that proved to be important in qualitative study was the role of content knowledge competency. It was mentioned frequently that it is necessary for English teachers to have a high command of textbooks, course materials, and side materials related to teaching. This finding was in line with Al-Khairi, (2015), Al-Thumali (2011), Blömeke, Suhl, and Kaiser (2011), Heller, Daehler, Wong,

Shinohara, and Miratrix (2012), Hill, Rowan, and Ball (2005), Khaksefidi (2015), Samson and Collins (2012), and Wilson (2013). Mentioned studies have shown that teachers' content knowledge plays a key role in student progress. Similarly, Kálmán, Tynjälä, & Skaniakos, (2020) emphasized that the professional development of teachers including content knowledge and subject matter mastery could result in student achievement positively. The next important category for teacher performance evaluation was classroom management (mean 4.40). Richards and Schmidt (2013) have mentioned this category as one of the areas that preservice teachers should be trained on. Teacher Education (2015) classified classroom management as one of the approaches and techniques that teachers should have enough knowledge about. Richards (2010) believes that teachers along with pedagogical and content knowledge should possess skills such as curriculum planning, assessment, reflective teaching, classroom management, teaching children, teaching the four skills. In addition, Çelik, Arıkan, and Caner (2013) plus Al-Wreikat, Abdullah, and Kabilan (2010) highlighted the role of classroom management and mentioned it as a key skill for teachers. Last but not least domain in this study was professional development (mean 4.52) which is an important criterion for teacher evaluation. It was found that a teacher's own evaluation and reflection on the evaluation of her/his performance are the important factors that develop teacher performance and result in better learning in the language classroom. Johnson and Golombok (2011) stated that teacher development influences student improvement and academic achievement positively. Also Borg (2018) believed that self-evaluation is a technique in which teachers evaluate their own competency and skill. It can be beneficial for teacher development and professionalism. It causes teachers to engage in the evaluation process and take responsibility as professional individuals. Taut and Sun, 2014 believed that if self-evaluation results were used for teacher development purposes, it would generate more accurate data. Teacher Education (2015), similarly, stated that teacher professional development is an important factor in teacher evaluation and teacher effectiveness. Although it was discussed that all of the domains found in the present study were in line with previous studies, it is worth noting that some of the above studies find the importance of these factors by investigating students' viewpoint (Al-Khairi, 2015; Çelik, Arıkan, & Caner, 2013; Wei and Hui, 2019; Zamani & Ahangari, 2016) and some others explored students' and teachers' opinions at the same (Al-Wreikat, Abdullah, & Kabilan, 2010; Khaksefidi, 2015; Soleimani & Zanganeh, 2014). In the following section, results related to the quantitative study were discussed..

Quantitative Study

Here the results from the questionnaire study are discussed. Iranian EFL teachers were asked to fill in a teacher performance evaluation questionnaire including 76 questions under the

following categories: language skills, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development. The data collected from the questionnaire were compared and analyzed based on gender differences and teaching experience among participants. In the following, results related to each variable are discussed separately.

Teacher performance and gender difference

The first research question in the quantitative study addressed to:

Are there any statistically significant differences among Iranian EFL teachers' performance based on their gender?

Results from Independent Samples, T-test showed that there is not statistically a significant difference between male and female EFL teachers' performance. Not only was there no significant difference between male and female teacher performance in general but also there were not any significant differences between male and female teacher performance based on each category of questionnaire (language skills, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development). In other words, both male and female teachers showed that language skills including listening, speaking, writing, and reading along with subskills vocabulary and grammar are important and they showed that high competency in these skills using different methods and techniques. In other domains like instruction methods, using creative ways, assessing learners, knowing students and their personality, having a good command of course materials, managing classroom, and working on their own development, findings showed that both male and female teachers highly agreed with these factors in their teaching performance. A possible explanation for this might be that EFL teachers evaluated their own performance and it seems possible that they consider their performance effective. Therefore, another possible explanation might be that teachers have not evaluated their own performance accurately. Borg (2018) believed that one shortcoming of teacher self-evaluation is accurate assessment of teacher competence by themselves. Similarly, Davis, Mazmanian, Fordis, Van Harrison, Thorpe, and Perrier (2006) showed that results from self-evaluation among professional teachers suggest that there are few numbers of teachers who are capable of accurate self-assessing, especially those who are not skillful enough and those who are so self-confident. Regarding the finding of teacher performance evaluation by gender and relationship of it with previous studies, it should be mentioned that most of the previous studies (Al-Khairi, 2015; Çelik, Arikán, & Caner, 2013; Wei and Hui, 2019; Zamani & Ahangari, 2016) in the literature investigated teacher performance and effectiveness from university and school students point of view and those few studies (Al-Wreikat, Abdullah, & Kabilan, 2010; Khaksefidi,

2015; Soleimani & Zanganeh, 2014) which have evaluated teacher performance mostly focused on a specific area of teacher performance such as pedagogical knowledge, pre-service teacher training program, effectiveness of teacher training courses rather than teacher performance.

Teacher performance and teaching experience.

In this section, findings related to the second research question analysis is discussed. The second research question addressed to:

Are there any statistically significant differences among Iranian EFL teachers' performance and years of teaching experience?

Generally, results indicated that there is no significant difference between experienced (more than five years of teaching) and less experienced teachers (less than five years experienced teaching).

In other words, both groups indicated almost equal performance in their teaching process. One possible explanation for this might be that teachers evaluated their own performance; therefore, it is possible that both experienced and less experienced teachers rate their performance highly. Although it was seen that there is no significant difference between the performance of experienced and less experienced teachers, there were some slight differences between the performance of experienced and less experienced teachers in some categories of the questionnaire. Results from the Independent Samples T-test showed that both experienced and less experienced teachers rated their performance almost equally in domains of listening, speaking, reading, content knowledge, classroom management, and professional development. However, the values of $Sig = 0.01, 0.01, 0.02, 0.01, 0.03 < 0.05$ for writing, vocabulary, designing and performing instruction, assessment, and familiarity with students showed that there are differences between the performance of experienced and less experienced teachers. It seems possible that these results are due to teachers' experiences in different areas of teaching. Another possible explanation could be related to the amount of content and pedagogical knowledge which each teacher might have. In other words, teacher education and degree (whether they have a bachelor or master degree) might influence teacher performance along with their experience which has not been taken into account in this study. So it is possible that teacher performance differences in these domains of the study be rooted in their degree level or education. The findings of the present study are similar to Alfahadi, Qradi, and Asiri (2016) in that they showed a teacher having more than 15 years of experience with bachelor degree and teachers having less than five year-experience with a master degree had a high positive performance in using quality standards in their teaching experience in comparison to teachers having less than five year-experience with bachelor degree. Also the finding of the study relating to designing and performing instruction domain was in agreement with another study conducted by Al-Thumali (2011). Similarly, he found that there was a

significant difference between teachers' performance in planning and management of learning based on their teaching experience. It was found that teachers with less than 15 year-experience had higher performance in comparison to teachers with more than 15 years of experience of teaching. However, it should be taken into account that the years of experience in the mentioned study was different from this study. According to the findings of the present study, it appears that experience and gender are two factors that represent valuable information to researchers and teachers in teaching English and evaluation of English teachers.

Conclusion

This study aimed to design a model for evaluating Iranian EFL teachers' performance. Also, it was intended to compare EFL teachers' performance based on two criteria of their gender difference and teaching experience (less than five-year experience with more than five-year experience teachers). To the first aim, the Delphi technique was used to develop a questionnaire. In the first round, 25 experts including university lecturers and experienced instructors in the field of English teaching were asked to answer open-ended questions regarding important issues in the evaluation of an English teacher. Then the related themes emerged. Using emerged themes, a questionnaire including 100 questions were designed and measured on a linear scale (1= not important to 5= absolutely essential). After calculating the frequency of each item, the results were resent to the panel to rate the questions. In the last phase, three criteria including 1- the mean 4 and more, 2- standard deviation less than 1, 3- less than 10 percent of the participants do not answer the item were considered to decide on the final questions and components of the questionnaire. Returning to the question posed at the beginning of this study, it is now possible to show the most important domains for evaluation of Iranian English teachers' performance. The most obvious finding from this study was that language skills, designing and performing instruction, assessment, familiarity with students, content knowledge, classroom management, and professional development were considered important categories that should be taken into account in the teacher evaluation process. The final version of the questionnaire was used to examine teacher performance based on their gender and teaching experience. The questionnaire was distributed using Google form. 150 questionnaires were filled correctly and analyzed using SPSS 22. It was found that gender cannot be considered a key factor in teacher performance. In other words, it was found that male and female teachers rated their performance almost equally. The last part of the study which compared teacher performance based on teaching experience showed slight differences in some domains of teaching between experienced and less experienced teachers.

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THE ARTISTIC VALUE OF VARIOUS GRAPHIC APPROACHES OF „THE LITTLE PURSE WITH TWO HALF-PENNIES” STORY BY ION CREANGA

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SUMMARY

The story **THE LITTLE PURSE WITH TWO HALF-PENNIES** signed by Ion Creanga appeared in several editions both in the Soviet and in the post-Soviet periods. In the Republic of Moldova the book was illustrated by famous graphic artists such as Leonid Grigorașenco, Ilia Bogdesco, Lică Sainciuc, Filimon Hămuruș, Igor Vieru, Andrei Țurcanu, Anatoli Smîșleaev, Alexei Colibneac, Simion Zamșa Elena Karacanțev etc., artists who have made a remarkable contribution in this field of art. Each graphic designer created his unique variants of the interpretation of the illustrated subjects, approaching various artistic techniques and means, scenographic, compositional, stylistic principles, etc. Studying them, we have the opportunity to compare the creation of these authors with the illustrations signed by Romanian graphic artists, etc. Thus, we can meditate on the aesthetic values of current editions compared to previous ones.

Keywords: graphics, book, illustration, story, art, interpretation, trend, concept.

INTRODUCTION

The story **THE LITTLE PURSE WITH TWO HALF-PENNIES** signed by Ion Creanga appeared in several editions both in the Soviet and in the post-Soviet periods. There are different translations of this story, in original it is: **PUNGUȚA CU DOI BANI** de Ion Creangă (original author's name), in English it also could be translated as: **TWO MONEY BAG STORY**. It can be differently treated in various languages, but we consider that the main idea is the same like it is described with the title **THE LITTLE PURSE WITH TWO HALF-PENNIES** in Internet sources [1, 2]. Being analyzed by some literary critics as a modern continuation of the subjects from ancient mythology, the famous story describes in symbolic way the advancement of the hero in social status. Through the **THE LITTLE PURSE WITH TWO HALF-PENNIES** story, the child discovers the world and can place himself in life situations outside the familiar context. It is one of the stories for children that symbols, at a metaphorical level, the struggle between good and evil, identifies the main behavioral typologies, as well as how certain concrete life situations can be solved. The **THE LITTLE PURSE WITH TWO HALF-PENNIES** story gives children certain life patterns and develops cognitive abilities. Captivating the interest of the little readers, the events described by Ion Creanga in this story served as a source of inspiration for artists from different fields.

The story **THE LITTLE PURSE WITH TWO HALF-PENNIES** by Ion Creanga has been translated into several languages, there are various staging's of the play of the same name in multiple theatrical scenes, cartoons or theatrical films, radio shows created in different historical periods. In social networks there are a multitude of posts of the text of the story, often accompanied by illustrations by book graphic artists and other images on the subject. Our purpose contains in the research of artistic evolution of illustration of this book.

RESEARCH AND FINDINGS

In the Republic of Moldova the book **THE LITTLE PURSE WITH TWO HALF-PENNIES** was illustrated by famous graphic artists such as Leonid Grigorașenco (1955, 1959), Filimon Hămuruț (1970), Ilia Bogdesco (1962, 1976-1977), Andrei Țurcanu (1981, 1988), Anatoli Smîșleaev (1993), Lică Sainciuc (1962, 2006, 2008, 2012) Alexei Colibneac (2017), Simion Zamșa and Elena Karacențev (2017-2020); Simion Zamșa in collaboration with Sergiu Samsonov and Andreea Apostol (2017) etc., artists who have made a remarkable contribution in this field. Each graphic designer created a unique variant of the interpretations of the illustrated subjects, approaching various artistic techniques and means, scenographic, compositional, stylistic principles, etc. Thus, several variants of editing **THE LITTLE PURSE WITH TWO HALF-PENNIES** story are known: separate books and anthologies. The anthologies also include the alphabet or ABC books version. Some artists illustrated both types of editions.



Leonid Grigorașenco. illustrations to „**THE LITTLE PURSE WITH TWO HALF-PENNIES**” STORY BY ION CREANGA, 1955, 1959.

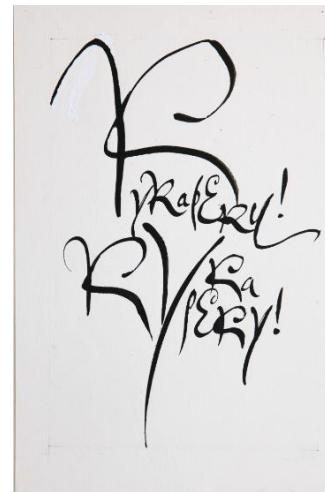
Leonid Grigorașenco was one of the first Moldovan authors who illustrated the **THE LITTLE PURSE WITH TWO HALF-PENNIES** in 1955. His illustrations address the narrative line of graphic treatment of the text of the story, combining the pen and ink technique with watercolor and colored pencils or pastels. In 1959 his illustrations to this story became component part and the graphic design of the anthological edition of Crenga's storyes. If the first variant of illustration

is a unique stylistic formula, then in the anthological edition the graphic designer offers a combination of frontispieces or vignettes made graphically by linear plastic method with full-page illustrations created in watercolor and edited in color. The plastic freedom, with which the artist realistically approaches the key moment in the context of the narrative, emphasizes the symbolic side of the subject. It is about the moment when the rooster runs after the boyar's (seigniors) chariot shouting to return his bag with two half-pennies. So, we see that the hero tries by himself to recover justice and truth. Further we will be able to observe that in this insistent longing he acquires all the necessary possibilities, including the supernatural, and wins this race which from the very beginning seemed absurd. But this is only one of the important key moments of the story, but it can be analyzed as the most significant one. We also have the opportunity to observe the methods of approaching such key moments by different artists, at different historical stages and at different publishing houses.



Lică Sainciuc. Illustrations to „THE LITTLE PURSE WITH TWO HALF-PENNIES” STORY BY ION CREANGA, 1962; „ABC” by Spiridon Vangheli și Grigore Vieru, Chisinau, „Lumina”, 1992-1995; „THE LITTLE PURSE WITH TWO HALF-PENNIES” STORY BY ION CREANGA, Chisinau, „Silvius Libris”, 2006; 2008; „Acasă”, 2012.

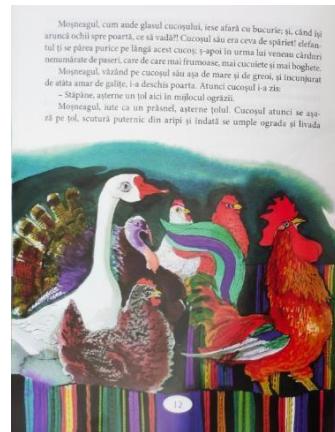
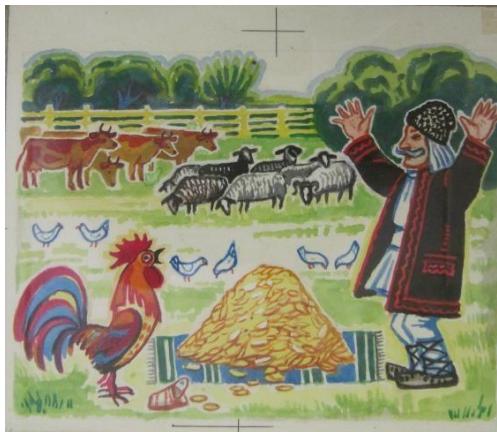
In the Republic of Moldova the book was illustrated by famous graphic artists such as Leonid Grigorașenco (1955, „Școala Sovietică”; 1959, „Cartea Moldovenească”), Ilia Bogdesco (1962, 1976-1977, „Cartea Moldovenească”, „Lumina”, „Literatura artistică”), Filimon Hămăraru (1970, „Lumina”), Andrei Țurcanu (1982, 1988, „Literatura Artistică”), Anatoli Smîșleaev (1993, „Făt-Frumos”), Alexei Colîbneac (2017, „Prut Internațional”); Simion Zamșa și Elena Karacentev (Chisinau, „Litera”, 2017-2020, watercolor) etc., artists who have made a remarkable contribution in this field.



Ilia Bogdesco. Sketch of illustrations and calligraphic text to „**THE LITTLE PURSE WITH TWO HALF-PENNIES**” STORY BY ION CREANGA, 1962, 1976, Chisinau, National Museum of Art of Moldova.

Andrei Țurcanu. Illustration to „**THE LITTLE PURSE WITH TWO HALF-PENNIES**” STORY BY ION CREANGA, 1982, Chisinau, AOSPRM, F-2906, inv. 3, d.189.

The variant by Simion Zamșa and Elena Karacentev was only in illustrative part, without executing the covers. So, we observe another, Romanian edition of book signed by Simion Zamșa in collaboration with Sergiu Samsonov and Andreea Apostol (Bucharest, “Litera mică”, 1917, watercolor). We observe various formulas for approaching the constructive and decorative principles in the first edition of the story signed by Ilia Bogedesco (1962) and in the Spanish and Romanian editions signed by Andrei Țurcanu. Ilia Bogedesco elaborated a unique realization of the book's design, also making the handwriting of the text, so every detail of the book is created by the same author, a unique example of creating the book as an integral plastic and stylistic object. Thus, the book can be seen as a true work of fine art. The author pays close attention to the psychological portraits of the depicted characters. In 1976-1977, Ilia Bogedesco created a more elegant and expressive plastic approach to this story, also with handwritten texts. In the same period with Ilia Bogedesco, in 1962, Lică Sainciuc also created an original variant of decorative approach to the story in the technique of linocut, using on the cover some red symbolic elements. At the same time, the illustrations for **THE LITTLE PURSE WITH TWO HALF-PENNIES** can be seen in the study of other books (alphabet, anthologies) illustrated by Igor Vieru, Lică Sainciuc, etc. In 1992-1995, a single illustration was included in the ABC book by Spiridon Vangheli and Grigore Vieru, that compositionally united all the key moments of the story, through the unique design method. And after the 2000s, the artist created the design of the separate book using computer techniques. Each approach of design by Lică Sainciuc remains unique and original in its own way.



Igor Vieru. Illustration to „ABC”, 1970, collection of National Museum of History; Alexei Colibneac, illustrations to „THE LITTLE PURSE WITH TWO HALF-PENNIES” STORY BY ION CREANGA, Chisinau, „Prut Internațional”, 2017.

The **THE LITTLE PURSE WITH TWO HALF-PENNIES** story illustrations signed by Ilia Bogdesco and Igor Vieru make a part of the collections of the National Museum of Art of Moldova and the National Museum of History. Located at the National Museum of History, the illustration signed by the plastic artist Igor Vieru reflects the final moment of the story and discovers the role of the subordinate character or hero in the life of his owner. Practicing easel painting and mural painting, in creating the illustrations the artist is influenced by the fine colors of medieval murals. We also can observe the influence of realistic Russian arts in the creation of book artists like: Leonid Grigorașenco, Alexei Colibneac, Simion Zamșa and Elena Karacențev. Anatoli Smîșleaev and Filimon Hămuruță capitalizes on scenographic principles to approach the book. At the same time, the tendency of each artist towards free and virtuous compositional expression of the artistically approached subjects and a perfect knowledge of the watercolor techniques of work are observed. Examples of coloring books with such topics are also known. But they require a separate analysis and clarification of historical details. Thus, we have the opportunity to compare and observe the stages of the evolution of artistic visions and plastic interpretations of this story, to meditate on the aesthetic values of current editions compared to previous ones.



Anatoli Smîșleaev. The cover to „**THE LITTLE PURSE WITH TWO HALF-PENNIES**” STORY BY ION CREANGA, Chisinau, „Făt-Frumos”, 1993;

Simion Zamșa, Elena Karacențev. Illustrations to „**THE LITTLE PURSE WITH TWO HALF-PENNIES**” STORY BY ION CREANGA, Chisinau, „Litera”, 2017-2020.

CONCLUSION

Thus, we have had the opportunity to compare and observe the stages of the evolution of artistic visions and plastic interpretations of **THE LITTLE PURSE WITH TWO HALF-PENNIES** story signed by Ion Creanga and to meditate on the aesthetic values of current editions compared to previous ones, outlining some specific trends. Comparing the creation of these authors with the illustrations signed by Romanian graphic artists, we observe the main today’s trend of which is the computer graphic realization of illustrations. The illustrations for **THE LITTLE PURSE WITH TWO HALF-PENNIES** can be seen in the study of other books (alphabet or ABC books, anthologies, etc.) illustrated by Igor Vieru, Lică Sainciuc, etc. The illustrations signed by the book graphic artists Ilia Bogdesco and Igor Vieru have entered the museum collections and are part of the national artistic heritage. Every Soviet and post-Soviet edition of this story marked a period of its creation and influenced the evolution of moldavian book graphic art and design. The creation of each artist nominated and selected for this research represents a separate page in the history of Moldovan fine arts, being kept in public and private national and international collections, that shows also its artistic and aesthetic value.

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**ROMANIAN LECTURESHIP IN BAKU – A RESULT OF CULTURAL COOPERATION
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ABSTRACT

From the perspective of the strategic interest for the Eastern Neighborhood, the European Union proposed the Eastern Partnership (EAP) as a special framework for cooperation with six states in this area: Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine (partner states). Launched at the Prague Summit on 7 May 2009, the Eastern Partnership is a specific dimension of the European Neighborhood Policy, aiming to expand the area of prosperity and security in the EU's eastern neighborhood, based on a common set of values and the gradual convergence of the EU policies. Romania is interested in strengthening the Eastern Partnership, as well as maintaining a strong and long-term commitment of the EU in the Eastern Neighborhood. At the same time, through its actions, Romania aims to capitalize on all the opportunities offered by the political and sectoral cooperation framework of the Eastern Partnership, in order to consolidate the benefits in the interest of the citizens. The Eastern Partnership was a priority dossier during the six-monthly Presidency of the EU Council in the first half of 2019, including the celebration, in May 2019, of 10 years since the initiative was launched altogether with increasing the visibility of the Partnership and its benefits, and promoting a strategic vision for the post-2020 Partnership. The paper explores the ways in which the cultural and educational relations grew naturally into a deeper cooperation between Republic of Azerbaijan and Romania. Methodologically, the diachronic perspective, used in this exegesis to illustrate comparatively the outcomes, is complemented by the synchronous one, through the description of cultural events in a well-defined spatial and temporal context. The structure of the paper allows to present the past of Romanian-Azerbaijani relations, and to describe the interest on a certain segment of culture and education cooperation developed by the Romanian Language and Culture Center within Azerbaijan University of Languages, Baku. Therefore, the importance of cultural and educational relations is highlighted in order to identify the opportunities and to create further possibilities of collaboration under the nowadays circumstances in order to be able to cultivate more intensive bilateral cooperation.

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Keywords: Eastern partnership, Cultural heritage, Diversity, Cultural relations, Education

APPRAISAL OF ADOPTION OF SUSTAINABLE CONSTRUCTION MATERIAL WASTE MANAGEMENT BY CONSTRUCTION FIRM IN NASSARAWA STATE

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1.0 Introduction

The construction industry is the backbone of every nation, as it is one of the forces driving the socio-economic growth and development of nations of the world (Saidu and Shakantu, 2016).

It improves the quality of live through the provision of infrastructure like roads, schools, hospitals, and other necessary basic facilities (Saidu and Shakantu 2016). Construction industry is the leading sector in any country. In spite of the benefits derived from this industry, the activities of the industry generates increasing quantities of waste which has created a bad image for the industry; and also deplete the limited natural resources (Adewuyi and Odesola 2015). Horvath, (1999) described the construction industry as one of the largest and most important industries; and at the same time the major consumer of natural resources and one of the largest polluters. The wastes generated by the industry have not been well managed, thereby causing considerable cost/time overrun and even leading to health and environmental problems (Imam, Mohammed, Wilson, and Cheeseman, C.R. 2008).. Also these wastes have affected the performance of many projects in Nigeria in term of cost management and many more (Oladiran, 2009)., Jayamathan, and Rameezdeen, (2014). Opined that ineffective material planning and control on construction sites could result to poor performance and unplanned outcomes of construction projects. Construction projects are faced with severe problems of time and cost overruns, as well as construction waste (Dania, kehinde, and Bala, 2007).

Waste management is a vital part of construction where the aim is to reduce and repurpose the quantity of waste generated, respectively. The intent is to achieve sustainable construction practices through social, environmental, and economic principles that contribute to sustainable development. (Shen, Tam, Tam, and Drew 2004)

The predominant stages in managing waste are generation, storage, collection, transfer, processing, and disposal (Rodgers 2011), where several approaches may be adopted during each stage to ensure effective management. Although waste generation may be inevitable, reduction is possible and it may be achieved throughout all construction activities, from design to deconstruction. Previous studies (for example, Ajayi, (2017), Ekanayake, & Ofori, (2004), and Greenwood, (2003)) have highlighted that one of the most appropriate strategies for managing waste is to minimize them through design. If less waste initially is generated, then there will be less pressure on other stages in the management process. Conversely, the final stage disposal the focus of this study is fundamental in determining the success and effectiveness of the entire management process, because poor and indiscriminate waste disposal would constitute environmental degradation. Therefore, it is important to carefully select and adopt sustainable management and disposal methods that are environmental friendly for construction material wastes due to their invaluable characteristics that could serve as resources for other industries (Geng, Sarkis, and Xue, 2012). Waste disposal management and methods that were identified from the literature include: recycling, incineration, composting, landfilling, open dumping, burning, reuse, shredding, and pyrolysis [Ghisellini, Cialani, and Ulgiati 2016]. Recycling is described as the end-of-life recovery of a material's value and its reprocessing into a new product for continuous usage in its primary or secondary state (Berg, and Bakker, 2015).

Most construction waste goes into landfills, thereby increasing the burden on landfill loading and operation; a significant portion of the remaining are dumped indiscriminately, particularly in third world countries. Waste from sources such as solvents or chemically treated wood can results in soil and water pollution. Landfills are costly and scarce and dumps are unsightly and are continuing sources of environmental hazards. This has led researchers to suggest reduced construction waste generation as a way of ameliorating these problems. In recent years, the construction industry has depleted natural resources of nations and invariably has led to environmental degradation. Due to lack of environmental awareness, contractors have caused irreversible damage to the environment by disposing of waste materials blatantly. Besides this construction activities has caused air and water sources to be polluted and all of this could lead to health complications. It is obvious that effective construction waste management must be properly implemented in a bid to stem these negative consequences. Reducing, reusing and recycling waste are profitable alternatives that will increase the lifetime of landfills, eliminate the environmental hazards of dumping, reduce exploitation of natural resources and according to (Poon Yu and Jaillon 2004) help to conserve natural resources and reduce the cost of waste treatment prior to disposal.

Wastes in construction occur throughout the process of operation, irrespective of the size of the project, the value and duration of the contract, and the variety of building type (Adnan, 1996). Wastes are generated in various construction stages ranging from foundation works to finishing, emanated from sources such as wooden materials, concrete, gravels, aggregate, masonry, metals, plastic, plumbing and electrical fixtures, glass, and material handling (Napier, 2012). Five major sources of building material wastes are concrete, reinforcement, formwork, brick and block, and tiles.

Studies from different parts of the world have shown that material waste from the construction industry represents a relatively large percentage of the production costs. Consequently, the poor management of materials and waste leads to an increase in the total cost of building projects (Ameh & Itodo, 2013: 745).

Most of the previous research done on construction waste, in project construction project such as Graham and Smithers (1996) Studied the Causes and Magnitude of Wastage of Materials on Construction Sites in Jordan., Adedeji (2002) studied Factors Affecting Material Waste on Construction Sites in Nigeria., Ogbonna, (2006) researched on Material Control Strategies In Some Selected Construction Firms In Nigeria. Ogunsemi, (2010) carried out a study on Professionals“ views of material wastage on construction sites and cost overruns in Lagos state, Onwusonye (2006) carried out a study on Material Waste Management In Construction Industries of India., Berger, and Godel, (1997) examine the effects of material-waste and their control measures on project-cost overruns at the site-management stage of a project, *D. O. Adeagbo, Achuenu and Oyemogun (2016)* construction material waste management practices in selected construction sites in abuja, Nigeria, *Terezie Vondráčková, Luboš Podolka, and Věra Voštová (2018)* handling construction waste of building demolition, and Akinkurolere, and Franklin (2005). Carried out an Investigation into Waste Management on Construction Sites in South Western Nigeria. The above previous studies focused on the causes of waste, dangers, ways of minimizing construction waste, ways of keeping proper site records for accountability sake. And recommend effective waste management measures.

But none of the above identified research has being carried out to appraise the adoption of sustainable construction waste management by construction firms in Nasarawa state.

Hence to bridge a gap this research will identify the types of construction materials waste in construction site in Nasarawa state of Nigeria, find out the causes of construction materials waste in construction site in the study area, assess the effects of the causes on volume of construction materials waste in construction site in the study area. and determine the sustainable measures of managing construction materials waste in construction site in the study area .

2.0 LITERATURE REVIEW

Concept of Waste

According to the new production philosophy, waste should be understood as any inefficiency that results in the use of equipment, materials, labour, or capital in larger quantities than those considered as necessary in the production of a building. Waste includes both the incidence of material losses and the execution of unnecessary work, which generates additional costs but do not add value to the product (Koskela 1992). Therefore, waste should be defined as any losses reduced by activities that generate direct or indirect costs but do not add any value to the product from the point of view of the client. Besides a clear understanding of the general concept of waste, it is helpful to use a classification of waste in different categories, in order to understand the wide range of possible corrective actions related to its prevention. Regarding the possibility to control the incidence of waste, this study admits that there is an acceptable level of waste, which can only be reduced through a significant change in the level of technological development. Thus, waste can be classified in unavoidable waste (or natural waste), in which the investment necessary to its reduction is higher than the economy produced, and avoidable waste, when the cost of waste is significantly higher than the cost to prevent it. The percentage of unavoidable waste in each process depends on the company and on the particular site, since it is related to the level of technological development.

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Waste is the unnecessary depletion of the natural resources, unnecessary costs and environmental damage which can be avoided through improved waste ethics. The Waste Framework Directive (European Directive 2006/12/EC) has defined waste as “any substance or object the holder discards, intend to discard or required to discard”.

Once a material falls within this definition it will remain waste until it is fully recovered and is no longer a threat to the environment and human health. After this point, it will no longer be subjected to the controls of the directive. Building Research Establishment (1981 cited in Ekanayake and Ofori 2004) define waste as “any materials apart from earth materials, which needed to be transported elsewhere from the construction site itself other than the intended specific purpose of the project due to damage, excess or non-use or which cannot be used due to noncompliance with the specification, or which is a by-product of the construction process”. Waste is defined by Formoso et al. (1999 Cited in Yara and Boussabaine 2006) as “any losses produced by activities that generate direct or indirect costs but do not add any value to the product from the point of view of the client”. Mohanty and Deshmukh (1998 cited in Mohanty and Deshmukh 1999), state that “any non value adding activity carried out in any

Types of Material Wastes

Ferguson et-al (1995) classifies wastes according to the nature of the wastes, as follows:

- (a) Overproduction Waste:** related to the production of a quantity greater than required or earlier than necessary. This may cause waste of materials, man-hours or equipment usage. It usually produces inventories of unfinished products or even their total loss, in the case of materials that can deteriorate. An example of this kind of waste is the overproduction of mortar or concrete that cannot be used on time.
- (b) Substitution Wastes:** monetary waste caused by the substitution of a material by a more expensive one (with an unnecessary better performance); the execution of simple tasks by an over-qualified worker; or the use of highly sophisticated equipment where a much simpler one would be enough.
- (c) Waiting time Wastes:** related to the idle time caused by lack of synchronization and leveling of material flows, and pace of work by different groups or equipments. One example is the idle time caused by the lack of material or by lack of work place available for a gang.
- (d) Transportation Waste:** concerned with the internal movement of materials on site. Excessive handling, the use of inadequate equipment or bad conditions of pathways can cause this kind of waste. It is usually related to poor layout, and the lack of planning of material flows. Its main consequences are: waste of man hours, waste of energy, waste of space on site, and the possibility of material waste during transportation.
- (e) Processing Wastes:** This is related to the nature of the processing (conversion) activity, which could only be avoided by changing the construction technology. For instance, a percentage of mortar is usually wasted when a ceiling is being plastered.
- (f) Inventories Wastes:** related to excessive or unnecessary inventories which lead to material waste (by deterioration, losses due to inadequate stock conditions on site, robbery, vandalism), and monetary losses due to the capital that is tied up. It might be a result of lack of resource planning or uncertainty on the estimation of quantities.
- (g) Movement Wastes:** concerned with unnecessary or inefficient movements made by workers during their job. This might be caused by inadequate equipment, ineffective work methods, or poor arrangement of the working place.
- (h) Production of defective products Wastes:** occurs when the final or intermediate product does not fit the quality specifications. This may lead to rework or to the incorporation of unnecessary materials to the building (indirect waste), such as the excessive thickness of plastering. It can be caused by a wide range of reasons: poor design and specification, lack of planning and control, poor qualification, lack of the team work, lack of integration between design and production, etc.

(i) Other Types of Wastes: waste of any nature different from the previous ones, such as burglary, vandalism, inclement weather, accidents, etc.

Poon et-al 2001 classifies construction wastes as

- (i) Structural Wastes; concrete fragments, reinforcement bars, abandoned timber plates and pieces and
- (ii) Finishing Wastes; surplus cement mortar, broken tiles and ceramics.

Bossink and Brouwers (1996) classifies waste according to their sources. They include: design wastes, procurement wastes, handling wastes, operational wastes and residual Wastes.

Construction material wastes can also be categorized as

- (i) avoidable wastes; those that occur due to improper handling of materials or carelessness and
- (ii) unavoidable wastes; those that happen due to application of materials like paint, concrete, mortar, and block.

Bossink and Brouwers (1996) further classifies wastes as

- (i) Direct; irreparable damage to a material and
- (ii) Indirect; Improper use of materials resulting to financial loss. Waste produced on the site can be classified as inert, non-hazardous, or hazardous

Mills, Showalter and Jarman (1999). The above classifications are based on the causes of the various classes of material wastes on building sites. Fig. 1 explains the categorization.

Cause of waste generation

There may be numerous causes responsible for the generation of waste in different systems. However, some general causes of waste generation at different stage have been perceived.

The check list of causes of waste generation as below:

General

- Lack of material management system • Poor housekeeping & storage condition • Poor quality control
- Adhoc procurement • Contractors negligence • Unconcerned supervisory staff • Untrained labour
- Non-use of left over materials • Theft and pilferage • Change in design and specification
- Improper handling • Loss during transportation and application.

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Specific

- Wrong use of various grade of metal
- Silt content in sand
- Improper cutting of steel
- Use of dry cement

- Non-utilisation of cut piece of steel Mishandling of cement bags
- Excess mortar/concrete preparation for cement, sand and aggregates

Strategies for waste reduction

Environmental stresses are escalating due to the consumer culture that relies heavily on resource extraction, production, consumption and disposal (Barr, 2004; Entwistle, 1999; Pongracz & Phojola, 2004). Sources of production are often distant from places of consumption and disposal, making the interconnectedness of resource cycling difficult to ascertain. It must be emphasized how the conditions experienced by one group of people can undermine the existence of another (Hartwick, 2000).

To link the spaces of production to the places of consumption and disposal, one must “follow the path of a commodity back from the point of consumption, marketing, distribution, and processing, along the transport network, to the point of production, and beyond” (Hartwick, 2000). It is also important to follow the commodity forward through consumption, second-handedness, deconstruction, transformation, or disposal. Hernandez and Martin-Cejas (2005) reinforce that “the integral management of solid waste requires a global perspective of the flow of materials circulating in the ecosystem.”

Taking account of the full environmental, social and economic costs of products and waste management policies is a step towards regarding the future consequences of today’s actions (Powell, Craighill, Parfitt, & Turner, 1996). These costs must be considered in a long-term context as sustainable waste management “raises concerns not only about the intra- generational but also the inter-generational implications of cradle-to-grave control where the potential environmental impacts may last hundreds of years” (Petts, 2005). Recent investigations into waste management strategies are challenging the idea that production-consumption-disposal follow an inevitable sequence from cradle to grave. Production and consumption processes can be imagined as being part of a cycle, referred to as a ‘cradle-to-cradle’ model by McDonough and Braungart (2002), where materials are continuously utilized throughout multiple lifecycles, never being downgraded to lesser products. The emphasis is on durable, long-lived products over single-use items, thereby minimizing waste, conserving raw resources, reducing pollution and offering the consumer a sustainable option.

Consumer waste is highly variable, typically unsorted, and contains multiple materials from an array of production sources. The true economic costs of solid waste management are far removed from consumers’ decisions thus violating the ‘polluter pays’ principle (Michaelis, 1995). Waste management on a global scale should enforce the notion that individuals, governments and industry have a role in reducing and reusing materials.

Individuals have a responsibility to reduce environmental impacts from waste through participation in environmentally conscious consumer practices; governments have a responsibility to monitor and enforce best-practices for waste reduction, including the implementation of policies and incentive programs; and industry has a responsibility for reducing energy and resource consumption by producing packaging that is recyclable or reusable.

Integrated waste management and the waste hierarchy

In recent years, the concept of integrated waste management (IWM) has become popular as a new approach to waste management. As defined by the World Resource Foundation (WRF, cited in Environment Council, 2000:23), IWM refers to “the use of a range of different waste management options rather than using a single option”. In other words, IWM is an approach which relies not only on technical solutions to the waste problem, but on a wide range of complementary techniques in a holistic approach. The approach involves the selection and application of appropriate technologies, techniques and management practices to design a programme that achieves the objectives of waste management (Tchobanoglous *et al.*, 1993).

The concept of IWM seems to have emerged from the realization that technical solutions alone do not adequately address the complex issue of waste management and that there is the need to employ a more holistic approach to waste management. As argued by Rhyner *et al.* (1995:17), “a single choice of methods for waste management is frequently unsatisfactory, inadequate, and not economical”. Use of an integrated approach to managing solid waste has therefore evolved in response to the need for a more holistic approach to the waste problem. In this approach, all stakeholders participating in and affected by the waste management regime are brought on board to participate in waste management. Furthermore, issues such as social, cultural, economic and environmental factors are considered in the design of an IWM project (Tchobanoglous *et al.*, 1993; Rhyner *et al.*, 1995; Schubeller *et al.*, 1996).

These elements most commonly associated with integrated solid waste management are waste prevention, waste reduction/minimization, re-use of materials and products, material recovery from waste streams, recycling of materials, composting to produce manures, incineration with energy recovery, incineration without energy recovery and disposal in landfills in that order of priority (Durham County Council, 2007)

These elements of IWM are frequently formulated into a waste hierarchy model which Girling (2005) has described as “a penny-plain piece of common sense that places the various strategies for waste management in order of environmental friendliness, from best to worst”.

As shown in the model (Figure 1), waste prevention and reduction are placed at the top to show that the best way to deal with waste is to prevent its production and, where this is not possible, to

produce less of it. At the other extreme, disposal is placed at the bottom to show that it should be the last resort among the strategies for waste management.

The waste hierarchy was originally set out in the EC Framework Directive on Waste (Girling, 2005) and is a useful guiding principle for waste management planning.

Intergraded waste management and the waste hierarchy both inspire sustainable waste management and can reduce the environmental hazards associated with waste disposal. It is therefore important for stakeholders in the waste sector to realize that an integrated approach which constantly strives to move up the waste hierarchy can be a useful tool for sustainable waste management. In spite of efforts by municipal authorities to improve waste management, most countries in the world still resort to strategies at the bottom of the waste hierarchy. In both developed and developing countries the bulk of solid waste collected by municipalities is still disposed of in landfills.

Other instruments that encourage good practice in waste management are the proximity principle (PP) and the best practicable environmental option (BPEO) (Environment Council, 2000). The proximity principles calls for the disposal of waste as close to its source as possible. Among other advantages, this practice reduces the time, energy and an expense involved in the transportation of waste to disposal sites, and also minimizes the possibility of accidents associated with the transportation of waste. With regard to the BPEO, it encourages the use of waste management strategies that achieve the most benefits in terms of cost, energy and time, and that also cause the least damage to the environment.

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The principles of waste management

The principles of waste management, as identified by Schubeller *et al.* (1996), are “to minimize waste generation, maximize waste recycling and reuse, and ensure the safe and environmentally sound disposal of waste”. This means that waste management should be approached from the perspective of the entire cycle of material use which includes production, distribution and consumption as well as waste collection and disposal. While immediate priority must be given to effective collection and disposal, waste reduction and recycling should be pursued as equally important longer-term objectives (Schubeller *et al.*, 1996).

Sustainable waste management

Another important concept of waste management is ‘sustainable waste management’ (SWM). SWM is an integral part of sustainable development (the Brundtland Commission’s approach) to development which seeks to “meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987) because the amount of waste generated

and how it is managed has profound implications for the quality of the environment and for the prospects of future generations. Thus, in keeping with the objectives of sustainable development, sustainable waste management can be regarded as an approach to waste management that, in addition to protecting human health and the environment, ensures that the scarce resources of the earth are conserved for both present and future generations of humanity.

It therefore becomes important to minimize natural resource extraction and consumption by recycling waste materials, and conduct waste management efficiently to curtail the environmental impacts of waste disposal and protect ecosystem services for both current and future generations (Millennium Assessment Report, 2005). In line with the waste hierarchy, the best way to achieve sustainable waste management is to reduce the amounts of waste we produce (Girling, 2005). Where waste is unavoidable a sustainable approach is to encourage re-use and recycling of products to prevent them from getting into the waste stream. Finally, where waste prevention/reduction, re-use and recycling are economically impossible, waste is processed to recover their intrinsic values such as energy. Sustainable waste management also seeks to increase co-ordination between the producers of goods, retailers, manufacturers, the public, local authorities and all concerned with the management of waste and reusable materials and equipment (London Waste Action, 2007).

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Partnerships and governance arrangements in waste management

The uneven distribution of waste service provision between wealthy and poor, and rural and urban neighbourhoods has been noted in many cases (Johnson & Wilson, 2000; Miraftab, 2004; Morrissey, 1992; Petts, 2005). Currently, most local governments “follow a top-down process of producing compliance with waste management, rather than seeking to identify citizens’ needs and concerns” (Johnson & Wilson, 2000, p. 306). Entwistle (1999) argues that the structure of conventional waste management systems is fundamentally unsuited to the definition and delivery of sustainable waste management. This view suggests that solutions are best framed at the local level where governance issues can be addressed. Therefore, the option of forming partnerships between multiple stakeholders to address waste problems is being investigated to find alternatives to conventional waste programs (Beall, 1997; Blake, 1999; Forsyth, 2005; Hernandez & Martin-Cejas, 2005; Kironde & Yhdego, 1997; Massoud & El-Fadel, 2002; Seldon & Wilkinson, 2001). The concept of partnerships has emerged as a contemporary system of local governance (Southern, 2002). Inherent to partnerships is power dynamics between partners and, although voluntary groups are usually well represented in partnership structures, it has been suggested that they often lack any real power (Southern, 2002). Conventional waste management arrangements do not consult local actors and provide no provision for participation by the public in decision-making.

Kironde and Yhdego (1997) examine community-based waste management in Tanzania from a governance perspective and emphasize the formation of partnerships between non profit organizations and local governments to provide effective, integrated waste management solutions, as the services rendered by private companies do not address the sustainable management of waste. By involving citizens in the management of solid waste, employment, social cohesion and civic engagement should result (Kironde & Yhdego, 1997). Their conclusion is based on assessments of participation in decision-making, transparency and accountability, financial efficiency, and sustainability (Kironde & Yhdego, 1997).

Forsyth (2005) explores case studies of waste management that attempt deliberative forms of environmental governance. He highlights how participation and governance are not uniform processes, and political conditions are not always open to partnership possibilities. Robbins and Rowe (2002) also caution that being co-opted into formal partnerships may make activists and leaders less effective. Marginal populations can become subject to political co-option at national and international scales, thus calling into question accountability and legitimacy of collaboration.

Mirafab (2004) suggests that community partnerships in South Africa also promoted the “casualization of labour and differential levels of service” that reemphasize social hierarchies. Governments have often failed to acknowledge the services of informal recycling groups and have declined to provide financial incentives to recycling micro enterprises (Hernandez, Rawlins, & Schwartz, 1999). However, in Quito, Ecuador, a pilot recycling program incorporated micro-enterprises and informal recycling groups to operate municipal recycling services; the revenue was then used towards local development projects (Hernandez, Rawlins, & Schwartz, 1999).

Partnerships are an increasingly popular arrangement where new political arenas involving diverse stakeholders are formulated. Environmental and developmental policies can thereby be acknowledged through new deliberative platforms of governance (Forsyth, 2005; Hoque, 2006).

Waste management fundamentally requires partnerships to succeed. Cooperation between industry, consumers, governments and community groups is essential to maintain the movement of commodities through the waste stream. More recently, local stakeholders and individuals have had less of a stake in this process as dominant companies have taken control over the waste management economy. Without local level involvement, tendencies for disengagement increase resulting in decreased levels of resource recovery and consequent environmental degradation.

Waste Minimization Projects

The first waste minimization demonstration projects in the UK were set up in the early 1990s with the aim of demonstrating the financial benefits of waste minimization in order that the approach would be copied throughout industry. The principle normally involves using a technique based on

a hierarchy of options; preventing waste by reduction at source, re-use, internal recycling, external recycling or treatment, and dumping only as a last resort.

Waste minimization projects are based on the development of inter-organizational networks of companies. However, the extent of networking and sharing of good practice varies widely from project to project. There is a risk that participation in a waste minimization project, which has been largely promoted on its capacity to produce easy financial savings can result in only single loop learning, and therefore does not lead companies to make the radical changes needed to move towards the scale of environmental improvement needed to achieve sustainable development. Despite the proliferation of projects, their impact still appears to be limited. Cheeseman and Phillips (2001) point to the limited impact of the projects in terms of a small minority of companies participating. There is great variation the impact of the project, notably regional disparities (Phillips, Read, Green and Bates 1999). Envirowise data shows that some regions have been much more active than others in terms both of numbers of projects and the impact of the projects (Envirowise 2001).

Barriers to Waste Minimization

The difference between traditional industrial waste minimization and the application of the same principles to construction is that the final data for a development, in terms of materials used, waste generated etc. are not available until the development is complete. This means that any cost saving measures identified in one project can only be applied in the next project. Since no two construction projects are exactly alike, the application of waste minimization to the construction process is therefore not as precise as it is in an industrial context.

For waste minimization in construction to be widely adopted, it is necessary to answer definitively one simple question: is it worth it? For example, if you are in charge of a building project with a budget of £1million and you suspect that you can save 2-3% of this cost through waste minimization, you obviously have £20-30,000 to spend on waste minimization. If you add up the total cost of segregating, double handling, measuring and managing raw materials, energy, fuels and waste and maybe having a general labourer on site to keep things tidy and it comes to less than the amount you stand to save, then it is worthwhile. The difficulty faced by developers in deciding whether or not to pursue waste minimization is that the value of neither figure is known: for a given project, it cannot be stated at the outset how much can be saved or how much it will cost to save it.

This leaves developers in the situation we see at the moment: any cost saving measures which are apparently effective will be used and those that may seem a bit more far-fetched may be tried but

will not be adopted unless they are clearly working. This principle applies to waste minimization throughout the design and construction of a project.

The True Cost of Waste

The true cost of waste consists of direct and indirect costs which could be 10 – 20 times the direct costs of disposal. Direct costs consist of landfill tax and the fee charged by the waste management company for transporting the waste offsite and rental cost of skip.

Indirect costs consist of:

- (i) Purchase price of the material that ended up as waste.
- (ii) Cost of transportation from suppliers to the site of material that ends up as waste.
- (iii) Missed opportunity of not reclaiming reusable and recyclable material.
- (iv) Lost time in terms of labour and management time.
- (iv) Loss of ability to win contracts based on bad waste history; it is a requirement from organizations with a strong environmental policy, such as local authorities and FTSE100 companies to engage contractors with a good waste history.

Financial benefits of waste minimization and Recycling

According to DETR (2000 cited in Andrew et al. 2004) “25% of waste produced on construction sites could be minimized relatively easily, which could increase profits by up to 2%”. Very often construction projects are competitively priced, allowing for very little profit margins. With the introduction of environmentally friendly approaches to minimize and divert waste from land fill it will mean that these extra profits will be very noticeable in the contractor’s balance sheet.

On demonstration projects used to indicate the cost of waste it was shown that average disposal costs using waste minimization initiatives accounted for 0.3% of the project value due to wastage being halved. Quantities of waste were as low as one third of normal wastage rates on some of the sites. According to Osmani et al. (2006), construction projects usually allow 4% as an allowance for waste, and savings of 1% can be achieved through a waste minimization programme.

According to the Hendry, Envirowise business manager Scotland, waste costs businesses 4.5% of turnover; however this may include other non-value adding activities. Begum et al. (2006) found that net financial gains of reusing and recycling construction site waste were 2.5% of the project budget. By maximizing resource efficiency through reduce, reuse and recycle it will reduce operational costs and improve environmental performance of companies.

Environmental Impact of Construction waste

The large volume of waste in the construction industry contributes to the rapid depletion of natural resources and production of high volumes of air pollution caused during processing. Water pollution will also result from the processing of materials. When material ends up as waste it has

the potential to be reused or recycled thereby minimising its impact on the environment through less processing. The construction industry is the biggest consumer of raw material in the UK , 90% of non-energy minerals extracted in Great Britain are used to supply the construction industry with materials 260m tonnes of material are extracted for use as aggregate and other construction material.

Waste contains embodied energy which according to Boustead and Hancock (1979, cited in Treloar et al. 2003) is “the energy consumed during extraction, processing, manufacture and transportation at all stages ”. When material is recycled the embodied energy within that material means there will be less energy needed in its processing.

According to National Waste strategy Scotland (1999) simple changes to the management and production processes aided with the use of new innovations can make big savings to the amount of waste being generated and the amount of energy being used. The construction of buildings, their materials and the occupant’s use of services is responsible for 50% of the UK CO₂ emissions. A push for a more sustainable construction is required as the Government has targets for a 60% reduction in emissions by 2050 below the 1990 levels. Metal, glass and hard wood timber have a high embodied energy. There re-use and recycling should be given high priority towards waste minimisation. By using reclaimed and recycled materials, 70% of embodied energy can be saved. This could potentially result in cost savings of 40% of the building price,

Gypsum causes harm at landfill due to leaching of sulphates into the ground, this is harmful to humans if it contaminates the water supply. Gypsum accounts for largest portion of the non-inert waste in the UK, at 36%, of the waste stream at construction sites. According to Musick gypsum (Calcium sulphate) when mixed in landfill with “anaerobic bacteria, organic matter and high levels of moisture, will release sulphate ions, producing hydrogen sulphide (H₂S) and metallic sulphide leachates which are toxic to fish. This gas is also harmful to humans at levels higher than 1000ppm. At one landfill levels of 5000ppm were recorded. The gas will reach maximum emissions 15 years after it was first placed in landfill. When plasterboard is mixed with biodegradable waste such as food it can produce hydrogen sulphide which is a Major contributor to acid rain. In the UK if a skip contains more than 10% plasterboard then this material needs to be segregated out and put in special ‘mono’cells in landfill.

The demands that developed nations are putting on the Worlds resources are several times larger than our share of the planet. By 2050 we are expected to have 4 times the environmental impact compared to what we have today, (Edwards 2005).

The ecological footprint of the UK is growing and so too is that of developing Nations who’s consumption of consumer goods is rising 10-20% in rapidly developing economies.

The UK economy will be competing with these developing Nations for resources which are beginning to become scarce.

Magnitude of waste in construction

Poon et al. (2004) reports a study of the measurement and prevention of construction waste in Hong Kong in which waste from seven materials was monitored in five house building projects. After sorting and weighing all the material wastes, the amount of direct waste by weight ranged between 1 and 10% in weight of the purchased amount of materials. Further, it was found that an average 9% (by weight) of the total purchased construction materials ended up as site waste. A similar study by Begum et al. (2006) in Malaysia showed the following composition and percentage of material wastes: Soil 27%, wood 5%, brick and blocks 1.16%, metal product 1%, roofing material 0.20%, plastic and packaging materials 0.05%, concrete and aggregate 65.80%. Jones and Greenwood (2003) obtained percentage of waste in ten materials as plaster board 36%, packaging 23%, cardboard 20%, insulation 10%, timber 4%, chipboard 2%, plastic 1%, electric cable 1%, and rubber 1% (Osmani, 2008).

Another study carried out by Kulatunga, Amaralunga, Haigh and Rameezden (2006) in Sri Lanka identified the main materials wastages as sand (25%), lime (20%), cement (14%), bricks (14%), ceramic tiles (10%), timber (10%), rubble (7%), steel (7%), cement blocks (6%), paint (5%) and asbestos sheets (3%).

Formoso et al. (2002) was one of the first studies on material waste in Brazil, involving a single case study based on data from an 18-storey residential building project that was chosen because all the records of materials supply and use were well kept by the construction company. Both direct and indirect wastes of 10 building materials were estimated. The waste percentages included both direct and indirect waste. The total waste was 18% of the weight of all materials purchased, representing an additional cost of 6%. One of the main contributions of this study was that it pointed out the importance of indirect waste in relation to direct waste. For instance, the amount of indirect waste of mortar was as much as 85% of the designed volume of plaster. This represents not only a waste of materials, but also a significant unnecessary additional load on the building structure.

Sources of materials waste

Construction waste stems from construction, refurbishment, and repairing work. Many wasteful activities can take place during both design and construction processes, consuming both time and effort without adding value to the client. Generation of the stream of waste is influenced by various factors such as natural waste. Natural waste is the wastage that costs more than what is saved if tried to prevent. There is a certain limit up to which waste of materials can be prevented. Beyond

that limit, any action taken to prevent waste will not be viable, as the cost of saving will surpass the value of materials saved. Thus, natural waste is allowed in the tenders. The amount of natural waste is subjective to the cost effectiveness of the approaches used to manage it. The approaches vary from one scenario to another and so do the natural waste. For instance, the cost of preventing wastage in a project with a good material controlling policy will be less than that of a project which lacks such a policy. Thus, the acceptable level of natural waste in the former situation will be less than the later (Kulatunga et al., 2006; Formoso et al., 2002).

A major factor contributing to waste generation is direct waste. This type of waste can occur at any stage of the construction process before the delivery of material to the site and after incorporating the materials at the building (Kulatunga et al., 2006; Formoso et al., 2002; Shen et al., 2004). Categories of direct waste are summarised in Table 1.

Table 1: Categories of Direct Waste

Category	Reason	Example
Delivery waste		
Cutting and conventional waste		
Fixing waste		
Application and residue waste		
Waste caused by other trades		

3.0 METHODOLOGY

Research design could be defined as the structuring of investigation with the sole purpose of identifying and establishing relationship among variables; to enable researchers to test hypothesis or answer research questions administered in the field. In other words, it could be described as a scheme or guide that enables researchers to generate data needed for their study. In choosing research design, factors like researcher's level of control on entities or phenomena under study, the purpose of the study, time available for the study and the type of data needed are very keys. In consideration with the aforementioned factors, (Singh 2010) The study adopted the use of descriptive and exploratory design because it will use objective methods to uncover facts about its background and problems.

The study conducted in Nasarawa state of Nigeria in some selected construction company that are operating within the Nasarawa state of Nigeria is the study area and Nasarawa State is bounded in the north by Kaduna State, in the west by the Abuja Federal Capital Territory, in the south by Kogi and Benue States and in the east by Taraba and Plateau States, populations for this study are professionals in construction industry, the sample of 181 were adopted from 340, for questionnaire administration purpose. survey strategy have been used for data collection and SPSS have be used for analysis.

4.0 RESULT AND DISCUSSION

Descriptive statistics based on mean ranking was carried out to explore the types of construction materials waste in construction site, the results showed the ranking, mean and standard deviation for each Item.

Table 4.1: Types of construction materials waste in construction site

Types of construction materials waste in construction site	Mean	Std. Deviation	Ranking
Sand 15%-25%,	4.17	.779	1 st
Lime 10%-20%,	4.08	.733	2 nd
Cement 8% -14%	4.01	.762	3 rd
Bricks 8% -14%,	3.92	.743	4 th
Ceramic tiles 5% -10%),	3.92	.868	5 th
Timber 5%-10%	3.92	.768	6 th
Rubble 3% -7%	3.74	1.111	7 th
Steel 3% -7%	3.65	1.003	8 th
Cement blocks 4% -6%,	3.64	1.002	9 th
Paint 2%-5%	3.63	1.001	10 th
Asbestos sheets 1%-3%	3.61	1.000	11 th

Table 4.1: shows the types of construction materials waste in construction site. It shows that the most effective facility management in the hospital, based on five point measurement scale, were Sand 15%-25%, with 4.17 mean ranked 1st, Lime 10%-20%, with 4.08 mean ranked 2nd, Cement 8% -14% with 4.01 mean ranked 3rd, Bricks 8% -14%, with 3.92 mean ranked 4th, Ceramic tiles 5% -10%), with 3.92 with mean ranked 5th, Timber 5%-10% with 3.92 mean ranked 6th , Timber 5%-10% with 3.74 mean ranked 7th, and the Steel 3% -7% with mean of 3.65, ranked the 8th , Cement blocks 4% -6%, with mean 3.64 ranked the 9th , Paint 2%-5% with mean of 3.63 ranked 10th and the lease waste in the study area was Laundry with 3.61 mean ranked 11th Therefore, these results are indicating the types of construction materials waste in construction site in the

study area. Descriptive statistics based on mean ranking was carried out to explore the causes of construction materials waste in construction site in the study area. The results in table below showed the ranking, mean and standard deviation for each Item.

Table 4.2: The Causes Of Construction Materials Waste In Construction Site.

The causes of construction materials waste in construction site	Mean	Standard deviation	Ranking
Sandcrete Block work & Brickwork	4.12	0.720	1 st
Formworks (from wood/timber)	4.05	0.878	2 nd
Mortar from Rendering/plastering	3.98	0.820	3 th
Concrete	3.98	0.916	4 th
Reinforcements	3.93	1.079	5 th
Tiles from walls, floors and other surfaces	3.91	0.963	6 th
Paint	3.85	0.952	7 th
Aluminium roofing Sheets	3.82	0.962	8 th
Formworks (from steel/metal)	3.75	1.026	9 th
Ceiling boards	3.75	0.873	10 th
Tiles	3.75	0.981	11 th
Glass	3.75	0.924	12 th
Wood	3.71	0.961	13 th
Steel	3.67	0.973	14 th
Plaster from mortar	3.66	1.063	15 th
Ceramics	3.64	1.064	16
Wires and cables	3.61	1.063	17 th
Pipes	3.49	1.062	18 th
Polythene sheets	3.48	1.050	19 th
Steel rebar's	3.47	1.048	20 th
Metal	3.46	1.047	21 st
Iron bars	3.45	1.042	22 nd
Sand	3.42	1.040	23

Table 4.2: shows the causes of construction materials waste in construction site. It shows that the causes of construction materials waste most, based on five point measurement scale, were Sandcrete Block work & Brickwork with 4.12 mean ranked 1st, Formworks (from wood/timber) with 4.05 mean ranked 2nd, Mortar from Rendering/plastering of 3.98 mean ranked 3rd, Concrete with mean values of 3.98 ranked 4th, Reinforcements with mean value of 3.93 ranked 5th, Tiles from walls, floors and other surfaces with mean value of 3.91 ranked 6th, Paint with mean value 3.85 ranked the 7th, Aluminium roofing Sheets with mean of 3.82 ranked the 8th, Formworks (from steel/metal) with mean value 3.75 ranked the 9th, Ceiling boards with mean value of 3.75 ranked the 10th, Tiles with mean value of 3.75 ranked the 11th, Glass with value of mean 3.75 ranked the 12th and Wood with the mean value of 3.71 ranked the 13th, Steel with the mean value of 3.67 ranked the 14th, Plaster from mortar with the mean value of 3.66 ranked the 15th, Ceramics with the mean value of 3.64 ranked the 16th, Wires and cables with mean of 3.61 ranked the 17th, Pipes with mean of 3.49, ranked 18th Polythene sheets, with mean of 3.48, thanked the 19th, metal with 3.46 ranked the 21st iron bars 3.45 ranked 22nd the least provided causes of building material waste in the study area was sand with mean value of 3.42 in the table above. Therefore, these results are indicating the causes of construction materials waste in construction site in the study area.

Regression analysis was carried out to know the effect of factors influencing the facility management on effectiveness of management

REGRESSION: Effects of the **causes building material waste** on volume of construction materials waste in construction site

Regression analysis was carried out, to assess the influence of **the causes building material waste on volume of construction materials waste in construction site**. The r^2 value in table 6 and 7 shows how much of the variance in the dependent variable volume of **construction materials waste in construction site** is explained by the independent variable of Mast **the causes building material waste**. In this case, the value was $r^2 = .871, f(1,128) = 29.414, p < .001$. This means that the independent variable **the causes building material waste** explained 87.1% strong effect size in **volume of construction materials waste in construction site**, with significance at $p < 0.001$.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643 ^a	.871	.181	.89466

a. Predictors: (Constant), THE CAUSES BUILDING MATERIAL WASTE THE CAUSES BUILDING MATERIAL WASTE

table 4.4:ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.543	1	23.543	29.414	.000 ^b
1 Residual	102.453	128	.800		
Total	125.996	129			

a. Dependent Variable: THE CAUSES BUILDING MATERIAL WASTE

b. Predictors: (Constant), VOLUME OF CONSTRUCTION MATERIALS WASTE IN CONSTRUCTION SITE

Also descriptive statistics based on mean ranking was carried out to explore the factors that influence the facility management effectiveness in the study area. The results in table below showed the ranking, mean and standard deviation for each Item.

Table 4.5: Measures of managing construction materials waste in construction site

Measures of managing construction materials waste in construction site	Mean	Std. Deviation	Ranking
Adequate storage of material	2.62	1.383	1 st
Careful handling of tools and equipment	2.58	1.340	2 nd
designing for recycling and ease of disassembly	2.56	1.306	3 rd
Employment of skilled workmen to carry out site operations	2.54	1.246	4 th
identification of materials which create waste and poor communication	2.51	1.196	5 th
Just in time operations of works/delivery of materials	2.51	1.301	6 th
minimizing temporary works	2.49	1.129	7 th
proper site supervision and management techniques	2.46	1.313	8 th
Proper implementation of Waste Management Plan	2.38	1.209	9 th
Proper procurement management	2.35	1.328	10 th
Recording and measuring different streams of waste	2.24	1.309	11 th
Recycling of some waste materials off site and on site	2.23	1.308	12 th
Staff training and awareness on waste management	2.21	1.307	13 th
use of proper capacity and specification	2.20	1.306	14 th
Use of realistic component size	2.19	1.305	15 th
Use of standard component	2.18	1.304	16 th

A mean ranking was conducted on the Measures of managing construction materials waste in construction site in the study area It was observed that Adequate storage of material with value mean of 2.62 ranked the 1st , Careful handling of tools and equipment with value mean of 2.58 ranked the 2nd , designing for recycling and ease of disassembly with value mean of 2.56 ranked the 3rd , Employment of skilled workmen to carry out site operations with value mean of 2.54 ranked the 4th, identification of materials which create waste and poor communication with value mean of 2.51 ranked the 5th , Lack of Just in time operations of works/delivery of materials with value mean of 2.51 ranked the 6th , Use of poor quality component and materials with value mean of 2.49 ranked the 7th , minimizing temporary works with value mean of 2.46 ranked the 8th , Proper site supervision and management techniques with value mean of 2.38 ranked the 9th , Proper procurement management with mean of, 2.35 , ranked the 10th Recording and measuring different streams of waste with mean of 2.34 ranked the 11th Recycling of some waste materials off site and on site with the mean of 2.33 ranked the 12th Staff training and awareness on waste management with mean of 2.32 ranked the 13th , use of proper capacity and specification with mean of 3.21 ranked 14th , Use of realistic component size with mean of 2.19 ranked the 15 and Use of standard component with mean of 2.18 ranked the 16th These results are indicating that the Measures of managing construction materials waste in construction site in the study area

5.0 Conclusion

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The aim of the study is to Aim is to appraise of adoption of sustainable construction waste management by construction firms in Nasarawa state with a view to identify the causes of construction material wastage and recommend the sustainable measures/principles for management and minimization of construction waste from the result obtained it may concluded that factors that causes of construction materials waste in construction site. Which were Sandcrete Block work & Brickwork, Formworks (from wood/timber), Mortar from Rendering/plastering, Concrete with mean values , Reinforcements, Tiles from walls, floors and other surfaces, Paint, Aluminium roofing Sheets, Formworks (from steel/metal) , Ceiling boards, Tiles, and there is a strong effect of the effect of the causes of material waste on volume of material waste in construction.

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TÜRKİYE'DE SANAL GAZETECİLİRGE GEÇİŞ SÜRECİNİ 'VATAN GAZETESİ' ÜZERİNDEN OKUMAK

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ÖZET

Sanal gazetecilik kavramı, yeni iletişim teknolojilerinin geleneksel gazetecilik mecrasını dönüştürmeye başlamasıyla ortaya çıkmıştır ve okuyucu kitlesini kullanıcı konumuna getirerek yeni medyanın önemli bir alanı durumuna gelmiştir. Nitekim habere hızlı erişim, içeriklere her ortamda ulaşabilme ve görsel/işitsel zenginlik içérme pratikleriyle hedef kitlenin dikkati çeken bir mecra söz konusudur. Bu durumdan ötürü ulusal eksendeki basılı gazetelerin tamamı sanal uzantılarıyla internet kullanıcılarına hitap etmektedir. Türkiye'nin köklü gazeteleri arasında yer alan Vatan gazetesinde ise durum farklıdır ve bu gazete basım faaliyetlerini sonlandıarak tamamen sanal gazeteciliğe geçiş yapmıştır. Mevcut çalışmada da bu konu üzerinde durulacaktır ve durum çalışması analizi yapılarak Vatan gazetesini basılı yayıncılıktan sanal gazeteciliğe taşıyan süreç derinlemesine irdeleneciktir. Bu doğrultuda teorik destekli olarak elde edilen bulgular ise ayrıca tartışılacaktır.

Anahtar Kelimeler: Gazetecilik, Sanal Gazetecilik, Vatan Gazetesi

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THE READING IN THE CONTEXT OF 'VATAN NEWSPAPER' TO TRANSITION VIRTUAL JOURNALISM IN TURKEY

ABSTRACT

The notion of virtual journalism has emerged as new communication technologies have started to transform the traditional journalism field and it has become an important domain of new media by transforming readers into user status. For this reason, there is a medium that attracts the attention of the target audience with fast access to news, access to content in every environment and containing visual and auditory richness. Because of this situation, all national printed newspapers appeal to internet users with their virtual extensions. The situation is different in vatan newspaper one of oldest institutions in Turkey and this newspaper ended its press activities and switched to virtual journalism entirely. The current study will focus on this issue and the case study analysis will be done, the process that brought vatan newspaper to virtual journalism will be examined as detail. Accordingly, theoretically obtained findings will be discussed with subheadings.

Keywords: Journalism, Virtual Journalism, Vatan Newspaper

1. GİRİŞ

Yeni iletişim teknolojilerinin yaygınlaşmasıyla birlikte bireyler medya içeriklerine daha hızlı ve güncel düzeyde erişebilmeyi istediginden ötürü konvansiyonel medya araçlarında önemli bir dönüşüm yaşanmaya başlamıştır. Hem biçimsel anlamda hem de içerik olarak vuku bulan bu dönüşüm süreciyle beraber medya yapılanmalarında hedef kitlenin yoğun olduğu sanal mecralara yönelik eğilim başlamıştır ve başta gazeteler olmak üzere televizyon, radyo ve dergi kurumları da aynı zamanda internet ortamında yayın hayatına giriş yapmıştır.

Tekelleşme probleminin olmadığı, editorial yapının daha esnek olarak öne çıktığı ve zengin içerikleri kullanıcılar sunulan nitelikli bir görünümün mevcut olduğu çevrimiçi medya ortamında konvansiyonel medya araçlarının entegrasyon süreci hızla tamamlanmıştır. Görev dağılımları da nihayetinde iki farklı çerçevede kurgulanmıştır ve örneğin X bir gazetenin basılı nüshasının ayrı bir sorumlu editörü mevcutken aynı gazetenin internet sürümünün editörlüğünü başka bir kişi üstlenebilmiştir. Diğer medya araçlarında da sistem genel olarak bu şekilde yürütülmüştür ve kurumsal yapı bağlamında internet medyasının ayrı bir kadrosu ve işleyisi dikkat çekmiştir.

Nitekim yeni medya alanında hedef kitlenin daha yoğun olması bu alanda reklam elde edebilmenin önünü de açtıından, medya sahipleri hızlı bir dönüşüm neticesinde sanal ortama evrilmiştir. Güncellik faktörü ise başlıca etken olarak değerlendirilmiştir ve misalin herhangi bir ulusal gazetenin satış rakamları giderek azalırken aynı gazetenin sanal uzantısı ise giderek hedef kitlesini genişletebilmiştir. İki durum arasındaki bu ters orantı, haber içeriklerinin güncel sunumu ve zengin içeriğiyle ilişkilendirilmiştir. Dolayısıyla düşüse geçen satış rakamları, giderek azalan reklam gelirleri ve karşılaşması güç duruma gelen baskı/dağıtım maliyetleri bilhassa geleneksel gazeteler açısından problem teşkil etmiştir ve sanal gazeteciliğe yönelik daha baskın hale gelmiştir.

Bu çalışmanın üzerinde durduğu konu da geleneksel gazeteleri sanal gazeteciliğe taşıyan sürecin irdelenmesidir ve bu çerçevede alt etmenlerin teorik inceleme neticesinde ortaya çıkarılmasıdır. Mevcut çalışmada bu süreç kurgulanırken ayrıca durum çalışması analizi yapılarak bir içerik oluşturulması hedeflenmiştir. Vatan gazetesinin ele alınmasının gerekçesi ise bu gazetenin iyi sayılabilcek ancak kademeli olarak düşüse geçen tiraj rakamlarına rağmen bir anda basım ve dağıtım faaliyetlerini sonlandırmasıdır ve tamamen dijital ortama geçerek internet üzerinden sanal gazetecilik çalışmalarını devam ettirmesidir. Bu minvalde teorik çerçeve oluşturulurken sanal gazetecilik kavramına temas edilmiştir ve bu gazetecilik biçiminin nitelikleri ile dezavantajları öne çıkarılmıştır. Daha sonra Vatan gazetesini geleneksel gazetecilikten sanal gazeteciliğe taşıyan süreç incelenmiştir.

2. SANAL GAZETECİLİK ÜZERİNE

İnternet teknolojisinin medya alanını dönüştürmesi bilhassa basılı gazetecilik üzerinde değişim oluşturduğundan ötürü, basılı gazetelerin içerik boyutları ve biçimsel yapıları internet ortamında tamamen değişim göstermiştir. Zira internet gazetelerinin gerek hazırlanış süreçleri gerekse görünüm ve tasarımları geleneksel gazetelerden farklı olmuştur (Gürcan, 1999). Dolayısıyla içerik ve biçimsel yapısıyla gazetecilik alanında yeni bir alanı teşkil eden, okuyucu statüsündeki bireyleri kullanıcı konumuna getiren ve haberi anında paylaşabilerek güncelik faktörünü bir avantaj olarak öne çikan yeni gazetecilik mecraları sanal gazetecilik olarak tanımlanmaktadır.

Literatürde dijital gazetecilik ve internet gazeteciliği olarak da adlandırılan sanal gazeteciliğin küresel medyada bilhassa 1990'lı yıllarla birlikte yaygınlaşması, internet haber sitelerinin kitle üzerinde etki uyandırması ile başlamıştır ve bu etkinin özellikle bilgi ve diğer tüm içerikleri anında paylaşabilme niteliği üzerinde gerçekleştiği görülmüştür. Bu nedenle geleneksel medya gazetelerinin herhangi bir haberi ancak ertesi gün okuyucuya ulaştırılabilmesi ve bu gazetelerin kırsal bölgelere tam randımanlı olarak dağıtım yapamaması bir problem ettiğinden söz konusu basılı gazetecilik mecrasında dönüşüm adeta zaruri duruma gelmiştir. Tırajların azalması ve gelirlerin bu doğrultuda düşmesi de diğer önemli etmen olarak değerlendirilmiştir.

Ayrıca reklam alımları da satış rakamlarının azalmasıyla beraber olumsuz etkilenmiştir ve gazetecilik alanından hızlı bir biçimde sanal gazeteciliğe geçişler başlamıştır. Türk medyası bağlamında değerlendirdiğimizde 1996 yılında Milliyet gazetesinin 1997 yılında ise Sabah gazetesi ve Hürriyet gazetesinin sanal gazeteciliğe geçtiği görülmüştür (Kara, 2012). Ana akım medyanın öncü gazeteleri olarak değerlendirilen bu gazetelerin sanal gazeteciliğe geçmesi diğer gazeteleri de hızlı bir biçimde internet medyasına yöneltmiştir ve hem basılı gazeteler hem de sanal gazeteler aynı anda hedef kitlesiyle buluşabilmiştir.

2000'li yıllarla birlikte ise gelişen teknolojiler bağlamında sanal gazeteciliğin daha etkin hale geldiği ve artık mobil telefon uygulamalarıyla yeni nesil okuyucu kitlelere hitap ettiği dikkat çekmiştir. Görsel ve işitsel nitelikleri yazınsal içeriklerle buluşturan, video gazeteciliğine ve diğer yeni medya parametrelerine ortam sunan, haberi en ücra coğrafyalarda yaşayan kitlelere dahi ulaştıran ve dağıtım problemi yaşamadan aynı anda milyarlarca insana ulaşabilen sanal gazetelerin bu görünümü aynı zamanda profesyonel bir işleyiş şemasını doğurmuştur. Öyle ki sanal gazetelerin de tıpkı basılı gazeteler gibi editorial yapısı oluşturulmuştur ve bununla birlikte birim editörlerinin öncülüğünde alt kadrolar inşa edilmiştir. Böylece profesyonel yapısıyla öne çıkan bir sanal gazetecilik mecrası kurgulanmıştır.

Sanal gazeteleri etkin kılan dağıtım faktörünün geleneksel gazetelerde önemli bir problem olması öte yandan okuyucu eğiliminin internet medyasına kaymasına olanak tanımıştir.

Nitekim dünya coğrafyasında pek çok kişi ulusal gazetelere erişmek adına çeşitli sorunlar yaşamıştır (Gezmen, 2002). Fakat sanal gazetecilikle birlikte yeni iletişim teknolojilerinin bireylere sunmuş olduğu tüm dijital araçlarla gazeteleri çevrimiçi olarak takip edebilmek mümkün hale gelmiştir. Diğer taraftan reklam veren kurumların sanal gazeteciliğe olan kitle eğilimine kayıtsız kalamaması ve bu mecralarda reklam sunumlarına ağırlık vermesi mali yapı bağlamında da sanal gazetecilik alanını güçlü duruma getirmiştir.

Gider kalemi olarak sanal gazetecilik alanında büro masrafları, editör ve tasarımcı maliyetleri ve ajans aboneliklerinin mevcut olması (Sütçü, 2006) geleneksel gazetelere nazaran çok daha az bir mali gider oluşturduğu için, sanal gazeteciliğin elde ettiği reklam gelirleri sürdürülebilir anlamda iktisadi dayanak oluşturmuştur. Zira basılı gazete patronlarının sanal gazeteciliğe önem atfetmesinin arka planında gelir/gider denkleminin gelir bandında artı değer oluşturmaması mevcuttur. Bundan ötürü sanal gazetelerin editorial kadroları profesyonelce dizayn edilmektedir ve sunulan içeriklerin niteliği kadar tasarımları ve görsel zenginlikleri de etkin bir biçimde planlanmaktadır.

Sanal gazetelerin içerik olarak link paylaşma niteliğini bulundurması da bir diğer önemli etmen olarak değerlendirilmektedir ve herhangi bir haber sunumunda bu haberin bilimsel arka planına dair yönlendirmeler yapılması kayda değer görülmektedir. Öyle ki internet teknolojisinin bilgiye doğrudan ulaşım sağlayan bir alan olarak adlandırılması (Bulut, 2006) söz konusu internet mecrasının habercilik alanını temsil eden sanal gazeteleri bu anlamda da öne çıkarmaktadır ve yorumlarla, değerlendirmelerle sunulan haberlerin enformatik boyutu için bağlantı linkleri paylaşılabilmektedir.

Geleneksel gazetecilik alanında haber metinlerinin arşivlenmesi oldukça zor olduğundan ve bu arşivleme sürecinin okuyucular tarafından uzun sürecli olarak yapılabilmesi ciddi bir sorun teşkil ettiğinden sanal gazeteciliğin arşivleme niteliği de artı bir değer olarak görülmektedir. Çünkü sanal gazetecilik alanında kullanıcılar sunulan haberler, makaleler ve diğer tüm içerikler dijital ortamda arşivlenebilmektedir ve istenilen her an bu verilere kolayca ulaşım sağlanabilmektedir (Millison, 2005). Bilimsel çalışmalarda kaynak gösterilmesi açısından da sanal gazetelerin eski nüshalarına erişim kolaylığının olması avantaj teşkil etmektedir ve tarihe tanıklık etmek açısından sanal gazeteciliğin bu niteliğe sahip olması kullanıcılar nezdinde tercih sebebi olarak görülmektedir. Dolayısıyla sanal gazetelerin ana sayfa görünümü dikkate alındığında sekmeler arasında arşiv başlığının bulunduğu ve sanal gazeteciliğe geçiş itibariyle sunulan tüm içeriklerin arşivlendiği söylenebilir.

Bilginin yeniden üretildiği ve aynı zamanda yeniden biçimlendirildiği internet ortamında (Karaduman, 2003) sanal gazeteciliğin kullanıcılar tarafından tercih edilmesi, kullanım pratikliği ile de ilişkilendirilmektedir. Geleneksel gazetelerin baskı sayfaları ölçüğünde haberlere yer ayıratması ve köşe yazarlarının yine bu basım tasarımları bağlamında gazete içeriğinde yer alması sınırlanmış bir habercilik yaklaşımı sunarken; sanal gazetecilik alanında haberin hem yazısal hem de görsel/işitsel boyutu istenildiği kapsamda inşa edilebilmektedir. Böylece paylaşılan haberlerin tüm detaylarına, köşe yazarlarının tüm değerlendirmelerine ve haberi destekleyen görsel/işitsel öğelerin tüm içeriklerine kapsamlı olarak yer verilebilmektedir.

Ancak bu enformasyon yoğunluğu bilgi kirliliğine de sebebiyet verebilmektedir ve ajanslara düşen her haberin yeterince denetlenmeden sanal gazetelerde yer bulması ayrı bir problem doğurmaktadır (Yüksel, 2014). Her ne kadar sanal gazetecilik alanında profesyonel kadrolar kurularak editorial yapılar oluşturulmuş olsa da anlık haber sunabilmek açısından denetimden uzak bir haber sunumunun tercih edilebilmesi sorun oluşturmuştur. Bu durum bilhassa doğrudan internet gazeteciliği yapan platformlarda daha fazla görülebilmektedir. Basılı mecrası da mevcut olan internet gazetelerinde ise her iki alan arasında eşdeğer bir hareket alanı var olduğu için bilgi kirliliği problemi minimum düzeyde öne çıkmaktadır.

Sanal gazeteciliğin ana akım medyada yer bulamayan ve yazılarını okuyuculara ulaştırmakta problem çeken gazeteciler için de önemli bir mecrası olduğu bilinmektedir (Çelik, 2003). Gerek fikir ayrılıkları bağlamında gerekse popülerlik çerçevesinde geri planda kalan gazetecilerin köşe yazılarını rahatça yazabildiği ve okuyucularına sanal gazeteler üzerinden ulaşabildiği bir ortamın mevcut olması ehemmiyet arz eden bir durum olarak dikkat çekmektedir. Hatta her geçen gün yeni sanal gazetelerin internet ortamında yer alması ve farklı görüşlere hitap eden içeriklerin kurgulanması sanal gazetecilik açısından özgün bir husus oluşturmuştur. Editorial yapı ana akım sanal gazeteler gibi kapsamlı olmasa da hem ajanslardan alınan haberlerle hem de özel olarak paylaşılan içeriklerle alternatif bir internet gazeteciliği öne çıkarılmıştır. Ayrıca aktüel gelişmelere kendi köşe yazarlarının gözünden yaklaşan bu gazetelerin özgün yapısı editorial bağımsızlığının tesis edilmesi açısından farklılık teşkil etmiştir.

Yeni iletişim teknolojilerinin bireyleri etkileşim sürecine dâhil etmesi ve multimedya niteliği sunması ise (Aydın, 2011) haberlere ve diğer tüm içeriklere doğrudan yorum yapılabilmesini sağlamıştır. Netice olarak desteklediği yahut karşı çıktıığı bir içeriğe anında geri dönüt yapabilme imkânı bulan aktif okuyucuların yani sanal gazete kullanıcılarının var olması bu alanı avantajlı kılmıştır. Öyleyse sanal gazeteciliğin avantajlarına ve dezavantajlarına temas edilerek geleneksel gazetelere göre farklılık arz eden nitelikler öne çıkarılabilir.

2.1 Sanal Gazeteciliğin Nitelikleri

Literatür verileri doğrultusunda kavramsal yapısına ve genel görünümüne yer verilen sanal gazeteciliğin; aynı zamanda geleneksel yani basılı gazetelere göre artı değer arz eden birtakım nitelikleri mevcut bulunmaktadır. Dolayısıyla gerek medya sahipleri ve gazeteciler gerekse reklam verenler ve okuyucular özelinde sanal gazetecilik alanını tercih sebebi kılan bu nitelikleri başlıklar altında sıralamak mümkündür:

- Sanal gazetecilik alanında haber sınırlamasının olmaması, bireylerin her konuya dair gelişmeleri takip edebilmesini kolaylaştırmıştır ve böylece geleneksel gazetelere göre oldukça kapsamlı olan bir haber içeriği ortaya çıkmıştır.
- Mobil cihazlar başta olmak üzere çeşitli cihazlar üzerinden sanal gazetecilik uygulamalarına erişimin olağan olması, hedef kitle ağını giderek genişletmektedir ve bu durum reklam piyasasının ilgisini çektiğinden ötürü sanal gazetecilik alanında reklam gelirleri artış yaşamaktadır.
- Sosyal medya platformları aracılığıyla sanal gazetecilik alanlarının öne çıkarılması ise her iki interkatif alanın bütünlüğe yaygın kitlelere erişebilmesine fırsat sunmaktadır ve özellikle sosyal medya sayfalarında link paylaşımı yapılarak sanal gazetelerin ana sayfalarına yönlendirme gerçekleşmektedir.
- Alternatif haber sitelerinin var olmasıyla beraber hukuk çerçevesinde özgürce gazetecilik yapılabilmesi, sanal gazetecilik mecralarının bağımsızlık bağlamında geleneksel gazetelere nazaran daha fazla öne çıkışmasını sağlamıştır.
- Kitlelerin sanal gazetecilik alanında haber içeriğine doğrudan yorum yapabilmesi ve görüşlerini beyan edebilmesi interaktif bir süreç doğurmuştur ve nihayetinde geleneksel gazetelerde tam anlamıyla var olmayan geri bildirim faktörü etkin olarak sanal gazetecilikte hayat bulabilmıştır.
- Dağıtım yapma ihtiyacının olmaması hem mali anlamda gider çıktısının önüne geçmiştir hem de küresel dünyanın her köşesine ulaşabilen bir sanal gazetecilik olgusu oluşturmuştur.
- Sanal gazeteciliğin enformasyonu anlık paylaşması güncelik niteliğini sunduğu gibi bu gazetelere her yerde erişimin mümkün olması kitleler minvalinde sanal gazeteciliği tercih sebebi konumuna getirmiştir.
- Diğer medya araçlarında yazılarını yayımlatamayan gazetecilerin sanal gazetecilik ortamındaki kapsamlı yapı itibarıyle yazılarını paylaşabilmesi, hem gazeteciler hem de bu gazetecileri takip eden okuyucular açısından olumluluk teşkil etmiştir.

- Sanal gazetecilik alanı aynı zamanda devasa bir haber arşivi niteliği taşımاسından ötürü hem geriye dönük bilgilere ulaşabilmek hem de bilimsel çalışmalarda eski içeriklere kolayca erişebilmek adına mühim değer arz etmiştir.
- Geleneksel gazetelerin yazısal içeriklerini, televizyon haberlerinin görsel sunumlarını ve radyo haberlerinin işitsel niteliklerini bir arada bulundurabilen sanal gazetecilik alanının bu bütünlüğü, zengin haber içeriği profiliyle yeni medyanın gazetecilik yönünü oluşturmuştur.
- Gazetecilerin ajanslar üzerinden elde ettiği haberleri analiz ederek sahaya inmeden ev ortamında faaliyet yürütebilmesini sağlayan sanal gazetecilik ortamı, bu yönyle kurumsal yapıların ek giderlerinin önüne geçmiştir ve muhtemel her koşulda haber yapılabileceğinin yolunu açmıştır.

2.2 Sanal Gazeteciliğin Dezavantajları

Yukarıdaki nitelikleriyle öne çıkan ve dolayısıyla avantaj arz eden faktörleriyle daha fazla öne çıkan sanal gazetecilik alanının kurumsal bağlamda ve okuyucular ekseninde dezavantaj teşkil eden hususları ise genel anlamda şu şekildedir:

- İnternet ortamında çok fazla haber sitesinin yer alması hedef kitlenin sanal gazetecilik alanında seçeneklerini artırdığı için çabuk tüketilen ve kolay vazgeçilen bir sanal gazetecilik izlenimi oluşmuştur.
- Milyonlarca takipçisi olan sosyal medya sayfalarının aynı zamanda kaynak gösterme gereği bile duymadan ajans haberlerini paylaşmaya başlaması, sanal gazetelerin aslı sayfalarından ziyade sosyal medya üzerinden haberleri takip eden bir kitle oluşturmuştur. Bu durum neticesinde hedef kitlenin sosyal medya alanlarıyla paylaşıldığı bir yeni görünüm meydana gelmiştir.
- Satış rakamları giderek azalmasına rağmen güvenilirlik noktasında geleneksel gazetelerin belirli bir okuyucu kitlesine hitap etmeye devam etmesi, bazı sanal gazetelerin bilgi kirliliği taşıyan içeriklere yer vermesiyle ilişkilendirilmiştir. Nitekim kaynağı tam olarak araştırılmadan, haber analizi yapılmadan ve olası olayların iki yönlü incelemesi yapılmadan sırhaberi daha önce sunabilmek açısından paylaşım yapılması bilgi kirliliğini doğurmuştur.
- Son olarak ise; profesyonellikten uzak bazı sanal gazetelerde uygunsuz reklam içeriklerine yer ayrılmazı ve bu içeriklerin haber okurken bir anda kullanıcıların karşısına çıkması hem kurumsal yapılara zarar vermiştir hem de reklam geliri elde etmek adına ciddi bir takipçi kaybına yol açabilmiştir.

3. AMAÇ VE YÖNTEM

Genel tarama modeliyle literatür destekli olarak metinsel kısmı inşa edilen mevcut çalışmada; temel olarak sanal gazeteciliğe geçiş sürecinin Türkiye'deki boyutunun ortaya çıkarılması amaç edinilmiştir ve bu doğrultuda ulusal gazete niteliği taşıyan Vatan gazetesi örneklem alınarak bu gazetenin sanal gazeteciliğe geçişinin alt gerekçelerini dışa yansıtma hedeflenmiştir.

Bu temel amaç çerçevesinde planlanan çalışmanın alt hedefleri olarak ise şu hususların öne çıkarılması gaye edinilmiştir:

- Sanal gazeteciliğin kavramsal boyutunu teorik bilgiler ve güncel nitelikli gelişmeler bağlamında dışa yansıtma
- Sanal gazeteciliğin avantajlarına temas etmek
- Sanal gazeteciliğin olumsuzluk teşkil eden yönlerini ortaya çıkarmak
- Vatan gazetesi özelinde, tamamen sanal gazeteciliğe geçilmesinin geleneksel gazeteciliğe yönelik oluşturabileceğini etkileri değerlendirmek

Söz konusu bu hedefler doğrultusunda kurgulanan çalışmanın yöntemini ise; örnek olay çalışması yani bilimsel literatürdeki tanımlamasıyla ‘durum çalışması analizi’ oluşturmuştur. Nitel bir araştırma yaklaşımı olan durum çalışması; belirli bir süreç içerisinde gerçekleşen ve sınırlandırılmış koşullarda genel olarak gözlemler, raporlar ve dosyalar desteğiyle hazırlanan bir metodu teşkil etmektedir (Creswell, 2007).

Aynı zamanda durum çalışması analizinde herhangi bir konuya dair birçok durumu açıklayabilmek için tek bir durum üzerinde daha fazla yoğunlaşmak söz konusudur ve böylece tek bir durum detaylı olarak irdelenerek diğer durumların ortaya çıkarılması gerçekleşmektedir (Gerring, 2007). Netice olarak mevcut çalışmada Türkiye'de sanal gazeteciliğe geçiş sürecini algılayabilmek açısından Vatan gazetesi üzerinde durulmuştur ve söz konusu gazetenin bu süreçteki konumu irdelenerek çalışma yürütülmüştür. Bu gazeteyi diğer sanal gazetelerden farklı kıtan husus ise Vatan gazetesinin tamamen internet mecrasına geçmiş olmasıdır.

Durum çalışması analiziyle ele alınan Vatan gazetesi bağlamında veri analizi olarak ise açıklayıcı yapı faktörü dikkate alınmıştır. Bu doğrultuda Vatan gazetenin sanal gazeteciliğe geçmeden önceki profili incelenerek ilgili gazeteyi sanal gazeteciliğe taşıyan hususlar göz önünde bulundurulmuştur. Bu bağlamda Vatan gazetesinin basım faaliyetleri yürüttüğü dönemdeki tiraj verileri dikkate alınarak sanal gazeteciliğe geçişin satış rakamlarıyla olan ilişkisi sorgulanmaya çalışılmıştır.

4. VATAN GAZETESİİNİN SANAL GAZETECİLİĞE GEÇİŞİ

Geleneksel medyanın yazılı basın unsurları arasında ulusal bağlamda faaliyetlerini yürütmüş olan Vatan gazetesinin Türkiye'deki gazeteciliğe ilk adımı 2 Eylül 2002 tarihinde olmuştur ve bu tarihte

Zafer Mutlu öncülüğünde gazetenin basım süreci başlamıştır. Türkiye'de internet gazeteçiliğinin yeterince yaygınlaşmadığı bu dönemde tiraj rakamlarının yüksek olması ve gazete okuyucularının hatırlı sayılır bir oran teşkil etmesi, Vatan gazetesinin de sektörde hızlı bir giriş yapmasını sağlamıştır. Öyle ki kısa zamanda iki yüz bine yaklaşan bir satış rakamı elde edilmiştir (Toruk, 2008). Gazetenin gerek siyasi haberleri gerekse magazinsel içerikleri sadık bir okuyucu kitlesi oluşturduğundan bir anda ülkenin onde gelen gazeteleri arasında Vatan gazetesinin adı da telaffuz edilmeye başlanmıştır.

2002 yılı itibarıyle Doğan Yayın Grubu, Demirören Grubu ve Karacan Grubu ortaklılığı ve son olarak da Demirören Holding bünyesinde basın çalışmalarını sürdürden Vatan gazetesinde söz konusu süreçte; Dilek Önder, Reha Muhtar, Güngör Mengi, Zülfü Livaneli, Güntekin Onay, Ruşen Çakır, Okay Gönensin, Ersin Düzen ve Ruhat Mengi gibi deneyimli gazeteciler yer almıştır ([wikipedia.org](https://www.wikipedia.org)).

Basın hayatını sürdürdüğü 16 yıllık süreçte gerek tiraj verileri bağlamında gerekse sansasyonel etki bırakan özel haberleri ekseninde sürekli olarak öncü gazeteler arasında yer alan Vatan gazetesinin kapanma süreci ise geleneksel gazetecilik alanında büyük tesir uyandırmıştır. Zira başından beri hep güçlü medya grupları bünyesinde yer alan bu gazetenin tamamen dijital geçmesi sektörü sarsmıştır. Dolayısıyla konvansiyonel medya piyasasına çıktığı ilk gün “Bu Vatan Hepimizin” sloganıyla açılışı yapan gazetenin son baskısı ise bu defa “Bu Vatan Size Minnettar” şeklinde olmuştur.

Netice olarak gazetenin 1 Kasım 2018 tarihinde yazılı basın faaliyetlerini sonlandırip dijital ortama geçtiğini ifade eden son açıklama ise Demirören Medya Grubu tarafından yapılmıştır (gazetevatan.com):

“Grubumuzun yeniden yapılandırma çalışmalarına istinaden 16 yıldır yayın hayatına devam eden [Vatan](#) gazetesi 1 Kasım 2018 tarihi itibarıyla artık Milliyet gazetesinin hafta sonu eki olarak okuyucusuyla buluşacaktır. Vatan’ın e-gazete uygulaması da devam edecek olup isteyen okuyucular bu mecradan da gazetelerine ulaşabileceklerdir. Gazetevatan.com ise dijital ortamda yayınıni südürecektr. Kurulduğu günden bugüne kadar özgün çizgisi ile özellikle genç okuyucuların ilgisini çekmeyi başaran Vatan gazetesinin dijital uygulamalarının genç kuşağın bu mecralardaki favorilerinden biri olmayı südüreceğine eminiz. Bu stratejik kararımızın yaratacağı ek imkanlar Gazetevatan.com’un daha da güçlü bir şekilde yayıcılık yapmasını sağlayacaktır”



Kaynak: (gazetevatan.com)

Nihayetinde gazetenin son baskısı da yukarıdaki görselde görüldüğü gibi olmuştur ve gazetevatan.com adlı sanal gazetecilik ortamına tamamen geçtiği ilan edilmiştir. Aynı yıl içerisinde temmuz ayında son baskısını yapan Habertürk gazetesinin ardından Vatan gazetesinin de geleneksel gazetecilikten çekilmesi, bunun devamı gelir mi sorularını akıllara getirmiştir ve bilhassa Milliyet gazetesinin de kapanacağı görüşleri yüksek sesle söylenmeye başlamıştır. Öte yandan Vatan gazetesinin kapanma gerekçeleri olarak ise özellikle şu tespitlere dikkat çekilmiştir (Yeşilkaya, 2018):

- Yeni iletişim teknolojilerinin medya alanında yaygınlaşmaya başlamasıyla birlikte habercilik formatının değişime uğraması
- Okuyucular bağlamında gazete haber içeriklerinin daha zengin olarak sunulması bekentisinin oluşması
- Tüm dünyayı mobil telefonlarla adeta ceplerinde taşıyan bireylerin kağıt medyadan hızlı bir biçimde uzaklaşması
- Gazetelerde sunulan haberlerin artık yüzeysel kalması
- Teknolojiyi bilen ve nosyonu iyi gazetecilerin basılı medyada yeterince yer almaması
- Muhalif gazeteler kapanıyor söyleminden ziyade basılı medyanın ağır şartlarına karşı durulamamasın gazetelerin sonunu getirmesi

Söz konusu tespitler arasında üzerinde durulduğu gibi; bilhassa muhalif gazetelerin kapanmaya mahkum olduğu söylemi medya alanında sıkça dillendirilmiştir fakat gerek Habertürk gazetesinin gerekse Vatan gazetesinin ardarda kapanması bu söylemi boşça çıkarmıştır.

Zira her iki gazete de içerik olarak muhalif tutumdan uzak bir yaklaşım sergilemiştir. Muhalif olarak nitelendirilen gazetelerin ise 2021 yılı itibariyle yayın hayatına devam ettiği görülmektedir. Gazetelerin sanal gazetecilik alanıyla teknolojik yetkinlik bağlamında başedememesi ise doğru bir yaklaşımdır ve nitekim geleneksel gazetelerde dijital çağ'a tam anlamıyla uyum sağlamak adına yeterli görünüm oluşmamıştır. Bu nedenle yüzeysel içerikleri ve mevcut köşe yazıları ile ayakta duran bir basın mecrası söz konusudur. İlgili haber içeriklerinin daha güncel ve detaylı olarak internet gazetelerinde yer bulması ise okuyucuları gazetelere bağımlı kılan bir etmen bırakmamıştır ve köşe yazılarını takip etmek için gazetelere yönelenlerin sayısı tirajları belirlemiştir.

Bu doğrultuda; çalışmanın merkezini teşkil ettiği gibi Vatan gazetesini sanal gazeteciliğe yönlendiren faktörler üzerinde durmak gerekirse tiraj verilerine ayrıca bakmak gereklidir. Vatan gazetesinin kapanmadan hemen önceki hafta olan 22-28 Ekim 2018 tarihleri arasında Türkiye'deki ulusal gazetelerin ortalama gazete satış rakamları şu şekildedir:

22 - 28 EKİM 2018				
	GAZETE ADI	GÜNCEL	GEÇEN HAFTA	
1	SABAH	296.390	296.295	
2	Hürriyet	278.904	279.893	
3	TC SÖZCÜ	261.661	256.972	
4	POSTA	201.393	200.587	
5	MİLLİYET	127.302	127.473	
6	TÜRKİYE	126.729	126.207	
7	Yeni Şafak	112.051	112.327	
8	Takvim	108.573	108.964	
9	GÜNEŞ	103.832	103.842	
10	fotoMac	103.629	101.980	
11	AKSAM	102.951	103.375	
12	VATAN	101.495	101.723	

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Kaynak: (gazetetirajlari.com)

Gazete satış rakamlarında görüldüğü gibi Vatan gazetesi, Türkiye'de günlük olarak yüz bin üzerinde tiraj elde eden gazeteler arasında yer almıştır ve bu satış rakamı ortalamasını istikrarlı bir şekilde korumuştur. Geçmiş yıllara nazaran satış rakamlarının düşmesi ise Vatan gazetesi özelinde değildir ve bu durum Türk basınının genel bir problemidir. Dolayısıyla Vatan gazetesinin kapanma gerekçesini doğrudan gazete tirajlarıyla ilişkilendirmek reel bir yaklaşım değildir.

Örneğin kağıt baskı maliyetinin artması da gazetelerin kapanmasıyla bağıntılıdır. Bilhassa 2018 yılında döviz alanında ciddi dalgalanmaların yaşanması baskı giderlerini çok fazla artırdığı için kısa zaman içinde Habertürk ve Vatan gazetelerinin kapanması bu durumla açıklanmaya çalışılmıştır (Özkan ve Mumay, 2018).

Türkiye Gazeteciler Cemiyeti Başkanı Turgay Olcayto ise kapanan gazetelere ilişkin genel olarak şu yaklaşılmlara temas etmiştir (Özkan ve Mumay, 2018):

- Eleştirel bir gazeteciliğin yapılmaması ve adeta bülten gibi bir sunum sergilenmesi
- Önceki iktidarlarla olduğu gibi bu iktidar döneminde de gazetelerin baskı hissetmesi
- Okuyucuların haberleri artık yeni medyadan takip etmesi
- Gazetelere ve gazeteciliğe artık yeterince değer verilmemesi
- Okuyucularda ‘iş adamları gazete çıkarıyor’ düşüncesinin oluşması
- Talimat alınarak gazetecilik yapılması
- Gazetelerin ticarethane gibi yönetilmesi ve sahipleri işadamı olduğundan ötürü yeterli kâr olmayınca gazetelerin kapatılması

Netice olarak medya sahipliğinin etkin olduğu ve özellikle Demirören Medya Grubu'nun Doğan Medya Grubu'ndan medya içeriklerini satın almasının ardından Türk basınında açık ara öne geçtiği mevcut koşullarda, gazetelerin büyük kısmının ticari bağlamda yönetildiğini söylemek gereklidir. Patronusuz gazetelerde ise durum farklıdır ve her ne kadar tüm gazeteler reklam gelirleriyle ayakta dursa da gelir azalınca gazetenin kapanması söz konusu değildir ve ticari kaygılarından ziyade gazetecilik mesleği öncelik alınmaktadır.

Dolayısıyla Vatan gazetesinin dijital ortama geçmesinin başlıca nedeni Demirören Medya Grubu'nun ilgili gazeteden yeterli kâr elde edememesidir. Bu kâr edememe durumu ise tiraj rakamlarından ziyade baskı masrafları ve reklam alımlarıyla ilgilidir. Zira yüz bini aşkın günlük satış rakamıyla okurla buluşan gazetenin elde ettiği tiraj diğer birçok gazeteye göre oldukça iyidir. Buna rağmen gazetenin kapanmış olması tıpkı Habertürk gazetesinde olduğu gibi diğer gider kalemlerinin ticari anlamda kurumu zorlamasıyla açıklanabilir. Bu kalemler de daha önce üzerinde durduğumuz gibi; baskı maliyetleri ve azalan reklam gelirleridir.

5. SONUÇ

Geleneksel medyanın lokomotifi olan gazetelerin özellikle 21. yüzyılda giderek değeri kaybetmesi ve yeni medyaya yenik düşmesi yalnızca okuyucu eğilimi ile açıklanmamalıdır. Öyle ki okuyucu eğilimi sanal gazetecilik alanına kaymış olsa da gazete satışları yine üst düzeydedir ve gazete okurları kitle genelinde önemli bir yer edinmektedir. Fakat okuyucu sayısının giderek azalması, ticari kaygılarla yönetilen birçok gazetenin yeni kararlar almasına zemin hazırladığı için 2018 yılı kâğıt medya için adeta kara bir yıl olmuştur.

Aynı yıl içerisinde Habertürk ve Vatan gazetesi kapandığından ötürü bu sürecin devamı gelir endişesi doğmuştur. Buna karşın diğer gazeteler günümüz itibariyle zorlu koşullara rağmen ayakta durmayı başarmıştır. Baskı maliyetleri, dağıtım giderleri, personel harcamaları, azalan reklam payı vb. gibi gider kalemlerinin oluşturduğu söz konusu zorlu koşulların bahsi geçen her iki gazeteyi kapanma sürecine taşıdığı aşıkârdır.

Nitekim bu çalışmada da Vatan gazetesinin kapanma süreci üzerinde durulmuştur ve basım faaliyetlerinin sona erdirilmesinin alt gerekçelerini ortaya çıkarmak amaç edinilmiştir. Elde edilen veriler ise şu unsurları karşımıza çıkarmıştır:

- Sanal gazetecilik alanında profesyonel olarak gazetecilik çalışmalarının yapılabilmesi ve reklam veren kurumların bu alanda da boy göstermesi Vatan gazetesinin söz konusu dijital ortama geçmesine zemin hazırlayan hususlardan birisi olmuştur. Ayrıca bu alanda giderlerin basılı medyaya göre çok daha az olması başlıca tercih sebebi olmuştur.
- Gazete Vatan adıyla dijital ortamda yer alan Vatan gazetesinin kâğıt medyadan uzaklaşması aynı zamanda döviz kurlarındaki hareketlilik neticesinde baskı masraflarının bir anda katlanmasıyla ilişkilendirilmiştir ve nitekim kısa zamanda karar alınarak tamamen sanal gazeteciliğe geçilmiştir.
- Vatan gazetesinde diğer birçok ulusal gazetedede olduğu gibi mevcut medya sahipliğinin işadamı tekelinde olması, işin mutfağından gelen gazetecilerin mesleki yaklaşımını ortadan kaldırdığı için gelirin olmadığı ortamda gazeteciliğe kolayca son vereleceği endişesi doğmuştur. Kısa zamanda iki ulusal gazetenin ardı ardına kapanması bu kaygıları haklı çıkarmıştır ve ticari düşünülerek ortaya çıkan bir karar sonucu Vatan gazetesi on altı yıllık yazılı basın serüvenini sonlandırmıştır.

Sonuç olarak; Vatan gazetesinde olduğu gibi diğer ulusal gazetelerin de aynı sonla karşılaşma olasılığı her daim vardır ve gazetelere ticari gelir elde edilen bir araç olarak yaklaşmaktan ziyade halkın bilgilendiren bir medya aracı olarak önem atfedilmesi ehemmiyet arz etmektedir. Zira ancak bu durumda basılı medyanın ömrü daha da uzayabilecektir.

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THE EFFECT OF PORTFOLIO ASSESSMENT ON IRANIAN EFL LEARNERS' AUTONOMY AND WRITING SKILLS IN UPPER INTERMEDIATE AND ADVANCED LEVELS

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ABSTRACT

With the increasing growth of technology, which has affected the English language teaching and learning field, it is the time to replace the old-fashioned techniques with the new ones and take the most advantages of the technological tools in this field. Although most teachers might be aware of the importance of a good assessment strategy, they rarely use portfolio for learning writing, autonomy, and set out to address the issue of whether the implementation of portfolio assessment would give rise to Iranian upper intermediate and advanced levels of writing and autonomy of learners. The researchers employed the following instruments: Oxford quick placement test, autonomy questionnaire, and topic-based paragraph writings as pretest and post-test. The design of the study was quasi-experimental. To this end, researchers chose 120 learners with convenience sampling method, which were 60 learners at upper intermediate and 60 learners in the advanced level. Participants were divided into two homogeneous groups (30 learners), that there were two groups at an upper intermediate level and two groups at an advanced level as an experimental and control groups. A piloted writing pre-test was given to both groups before the treatment. The experimental group received the treatment four writing. After the treatment, the researchers administered the same writing and also autonomy post-test for both groups in the upper intermediate and advanced group. In order to analyse the research questions, descriptive statistics with covariant analysis were used to test the hypotheses. Based on the results achieved from the first research question, portfolio assessment has a positive effect on Iranian EFL learners' autonomy on both upper intermediate and advanced levels significantly but this technique was more effective for the advanced group. Based on the results achieved from the second research question, portfolio assessment has a positive effect on Iranian EFL learners' writing quality on both upper intermediate and advanced levels significantly but this was more effective for advanced learners. The implication is that portfolio assessment can improve the writing ability and can be considered as a motivating strategy. The results of quantitative analysis revealed that portfolio assessment enhanced learner autonomy and writing skills in the experimental group significantly, and offered them an opportunity to reflect upon their learning process, growth, and progress.

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Index terms: autonomy, portfolio assessment, writing, writing skill.

CAUSES OF ETHNIC CLASHES IN KAZAKHSTAN

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ABSTRACT

In this research, I analyze what can explain the occurrences of ethnic clashes that took place in Kazakhstan since its independence. In particular, I deal with the gap in the literature that used to focus only on certain aspects of ethnic problems in the country, such as language, migration, Kazakhization, while causes of ethnic clashes themselves looked significantly understudied. Thus, my research demonstrates what exactly causes the grievances that lead to mobilization of ethnic groups along ethnic lines. I studied the conducive role of Kazakhization on the perception of ethnic superiority among the titular ethnicity, demonstrating how government promotes Kazakhness among population. Kazakhization played an important role contributing to the level of grievances among ethnic Kazakhs. Also, I conducted careful case selection to find the most suitable cases for the examination. I created a sample with three pairs of villages with common characteristics, where significant number of respective ethnic minorities densely coexist with the titular ethnic group. The only difference between the pairs was the outcome. Thus, one sample from each pair experienced ethnic clash, and another pair did not. Once I had finished my case selection process I proceeded to the actual examination of the theory. I studied existence of two essential conditions that seed the feeling of deprivation and can be responsible for the variation across the pairs: poverty and inequality. Specifically, through conducting statistical analysis of the data that measures level of poverty, I show correlation between ethnic clashes and poverty rate. However, taking into account that poverty is common feature to all villages from my Sample size, I found that it is the perception of inequality that is responsible for the variation. Since the data on ethnic clashes in Kazakhstan is quite limited and can hardly be complete and reliable, I conducted a field trip, where I was trying to obtain first-source data from survey and in-depth interviews. The data from my field trip reveals the correspondence between the feeling of relative inequality, reinforced grievances and the outcome. Moreover, it shows business ownership as a trigger that determines the outcome. To be more specific, the villages where major businesses and properties belonged to ethnic Kazakhs, the outcome did not occur, and exactly opposite happened in the villages, where major businesses and properties belonged to ethnic minorities. Thus, building on the theory of *relative deprivation* I reveal how business ownership leads to the feelings of deprivation and subsequent grievances, which resulted in ethnic clashes.

CHAPTER 1. INTRODUCTION: WHY IT IS IMPORTANT TO STUDY ETHNIC CLASHES IN KAZAKHSTAN

Kazakhstan is a post-Soviet country, which needed to resolve multiple acute ethnic questions due to its multiethnic character, once the country had obtained independence. One of such question was coming from the fact that the Republic was the only post-Soviet country, where the titular ethnic group was a minority. Taken into account its close proximity and strong dependence from the powerful Russian Federation together with significant amount of Russians in Kazakhstan, the problem with diverse ethnic composition was particularly acute for the government of the newly independent country. It was a real challenge to maintain peaceful coexistence of multiple ethnic groups simultaneously raising the role of Kazakhs in the society. This led to the emergence of unofficial Kazakhization project implemented by the government, which was intended to reinforce Kazakh identity at the expense of other ethnic groups. Kazakhization was gradually diminishing the role of many other ethnic groups, which led to the significant modification of ethnic composition. Eventually there were not many ethnic minorities left, who would densely occupy certain territory of the country. However, several ethnic clashes took place, which occurred exactly in the villages, where densely populated minorities coexisted with Kazakhs. The purpose of current study is to examine what causes the clashes. For this purpose, I will carefully examine several pairs of villages with opposite outcomes to understand what causes the variation between the samples. The understanding of the causes of ethnic clashes is my main research puzzle in this paper, which is very important to understand because it can help to better understand ethnic situation in Kazakhstan. It will also contribute to the existing literature regarding ethnic situation in the Republic.

There are two equally convincing theories that can explain the causes of ethnic clashes in Kazakhstan. The first is called relative deprivation theory. The theory explains the feeling of economic deprivation as the main driving force that accelerates ethnic clashes. This feeling is a result of two factors, which are poverty and inequality. Altogether it creates grievances, which is an ultimate force that mobilizes society along ethnic lines and leads to clashes. The second theory is called the theory of political entrepreneurship. This theory implies the existence of certain influential figures in a society (local politicians or entrepreneurs), who manipulate with ethnicity in order to satisfy their private interests. Thus, for this theory to be proven, it is important to identify the existence of private interest in ethnic mobilization. Several sources strongly emphasize private interest as a main driver that creates clashes. The argument, which was strongly opposed by the government, which argue that conflicts used to be the result of domestic fight.

Since both theories sound equally convincing, I believed that the field trip would allow me to determine the most suitable theory for this study.

This research can significantly contribute to the existing literature on ethnic situation in Kazakhstan. There is a literature that focuses to study different aspects of ethnic clashes in many post-Soviet countries after the decay of USSR (e.g. Kyrgyzstan). However, there is an obvious gap in the literature when it comes to ethnic clashes in the Republic. Usually, scholars, who study ethnic situation, prefer to study other existing ethnic problems. For example, the literature regarding migration or state language in the Republic is relatively rich. But there has not been a study that would explain the causes of clashes that took place in the country. Current research is seeking to fill this gap in the literature. Therefore, the main question of current study sounds in the following way: "What can explain the occurrence of ethnic clashes in some villages and absence of the clashes in others, provided that there are a lot of similarities between these villages?" In order to collect data for the analysis I decided to conduct a field study. The data confirmed relative deprivation theory. I found the correlation between perception of deprivation and ethnic clashes. To be more specific, I found that in the villages, where ethnic clashes occurred, the feeling of deprivation among ethnic Kazakhs was higher than in the villages where the clashes did not occur.

My analysis also indicated that business ownership is a decisive factor, which determines the feelings of deprivation. Thus, I found strong interconnection between ethnic clashes, feelings of deprivation and business ownership. Places, which experienced clashes, are the places where businesses belong to minorities and vice versa.

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Current thesis proceeds in seven chapters. The second chapter is dedicated to literature review, which examines existing theories on ethnic clashes. The analysis of the literature is vital to further explore the research question. The following chapter discusses the theoretical framework of this study. Chapter 4 discusses methodology and case selection. Chapter 5 is empirical section that provides the analysis of the data I collected from survey and interviews. The next chapter represents discussion section, where I analyze my findings with initially proposed theory and arguments. And the concluding chapter explains the importance of the findings and provides recommendations for further research.

CHAPTER 2. LITERATURE REVIEW: EXISTING THEORIES OF ETHNIC CLASHES

Young (1986) emphasized three main approaches from the literature on ethnicity: “*constructivist*”, “*primordialist*” and “*instrumentalist*” (p.21). Each classification provides different perspectives on the correlation between different concepts of ethnicity and ethnic conflicts. Instrumentalism understands ethnicity as a tool in political and social competition. The idea is that cultural diversity creates social roles that can be utilized in exchange of certain material benefits. From this perspective, cultural pluralism becomes occasional and circumstantial. The instrumentalist approach is usually utilized by the rational choice theorists, who believe that ethnic groups are rational actors, who try to use ethnicity in a way to maximize material benefits. Smith (2001) noted that community leaders, “*who used their cultural groups as sites of mass mobilization and as constituencies in their competition for power and resources, because they found them more effective than social classes*” (pp. 54—55). Primordialists focus on psychological and cultural factors. They seek to explain powerful emotions that cause ethnic violence. Horowitz (1985) provided an example arguing that kinship “*makes it possible for ethnic groups to think in terms of family resemblances*” (p.57). Kaufman’s analysis of extreme ethnic violence that occurred in Rwanda and Sudan also supports the primordialist approach. The results showed that symbols in their various forms (e.g. myths) helped to justify hostility and raise the fear of group extinction. The emotional tendency to associate themselves with symbols helped elites in Sudan and Rwanda to make chauvinistic politics popular. Tishkov (1995) claimed: “*Rumours and myths based on socially constructed perceptions and on informational simplicity, as well as a situation of group social paranoia, were found to be key elements in precipitating ethnic violence*” (p.133). Constructivists argue that it is not so important what is responsible for ethnic groups’ actions, but the very existence of these groups itself. Thus, constructivism tries to grasp the forces that stand behind the creation of ethnic groups. All of these approaches provide different perspective on possible causes of ethnic clashes. And in certain cases they complement one another. As Varshney (2007) pointed out: “*No one seriously argues anymore that ethnic identity is primordial, nor that it is devoid of any intrinsic value and used only as a strategic tool. Pure essentialists or pure instrumentalists do not exist any longer.* (p. 291). ” For the purpose of the current study, I decided to rely on Young’s classification but to introduce small changes. Instrumentalism explains the ethnic conflicts through the prism of material gains, primordialism emphasizes the importance of psychological factor, constructivism focuses to understand the origin of ethnic divisions. Hence, causes of ethnic conflicts can be motivated by three factors: *psychological/emotional, instrumental and constructivist*.

The psychological/emotional approach tends to consider some emotional and psychological sentiments as a basis or significant contributor to the escalation of ethnic clashes. Gil-White (1999) provides one explanation of the cognitive school of thought. He demonstrated the importance of ethnic cognition, which has primordialist beginning. He conducted a study in multi-ethnic regions of Mongolia and came to the conclusion that "*ethnic cognition is at the core primordialist, and ethnic actors' instrumental consideration – and by implication their behaviors – are conditioned and constrained by this primordialist core.* (p.789)." His analysis showed the existence of strong psychological attachment to ethnicity, which can be decisive factor that predetermine further behavior.

A school of thoughts that focuses on some circumstantial aspects tends to emphasize a specific circumstantial social and political environment that leads to the mobilization of ethnicity and escalation of conflicts. Lee (2002) referred to the term "interactive nationalism" introduced by Hennayake (1992) to explain existing ethnic antagonism in Kazakhstan. The term refers to nationalist sentiments that originate as a result of interactions between the ethnic majority with ethnic minorities. Thus, interactive nationalism is a nationalism appeared among minority groups as a reaction to the exclusive nationalism of the majority group with the intention of the latter to establish its hegemony or other forms of domination over the minority. Brubaker and Laitin (1998) emphasized state weakness as an important precondition for ethnic mobilization. They found that the collapse of the Soviet Union was a traumatic process and the subsequent emergence of newly independent states created a lot of weak states, which weaknesses contributed to the growing ethnic and nationalist violence. It can be related not only to the case of Soviet Union collapse, but to other similar transitions, which resulted in the decay of the "Weberian state". The decline in the state's monopoly on violence led to its inability to maintain sufficient and effective control over the territory. As a result, states became less capable of suppressing different possible kinds of violence on its territory including ethnic conflicts. The decay of the Weberian state is referred to the examples of post-Cold War world, when the break-up of the Soviet Union and Yugoslavia created many new independent states with weak central governments and inefficient control over its borders. Brubaker and Laitin (1998) also offered an example of Sub-Saharan Africa, where a lot of quasi-states appeared due to the inability of its former patrons to effectively establish control over the whole territory. Posen (1993) referred to the one of the main concept from the realist school "*the security dilemma*" to explain the ethnic conflict in Yugoslavia. According to his analysis, the concept is applicable in collapsing or weak states where the central government is not able to maintain control effectively and groups need to respond to the insecurity. In other words, the absence of a sovereign government is an essential condition.

Another prominent explanation of ethnic clashes is the relative deprivation theory. Walker and Pettigrew (1984) defined the concept in the following way: “*persons may feel deprived of some desirable thing relative to their own past, another person, persons, group, ideal, or some other social category.*” (p.302). Guimond and Dube-Simard (1983) argued that the main reason why clashes occurred is not necessarily when people are actually deprived of something, but rather when they feel deprived relative to other groups. Webber (2007) confirmed this position arguing that “relative deprivation is about how we perceive the world” (p.114). Thus, the feeling of relative deprivation of a one group towards other groups creates grievances, which can be a possible explanation for ethnic clashes (Gurr, 1970). Murshed and Tadjoeddin (2007) argued that grievances and horizontal inequalities can sufficiently explain conflicts emergence. Gurr (1993) defined grievances as the product of poverty and political and economic differences among groups, and limited political access and lost autonomy are significant prerequisites for separatist demands and rebellion (p.188). He also argued that relative deprivation is expressed in “*discrepancy between the value expectations of individuals and their capability to fulfil these expectations, whereby expectations are understood as goods and life conditions individuals think belong to them (or should belong), while value capabilities are goods and life conditions individuals can attain (or maintain) with the means at their disposal* (Dzuverovic, 2013, p.118).” Runciman also argued relative deprivation is evident when “*a person A does not possess X, but knows that others possess X. Because of that, person A wants to get X and thinks it is possible* (Dzuverovic, 2013, p.118).” Denny and Walter (2013) stated that in the case of civil wars ethnic groups are more likely to be mobilized than any other groups because ethnic groups tend to have more grievances against the state (p.199). They explained the likeliness of existence of grievances along ethnicity claiming that ruling elites in an ethnically divided societies can distribute benefits disproportionately in favor of their own ethnic groups. The relative deprivation theory looks the most promising in my case and definitely needs to be checked. The main reason for this is that the theory explains existence of grievances, which drives the clashes. And the grievances occurred due to poverty and inequality. I assume that poverty and ethnic inequality are the features that take place in Kazakhstan. And in districts with high concentration of an ethnic minority and Kazakhs, these factors most probably can create the grievance, which might be a cause of the clashes. I also assume that in this areas ethnic groups are quite divided due to the logic proposed by Denny and Walter above.

A school of thoughts that primarily focuses on certain advantages in the political use of ethnicity is instrumental. Lake and Rothchild (1996) offered instrumental explanation arguing that “*intense ethnic conflict is most often caused by the collective fear of the future. As information failures, problems with credible commitment, and the security dilemma take hold, groups become*

apprehensive, the state weakens, and conflict becomes more likely" (p.41). They argued that once a multiethnic state becomes weak, ethnic activists and political entrepreneurs can swiftly polarize society along ethnic lines, which in turn can magnifies the strategic dilemma and increase the probability of conflict. Lake and Rothchild particularly demonstrated the role of political entrepreneurs, which significantly contribute to the conflicts. Mobilization along ethnic lines is very convenient in the distributional conflicts for political gains but it would be impossible without political entrepreneurs. Political entrepreneurs are individuals, who influence and change the political direction (Schneider and Teske, 1992, p.737). The theory of political entrepreneurs assumes that there has to be something that drives political entrepreneurs to undertake certain measures. Most economic focusing on the role of entrepreneurs argue that the pursuit of profits drives the entrepreneurial process. In local governments, political entrepreneurs can be high-level unelected leaders, such as city managers; elected politicians, such as mayors or members of city councils; leaders of established interest groups; or creators of new groups (Schneider and Teske, 1992, p.738). The findings offered by Posner (2004) on his analysis of Chewas and Tumbukas in Malawi and Zambia demonstrated how political entrepreneurs use ethnic politicization for material benefits. Hechter (1995) argued that "... nationalism can emanate from social or from individual irrationality... The hallmark of rational individual action lies in its instrumentality (p.53)." Hechter explained nationalism from the instrumental perspective arguing that "It is instrumentally rational to be a nationalist if by so doing people believe they will be better off materially, or culturally." Also, Oberschall (2000) introduced a concept of cognitive frames arguing on existence of two ethnic frames in mind: "ethnic cooperation and peace frame for normal times and a crisis frame anchored in World War II memories." (p.982). Analyzing how nationalism and ethnic violence erupted in the former Yugoslavia where people managed to live peacefully for thirty-five years prior to the conflict, he revealed how the former frame was substituted by the latter on the example of Yugoslavia. Namely, the power competition among elites increased the level of manipulation and mobilization along ethnic lines and organized mass media propaganda spread insecurity and fear changing the balance in favor of a crisis frame. Thus, Oberschall demonstrated how political entrepreneurs can manipulate with emotional sentiments for their own benefits. Williams (1994) focused on two factors to explain ethnic conflicts: (1) class, economy and competition; (2) demographic factors. Williams noticed that the comparison about the relative importance of material interests (e.g. class position) over ethnic identities and commitments would never provide any conclusions. He pointed out on the fact that ethnic factors constantly sacrifice economic interests "in favor of symbolic gains" (p. 64). A good example is violence that occurred in India between Assamese Hindus and Bengali Muslims. Williams argued that immigration by

the latter led to intense competition over material and political benefits (e.g. working place, land), but the transformation of secular movement into ethnic and religious opposition happened on the basis of cultural issues (e.g. religion and language). Khazanov (1995) explained ethnic antagonism in Kazakhstan arguing “competition for political participation, economic opportunities and cultural status virtually ensures that ethnicity will remain an important criterion for political organization and that ethnically based claims will maintain a prominent place on the addenda of the state.” (p.258). He mentioned that the deterioration of the economic situation and subsequent growing unemployment increased Kazakh malice towards ethnic minorities, which resulted in clashes between Kazakh and Chechens in Dzhambul district in 1990 and anti-Chechens demonstrations in Ust’ - Kamenogorsk in 1992.

CHAPTER 3. RESEARCH QUESTION AND THEORETICAL FRAMEWORK

3.1 Research Question and Arguments

My research question is the following: *What can explain the occurrence of ethnic clashes in some villages and absence of the clashes in others, provided that there are a lot of similarities between these villages?*

First and foremost, I would like to explain why I chose exactly this research question because this choice was not a mere coincidence, but rather it was motivated by my personal experience. As a member of an ethnic minority, I have always had a particularly strong interest in the topic. There is a long history behind my interest on this topic, which started back in my childhood. I was born in a small village, which is only 17 kilometers away from the small city on the Southern part of Kazakhstan called Taraz. I spent my early childhood there because my grandparent and parents were initially living there. Later, I and my family moved to live in Taraz where I graduated school. Therefore, when I was going to the field trip, everything was simultaneously very different and familiar to me. My grandparents are still living in the village and I am visiting them from time to time. I can say that the life in typical Kazakh village is very familiar to me. It is also worth to mention that I was born when Kazakhstan only recently obtained independence. When my mother was still going to school back in 1990s, the village was full with various ethnic groups, such as Germans, Koreans, Ukrainians and Russians. And the village had a Russian name “Mikhailovka”. However, within the first years of independence between 1991 and 1996 ethnic minorities were massively moving abroad. Mikhailovka was mostly occupied by ethnic Germans during the USSR regime, but when I am visiting the village today, there is no Germans around. Nowadays, it is mostly Kazakhs. My grandparents are Korean and they represent a small portion of ethnic

minorities, who stayed. Today, this village has a different Kazakh name “Sary-Kemer”, which can be translated as “yellow sand”.

I think the situation that happened with my grandfather also demonstrates the impact of Kazakhization. Before Kazakhstani independence my grandfather was a director of one local municipal music school. This school was the biggest in the region and at the same time very popular. My grandfather was well-known person and even several newspapers were writing about him. He was a director of the school for over 20 years. Also, he was witnessing mass migration of many of his friends, who were representatives of ethnic minority groups. Unfortunately, after the independence it became much harder for my grandfather to preserve his position. My grandfather was witnessing how Kazakhs were replacing ethnic minorities on management positions of various organizations and institutions, which also contributed to migration. However, my grandfather was able to save his position for several more years after the independence. But it was very difficult because local governmental bodies were constantly trying to appoint ethnic Kazakh. The only thing that helped my grandfather to stay longer was his good reputation among local people and employees. Eventually, he stepped down and it was painful and unfair for him and for all of us because he dedicated all his life to the prosperity of this school. Today, it is sad to observe that this school is barely surviving.

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Other episodes from my life were also influential for my genuine interest to the question. I do not really want to disclose everything in detail because something is very personal, but I will just convey the general idea. When I was studying at school, I noticed the existing prejudice that was usually attributed based on ethnic characteristics. Several times I was even strongly abused and humiliated because of my ethnic identity. And it did not happen only to me but also to other ethnic minorities. In the school Kazakhs tend to gather in groups with Kazakhs and it was a rare case when members of other ethnicities were accepted. Usually when interethnic conflicts occurred, Kazakhs were always majority. I also noticed the tendency that happened in friendships. For example, most of my friends were ethnic Koreans. I did not realize it earlier, but it became very obvious to me today. And this pattern was also relevant to other ethnic groups. In short, there were a lot of episodes from my life that made me interesting to study ethnic situation in Kazakhstan. This is also the reason why I wanted to contribute to the existing knowledge on ethnic problems.

The literature review revealed two main lines of explanations to causes of ethnic clashes that can be relevant to the cases of Kazakhstan: *relative deprivation theory and theory of political entrepreneurship*. In order to decide what is the most applicable theory for the study, I conducted a preliminary field study, which helped me to resolve the dilemma. The preliminary investigation

indicated that relative deprivation theory is the most promising explanation. During my field trip, it became clear that the theory of political entrepreneurship is irrelevant due to insufficient evidence regarding the existence of figures personally interested in ethnic clashes. Therefore, the purpose of this thesis was to check the relevance of relative deprivation theory.

After gaining the independence Kazakhstan was the only Post-Soviet country where the titular ethnic group was a minority. Taken into account its vulnerable position as a newly sovereign state, which was reflected in its close proximity to Russia and historic dependence of Kazakhstan from its powerful neighbor, it was necessary for Kazakhstan to establish itself as a nation in order to preserve independence. Melvin (1993) claimed “at the beginning of 1993, 36.4 per cent of Kazakhstan's population (6,169,000) identified themselves as Russian, while 43.2 per cent (7,297,000) considered themselves Kazakhs” (p.208). The government focused to expand Kazakh identity beginning the process of “*Kazakhization*” (Melvin, 1993, p.208). The policy encouraged local Kazakhs to beget new generation of Kazakhs offering childbirth subsidies and attracting ethnic Kazakhs (Oralmans) abroad to come back to their ethnic homeland. Furthermore, various aspects of Kazakh identity such as language and history were consistently promoted. As Melvin noticed “key government officials and economic managers have been replaced by ethnic Kazakhs, the mythology of continuous Soviet victories formerly taught in the schools has been replaced by a new version of history that stresses Russian and Soviet colonization and, most contentiously, the whole of the republic's population is required to learn Kazakh.” (Melvin, 1993, p.208). As a result, Kazakhs have become a dominant ethnic group over time seeking to acquire more control over the land, which resulted in ethnic tensions. Tussupova (2014) pointed out that eventually two groups had appeared in the independent Kazakhstan: Kazakhs and Kazakhstanis (p.32). Thus, I argue that *Kazakhization* legitimized the feeling and expectation among the titular ethnic group about superior position of their ethnicity in Kazakhstan.

Argument 1. Post-independence unofficial politics known as “Kazakhization” that promoted Kazakh identity legitimized and reinforced the feeling of ethnic superiority among the titular ethnic group.

Nevertheless, *Kazakhization* played only contributory role to the ultimate feeling of grievance. This factor along can not explain variation in outcomes across the pairs of villages. There are two main factor that usually spark the conflict in accordance to the theory. These factors are poverty and inequality. I assume that the former is equally widespread in all sample villages and play only contributory role in the overall grievance. Taken into account the role of *Kazakhization* that raised expectation of Kazakhs, poverty is something that associated with failed expectations, which

undoubtedly increased the feeling of deprivation and grievance. Thus, with respect to poverty, I assume that it plays contributory role to the ultimate outcome.

Argument 2. Poverty is associated with the failed expectation of ethnic superiority raised by Kazakhization, which contributed to the feeling of deprivation and grievances among Kazakhs.

And finally, I expect that inequality or perception of it is something that accounts for the ultimate driving force of variation. Perception of inequality is not necessarily built on actual inequality. However, there is more probability where real inequality also takes place. I believe that my field study will reveal what exactly explains the perception of inequality. Since there is a pattern within the sample cases, which shows that ethnic Kazakhs are usually the one, who initiated mobilization, I assume that it is always the titular group, who felt grievances. The perception of inequality usually happened when there is something that makes Kazakhs feel inferior relative to the respective ethnic minority, which causes grievance. However, what exactly accounts for such feelings of inequality can become clear during my field study.

Argument 3. Perception of inequality and inferiority by the titular ethnic group relative to respective ethnic minority is an ultimate driving force that determines the variation between the outcomes.

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3.2 Kazakhization and emergence of relative deprivation

3.2.1 Kazakhization and its role in legitimization of perception of Kazakh superiority

USSR played an important role in construction and fixation of identities. One of the example of this is inscription of identity in the internal passport (Suny, 2001). As Suny pointed out,

“The practice of fixing nationality in each citizen’s internal passport on the basis of parentage rendered an inherently liquid identity into a solid commitment to a single ethnocultural group. Young people with parents who had different national designations on their passports were forced to choose one or the other nationality, which then became a claim to inclusion or an invitation to exclusion in a given republic. In some cases people could opportunistically change their nationality officially, or change their names, to ease their situation in the national republics.” (Suny, 2001).

It demonstrates that identity is constructed but nevertheless it is useful to explain current ethnic dynamics. After the collapse of the Soviet Union, the sovereignty of newly independent Kazakhstan was particularly under threat provided since it was the only country where the titular ethnic group represented a minority population with a significant number of ethnic Russians ethnic

group (Abdam 2016, Peyrouse 2007). Taken into consideration that the Soviet Union regime had been destroying the Kazakh intelligentsia and consistently promoting Russification in Kazakh lands, the Kazakh nation together with its culture, language and customs were being suppressed. The listed factors had an impact on independent Kazakhstan, which on the one hand wanted to reinforce the Kazakh ethnicity, and on the other hand, had to maintain peaceful relationships among multiple ethnic groups, which coexisted on its territories (Tishkov, 1994). After the independence in 1991 Kazakhstan became a home for 126 registered ethnic groups (Suleimenova and Smagulova 2005). The multiethnicity created a certain policy led by Nazarbayev, where Kazakhstan promotes multifaceted state narrative regarding the nation's identity. It means that officially Kazakhstan positioned itself as a state, which supports ethnic diversity, but meanwhile insisting dominant role of ethnic Kazakhs (Laruelle, 2016).

There were many different national-patriotic groups, which were promoting distinct ideas and views on the position of ethnic groups in Kazakhstan. Laruelle (2016) identified several main groups that consisted of various actors, including spiritual leaders, poets, historians and other representatives of Kazakh intelligentsia. These groups emerged during the perestroika years and called: Zheltoksan, Alash and Azat. These parties proposed various degree of radicalism, but all of them were calling for Kazakh nationalism. The only differences among these groups were the vision about the extent to which nationalism had to be strong and means that needed to be applied. Nevertheless, all of these parties were eventually suppressed to various degrees by the Nazarbayev regime, which implemented its own policy, which later began to be called Kazakhization among scholars and general public. However, it is important to point out that the existence of nationalist movements took its roots to pre-independence period, which means that more radical feelings that Kazakhstan shall belong to Kazakhs existed prior to the actual independence of Kazakhstan. In this study I argue that Kazakhization only reinforced this feeling of deprivation, which increased the probability of grievances that spark clashes in cases, where Kazakhs do not feel supremacy. In other words, Kazakhization made it easier for Kazakhs to feel aggrieved due to the existing expectation of Kazakh superiority that was legitimized and promoted by Kazakhization. And one of the essential position that constitutes such superiority is the economic well-being of ethnic communities.

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The project of "Kazakhization" became a fundamental policy implemented by the Kazakhstani government with the purpose to restore values and identity of the titular ethnic group that was undermined during Soviet times (Nourzhanov and Saikal 1994). The newly adopted project is an essential step to understand contemporary ethnic relations existed in Kazakhstan because it

significantly transformed the country changing its ethnic composition and roles. The Kazakhization project was implemented as a response to the disappearance of Kazakh language, culture and identity in general, the process that began under the Soviet reign during 1960s. Hence, the goal of Kazakhization was to promote the titular ethnic group providing special status to ethnic Kazakhs. The favorable position of Kazakhs was reflected in Kazakhization of public administration and economic sectors during 1980s (Dave, 2003). The reforms were directed to substantially increase the role of indigenous ethnicity in all spheres of life, which provoked negative reaction and increased outflow of ethnic minorities in subsequent years (e.g. Russians) (Abdam, 2016). The result was the new politics of independent Kazakhstan took into account ethnic factor employing nationalism as a politico-ideological instrument, which eventually turned into a chauvinistic ideology (Smith, 1996; Abdam, 2016). Chauvinism is reflected in the Kazakhization project, which focused to create a special dominant place of Kazakh ethnic group. Some authors argue that Kazakhization can be observed via campaigns that were initiated by the newly independent government (Masanov, Karin, Chebotarev, and Oka 2002), such as various attempts to erase historical memories of Russian dominance by changing historical perspectives where Russians began to be seen not as friends to Kazakh, but rather occupiers and enemies (Abdam, 2016). Also, a lot of scholars pay special attention on the language policy, which also constitutes manifestation of Kazakhization process. The government initiated campaigns to revive and promote Kazakh language in the early years of independence. And lastly, migration policy is another significant factor that constitutes an attempt to increase the role of the titular ethnicity. As I mentioned in the Chapter 1, the government used certain migration processes to increase the total number of Kazakhs, which motivated Kazakhs living outside to come back to their homeland. As a result of such policy, the population of Kazakhs turned from minority to majority.

Kazakhization is hard to trace because this project tends to be unofficial, meaning that the government has not been talking explicitly about that and there are no official documents that would provide evidence about this policy (Abdam, 2016). Kazakhization is rather implicit and unofficial and can be seen through the implementation of certain state practices. It is hard to say whether Kazakhization was a necessary step for Kazakhstan to preserve its sovereignty and build a nation state as some authors argues (Abdam, 2016), but this process led to the unequal treatment of other ethnic groups by significantly favoring its titular nation. The specific tools that were used to promote special status to Kazakhs were state planning, employment policy on public services, and social engineering. These tools allowed to create special conditions that favored ethnic Kazakhs. As a result, by 1994 the cabinet of president administration on 75 percent consisted of ethnic Kazakhs, whereas at the beginning of perestroika period in 1980s this number was slightly

exceeding 30 percent. Another evidence of Kazakhization was reflected in language policy, which became highly promoted together with national heroes such as Abay. The evidence of such language promotion can be observed in various ways. For example, the number of Kazakh schools increased twice during the first decades of independence of Kazakhstan, which led to the further promotion of Kazakh language. Moreover, the evidence of Kazakhization can be traced in the Constitution of 1993, which clearly stated that the Republic of Kazakhstan is an expression of will of Kazakh people, which was changed again in 1995. In the new version of the Constitution the phrase “will of Kazakh people” was changed to the “will of the citizens of Kazakhstan”. This minor change makes tremendous difference because it was a sign that Kazakhstan is for all ethnic nations and under the term “citizens of Kazakhstan”, regardless of their ethnicity.

Thus, under the concept of “Kazakhization” I understand political process implemented by the newly independent government, which promoted the superiority of the titular ethnic group via various socio-political and socio-economic instruments. The process is particularly important to current analysis because I assume that it directly impacted on feelings of relative deprivation among Kazakhs in the respective villages where clashes occurred. One of the expressions of economic inequality was the implementation of Kazakh language as an essential requirement to obtain public service employment. As many sociological studies suggest, the result of such policy can be observed by the fact that 80% of governmental and academic positions are currently occupied by Kazakhs (Abdam 2016). Furthermore, some of civil service jobs, including office of the President and the Chair of the parliaments require knowledge of Kazakh language, which automatically excludes these opportunities for many ethnic minorities. In general, it is only one example that leads to the unequal opportunities on the labor market for various ethnic groups¹.

3.2.2 Factors that cause relative deprivation

In this section I want to define the concept of relative deprivation based on the literature review written in the Chapter 1. Relative deprivation can generally occur as a result of grievance, which is an essential element and determinant factor that can spark conflicts. The grievance can occur in two ways. First, the existence of relative deprivation reflected in ethnic inequality triggers grievances and promote clashes. However, grievances can occur even without actual inequality, but rather with the feeling of deprivation. To be more specific, the perception of deprivation is usually subjective and does not necessarily depend on the actual existence of deprivation and

¹ Kurganskaya, "Kazakhstan: Language Problem In The Context Of Inter-Ethnic Relations"(02 December, 2015) accessed online: <http://www.ca-c.org/journal/cac-06- 1999/kurganskaja.shtml>

inequality. With respect to the case of Kazakhstan, I assume that the feeling of relative deprivation among the titular ethnic group created grievances that played a major role in sparking the clashes.

I examined various existing theories that explain causes of ethnic clashes. I found relative deprivation theory the most applicable to explain the cases of ethnic clashes in Kazakhstan. I decided to use this theory because it emphasizes two factors that spark ethnic clashes: economic inequality and feelings of deprivation. I believe that the causes of clashes in Kazakhstan are exactly these two reasons. I argue that the Kazakhization project implemented by government reinforced the already existing feeling among the titular ethnic group that their ethnicity shall be supreme. One of the significant measurement of supremacy is economic well-being. Therefore, I argue that in the villages where clashes occurred, these incidents happened due to the fact that Kazakhs were either actually relatively deprived comparing to the respective ethnic group, or at least were feeling deprived.

Second, a contending theory that could have been applied is the theory of political entrepreneurship. As I have already pointed out in Chapter 1, it focuses on political entrepreneurs as major drivers that trigger ethnic clashes. The theory was ruled out after my field trip to the villages of interest. I did not find any supporting evidence of existence of local politician, who could provoke the clashes, or other local influential figures (e.g. businessmen) who could have potentially benefited from the eruption of clashes.

3.2.3 Kazakhization and emergence of deprivation

I assume that the Kazakhization process and the feeling of relative deprivation among the titular ethnic group are directly interlinked in the context of Kazakhstan. The Kazakhization promoted superiority of the titular ethnic group raising the expectation of Kazakhs about their dominant role within their homeland. Since Kazakhization was built around the concept of ethnicity, emphasizing ethnic differences, it contributed to certain perceptions of domination among ethnic Kazakhs and subsequent expectations among them of their privileged role among all other ethnic groups. The ethnic clashes that occurred in Kazakhstan happened in villages where ethnic minorities represented a significant part of the population and where Kazakhs were not better-off. Based on my personal observation from the field trip I can say that there is even a tendency that ethnic minorities in the corresponding villages have on average better houses and standards of living in general. These conditions created a feeling of relative deprivation among local Kazakhs. These feelings became particularly acute taken into account the influence of Kazakhization project, which contributed to the perception of Kazakh dominance and superiority over any other ethnicity.

I argue that it is Kazakhs, who are feeling deprived not otherwise. This argument is very counterintuitive in itself. It is expected that Kazakhization had a negative impact on the minorities, who could logically feel themselves deprived and aggrieved. However, I found that in every case of interest it is Kazakhs, who mobilized against ethnic minorities initiating the clashes. The mass mobilization of the titular ethnic groups began in places where Kazakhs lack economic dominance. To be more precise, I argue that the expectations among the titular ethnic group about superiority of Kazakh ethnicity, which was reinforced by Kazakhization, increased the sense of deprivation among Kazakhs, who do not feel such superiority coexisting with another densely populated ethnic group. Hence, in such circumstances it is very easy to get aggrieved especially because Kazakhization promoted the idea of Kazakh ethnic dominance. As I mentioned in Chapter 1, in my case selection I am specifically focusing to study villages where significant number of ethnic minorities coexist with Kazakhs. It is expected that in these villages economic inequality exists among respective ethnic groups, where the titular ethnic group on average has a worse standard of living in compare to corresponding minorities. I expect that this inequality together with the expectation of Kazakhs about their alleged dominance create a strong feeling of deprivation among them, which eventually sparked the clashes. As I mentioned in the Chapter 1, grievance, not the actual inequalities, is responsible for clashes.

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CHAPTER 4. METHODOLOGY AND CASE SELECTION

4.1. Methodology

I must admit that my nationality provided me with certain advantages during my field study. Local population was not very eager to talk about terrible past events. I assume that if I were Kazakh, it would be much harder for me to talk with ethnic minorities. However, since I am Korean, it was easier for me to position myself as a neutral student of Nazarbayev University, whose only interest was to conduct a university project. Most of the respondents were able to quickly understand that I neither belonged to Kazakh, nor to any of the ethnic minorities involved in the conflict that affected them. It was reflected in their question, when they were asking me something like: "what is your nationality? You do not look like Kazakh or Dungan". I believe that they were much more opened to me because of my ethnic identity, but it was sometimes still a difficult challenge to obtain full information from the respondents. Therefore, I simply focused to be pleasantly persistent and simultaneously put the pressure off from people. It was essential for me to obtain trust from each and every respondent.

There are several tools that I am going to use in order to check my theory: a) interviews; b) survey questionnaire; c) statistics; d) analysis of Nazarbayev's speeches.

a) Interviews

It was vital for my research to conduct field study in order to be able to find out insights from the local population. Since my main focus was to study ethnic clashes that took place specifically in small villages, it meant that it would be particularly difficult to find available statistical information that would show the level of inequality in those villages as well as any other relevant information for my project. Furthermore, ethnic clashes are highly uncovered topic in Kazakhstan, which means that there is not a lot of objective information available. Therefore, conducting a field study to obtain complete and ultimate data applying interviews and survey methods are the main sources of data in my analysis. Nevertheless, I am also relying on the relevant statistics that were available but simultaneously pointing out on the limitations of such data, which could not be used as a complete information for the analysis.

With respect to the interviews and survey I conducted fieldwork in the respective villages of interest to study whether the relative deprivation really takes place. Particularly, I was seeking to learn people's attitude towards other ethnic groups, whether the perception of inequality and grievances exist and possible cause of grievances that triggered clashes. Also, I wanted to check the presence of political entrepreneurs, which would help me to understand the applicability of the respective theory. Initially I was planning to take five interviews in each village to local Kazakhs and minorities and I managed to accomplish it. As I explain in the previous chapter, I selected three pair of cases with the most identical features, where the titular ethnic group coexists with densely populated ethnic minorities. The ethnic groups that I seek to study in the current paper are: Dungans, Uyghurs, Tajiks. I managed to visit all villages that I was initially planning to visit (see. Chapter 1).

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The process of obtaining interview data was complicated because I needed to visit six local villages located on the Southern and Southeastern parts of the country. It turned out to be a fruitful research in general and for the theory in particular because I was able to find relevant data, which will be discussed in the Empirical Section. Shortly, the data supported the main theory and arguments. It showed that the feeling of relative deprivation among Kazakhs occurred in places, where major businesses and properties are owned by ethnic minorities. Furthermore, I resolved theory problem that I encountered during my literature review chapter. I eventually came to the conclusion that theory of political entrepreneurs is irrelevant and the most suitable theory is relative deprivation due to reasons mentioned earlier. During my interview with locals, I did not find any evidence that would support the existence of figures, who could benefit from the clashes. Thus, the field trip gave me confidence in what theory to use and provided me with necessary data for my study.

I should mention existing limitations that I encountered during my field trip. The first limitation was related to time. Since I was limited with the course of this semester, I was able to make only one short field trip the duration of which was only one week. Therefore, I needed to finish all interviews and survey within this short period. Time shortage was my major challenge. Also, I was able to choose only one pair of villages for a more thorough examination in order to find out more information relevant for my study. Despite the equal number of interviews and surveys were conducted in every village, I spent more time in Dungan villages. I chose Masanchi/Sortobe and Zhalkap-Tobe because the former was the place with the most recent case that witnessed ethnic clash, which meant that the consequences from the clash (e.g. property damages) could still be observed. I used additional time to talk more with local population in order to find out who exactly owned the major businesses and properties in the area. Thus, I spent extra time to examine villages more thoroughly. Another limitation was financial because I had limited amount of finances, which made it more difficult for me to spend more time in the field and collect more data for the analysis. Nevertheless, despite all these limitations, I was able to collect all necessary data for the study to conduct solid analysis.

Since the choice of the villages are justified in the previous chapter, I would like to share the interview process. In every respective village I was conducting interviews with five people, where three were ethnic Kazakhs and two were ethnic minorities. The interviews were conducted in different places upon convenience. I decided to take five interviews from every village because I was limited in time and decided to focus not on quantity but on quality. In order to fill the quantity gap, I also conducted a survey questionnaire. In short, the field trip was very useful to my theory because it helped me to understand the existence of ethnic grievances and economic inequality, which confirmed relative deprivation theory. The sample of the interview questions and survey questionnaire is in the Appendix 1. Also, it is important to mention that I was strictly adhering the rules of Ethics. Therefore, I had not begun my data collection until my IREC approval was not ready.

In every village I began collecting the data by looking for potential interview prospects. Since a lot was unfamiliar to me in the new places, I decided to apply the most straightforward approach. I simply began approaching people on the streets. However, I was wearing clothes with Nazarbayev University logotype and showing my ID to people. I was trying to present myself as clear as possible letting people know that I am a peaceful student from Nazarbayev University, who conduct Thesis research project. Fortunately, not many people were reluctant to talk with me. Most of the people were kind, open and willing to talk. Probably it is because people in villages tend to be less in a rush. And also, they were curious about me too. Some of them have heard about

Nazarbayev University. Once I presented myself and gave full information about the purpose of my presence, I offered them to participate in the interview. The interview was taken place in different location depending on the situation. Some respondents invited me to visit their homes, while other prefer to be interviewed in local cafes. The interview lasted from 40 to 70 minutes. The language of the interview was either Russian or Kazakh. Russian was my main language, but some respondents preferred to speak Kazakhs and I agreed. Since the topic of my research was pretty sensible, I was trying to be clear that this is solely for my study purpose and that all the information will be undisclosed and protected. Also, I was trying to point out that they would be able to quit the interview at any time they wanted. Some people rejected to participate in the interview, but it was still possible to find 5 people, who were willing to. However, as I mentioned earlier, the biggest challenge for me was time shortage. Also, in order to add randomization, I was selecting people of different age groups, who were older than 21. Thus overall, I conducted 30 interviews in 6 villages from the Table 1, out of which 18 were Kazakhs and 12 were ethnic minorities. I was trying to control randomization choosing respondents with different characteristics. The age range of the respondents was 29-56 years old, where 50% were male and 50% female. The respondents' occupations were different. I interviewed farmers, shop owners, café employees, employees at wellness complexes and several business owners. In every villages I interviewed both Kazakhs and respective ethnic minorities.

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b) Survey questionnaire

Also, I distributed a survey questionnaire to 20 locals of both genders in every respective village with the same purpose. Both interviews and survey were intended to help me to understand the perceptions of locals regarding the existence of ethnic inequality, grievances and feelings of economic deprivation. I prepared the questionnaire (see the Appendix 2) and distributed it across the villages. I was trying to allocate the questionnaires in equal proportion among ethnic groups. The sample questions had a similar content as the interview questions. The only difference is that interview allowed me to go deeper and ask additional question depending on situation. However, the survey questionnaire allowed me to obtain more data.

I usually began with the interview and at the end of each interview I was asking from the respondents to connect me with someone, who could fill the survey. Most of my interview respondents referred me to their neighbors with whom I could communicate and ask to fill the questionnaire. I printed all questionnaire in advance and ask to fill them. Every time I was trying to explain what I am doing and how important it is for me to obtain full responses. In order to make sure that the responses were properly written, I usually preferred to fill them myself while

participants were just telling me the answers. It also allowed me to quickly ask additional questions. However, since I had time limitation, I spent less time on survey questionnaire. It took me no longer than 10 minutes to fill the form.

c) Statistics

Furthermore, I examine information provided by Statistics Committee to look for Gini coefficient for the Oblasts of interest. Analyzing the data published by the agency I was trying to find the level of inequality across Oblasts based on Gini Coefficient. This data will help me to analyze whether inequality actually exists in the respective Oblasts. It will support my claim and confirm the existence of inequality. I decided to use this index because the Gini index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. The index provides reliable data because the data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. The index of 0 represents perfect equality, while an index of 100 implies perfect inequality. This analysis will help me to trace the level of inequality in the respective Oblasts of interests, which is important for my theory, because the idea of relative deprivation is built around the inequality, as I mentioned in the previous chapter.

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Nevertheless, this index had only limited use for my study. I must admit that the index does not reflect the real situation that was happening in the villages due to the fact that it measures inequality based on taxes, which means only taxable income is taken into consideration. However, a lot of people in the regions earn income that is not taxable because it is unofficial. Furthermore, the index is unable to clearly show the inequality for the specific village and between specific ethnic groups. It solely describes general inequality in Oblasts. Nevertheless, it was still useful to compare Gini index among the Oblasts to see what region has the highest general inequality. In order to measure poverty, I was relying on the statistics provided by government agencies that used to measure poverty using minimum salary as a baseline. Despite the fact that this indicator also does not reflect the true picture, I decided to use it to identify what Oblasts are the poorest.

Since I understand that statistics in Kazakhstan does not reflect the real picture, I used this data only as a supporting evidence for my general logic. Gini Coefficient does not reflect the real picture because according to the index, Kazakhstan almost does not have poverty and inequality, which contradicts even to common sense². While in reality poverty in Kazakhstan is highly visible

² <https://zonakz.net/2019/10/02/kazakhstan-pobyl-vse-socialnye-rekordy-norvegii/>

especially in rural areas. The coefficient is built on the data provided by the government bodies, which can hardly be recognized as a reliable data.

d) Analysis of Nazarbayev's speeches

And lastly, I will conduct the analysis of Nazarbayev's speeches, which will help me to trace the existence of Kazakhization. Since I am arguing that Kazakhization reinforced feelings of Kazakh ethnic superiority, content analysis will help me to analyze the existence of Kazakhization and whether it actually reinforced the feeling of ethnic superiority. In order to trace the existence of Kazakhization, I will firstly analyze the speeches of the first president of Kazakhstan that had been made during the first years of independence to prove that the promotion of Kazakh ethnic superiority is part of state nationalist discourses. I will pay special attention to the speeches, where Nazarbayev were mentioning ethnic relations and the role of Kazakhs in the process of nation-building. I decided to use Nazarbayev speech because it reflects the main political direction chosen by the Republic of Kazakhstan. Furthermore, this analysis is only a complementary source of information needed only to understand whether the political direction legitimized expectation of Kazakh ethnic superiority. For this purpose, I believe that the excerpts from Nazarbayev speech is a good reflection of such legitimization. Also, I will analyze the news that were publishing information regarding the specific ethnic clashes I look at. Since not a lot of sources publish such kind of information, I will focus to highlight events, which provide a valuable information for analysis. I will examine whether the information provided put titular ethnic group in favorable position. Furthermore, I will analyze the comments to see whether the nationalist sentiments are supported by the general mass or not. Also, I will analyze cultural objects in Almaty and Nur-Sultan and cultural events that took place in Kazakhstan in order to understand whether Kazakh culture receives stronger promotion than other cultures. For this purpose, I will be analyzing messages from the president during the first ten years of independence because these years reflect the period of reshaping the role of ethnic Kazakhs after its long suppression during USSR period.

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4.2 CASE SELECTION

4.2.1 Regional distribution of ethnic minorities in Kazakhstan

There are three ethnic minorities, which represent a great proportion of population in certain regions of Kazakhstan which and can be examined for this study: Uyghurs (1.4% from overall opulation), Tajiks (0.2%), Dungans (0.3%). All these ethnic minorities live in the Southern part of Kazakhstan, specifically neighbouring Zhambyl, Almaty and Turkestan Oblasts³.

³ The data taken from an official National Census of 2009

Dungans are specifically represented in Sortobe, Masanchi and Zhalpak-Tobe, which are all located in the Zhambyl Oblast. Masanchi and Sortobe are located close to each other in the Kordai district, where Dungans form a majority. Zhalpak-Tobe is located just a two-hour drive away from the villages in Zhambyl district and has nearly an even number of Kazakhs and Dungans. A large cluster of Uyghurs occupies Shelek in the Enbekshikazakh district and the village of Chundja in the Uyghur district. Both villages are located in the Almaty Oblast. High concentration of Tajiks live in Turkestan Oblast. Bostandyk, Yntymak and Enkes are all located very closely to one another in Saryagash district. Also, Tajiks occupy Gullistan of Maktaaralsk district, where they account for 98% of population⁴.

Thus, most of the densely populated minorities, which have examples of both peaceful coexistence and clashes with a relatively similar settings are: Dungans, Uyghurs and Tajiks in the respective regions mentioned above.

4.2.2 Case selection

For the purpose of the current analysis, I selected three pair of cases with the most similar features, where the titular ethnic group coexists with densely populated ethnic minorities. The ethnic groups that I seek to study in the current paper are: Dungans, Uyghurs, Tajiks (see pic.1). The following table demonstrates the number and percentage of corresponding ethnic minorities at a certain point in time in the respective Oblasts. Oblast is a type of administrative division in Kazakhstan, which divides regions of Kazakhstan.

Ethnic group	Dungans	Uyghurs	Tajiks
Village 1 (conflict)	Masanchi/Sortobe, Kordai district (Zhambyl Oblast) = 24 000 Dungans = 90% of all population of the villages.	Shelek (Chilik), Enbekshikazakh district (Almaty Oblast) 19 000 Uyghurs = 74%	Bostandyk/Yntymak, Saryagash district (Turkestan Oblast) = 5000-7000 Tajiks = 85%
Village 2 (no conflict)	Zhalpak-Tobe, Zhambyl district (Zhambyl oblast) = 7000 Dungans = 85% of all population.	Chundja (Чунджа), Uyghur district (Almaty oblast) 15 000 Uyghurs = 79%	Gulistan, Maktaaralsk district (Turkestan Oblast) = 2514 Tajiks = 98% of all population

Table 1.

These pairs were chosen because these cases are the most relevant for the analysis due to the most similarities. Firstly, these ethnic groups densely occupy certain territories of the Southern part of Kazakhstan. Secondly, these pairs represent examples of peaceful and non-peaceful coexistence of an ethnic group with the titular ethnicity. Thirdly, all pairs in the chosen sample live in a quite similar conditions in rural areas of relatively similar size in the same Oblasts and under the same administrations. Also, all of them are either involved in an agriculture or a small business.

⁴ The data taken from an official National Census of 2009

Fourthly, all pairs have a relatively significant amount of respective minority group, who coexists with Kazakhs. Lastly, the patterns of ethnic clashes that occurred between the ethnic groups have a lot of similarities.

a. *Dungans*

Masanchi and Sortobe are located close to each other. Both of these villages are in the Kordai district and accounted for around 90 percent of Dungan population. Masanchi has around 13 000 people and Sortobe, around 10 000 people. The village is considered the so-called capital of Kazakhstan's Dungans. Thereby, Masanchi has a museum of Dungan's history. Also, a special day dedicated to Dungan's ethnus called "The day of Dungan's ethnus" is celebrated in Masanchi and neighbouring Sortobe annually. Even a monument dedicated to Dungan's national leader Bai Yanhu was established in the village. The villages were the epicentre of the ethnic clash in 2020. Zhalkap-Tobe is a village in the same Oblast, which is only two-hour drive away from Masanchi. The village has many similar settings with the population of around 8 500 people, who are mostly Kazakhs and Dungans. The previous name of the village is "Dunganovka" due to a significant amount of Dungan residents living there. Despite its counterparts the village has not experienced any ethnic clashes. Both villages are mostly agricultural with a significant amount of Dungans. In Zhalkap-Tobe the number of Dungans is almost equal than of Kazakhs. People in both villages have an identical rural lifestyle with and similar sources of income⁵.

In February of 2020, a conflict began in Sortobe due to an incident with a fight between a group of young Dungans on the one side and Kazakh elderly man and his two sons on the other. It was a domestic fight. In accordance with the information I received from my field study, there were personal mutual hate that existed for long between the families. As a result, the 80-year-old man was beaten. Further, when the Kudashpayev family was heading to the hospital, their road was blocked by cars, the owners of which were young Dungans. A scuffle took place, which led to the hospitalization of two members of the Kudashpayev family. Two days later on February 7, in the evening the police department of the Zhambyl region received a message that about 70 aggressive residents had gathered on the outskirts of Masanchi. The situation was being recorded and spread through the various channels of social networks by various participants with appeals to gather for actions. A mobilization along ethnic lines were immediate, which led to the arrival of at least 300 more Kazakhs from neighboring villages. During the clashes, several dozen participants received bodily injuries and gunshot wounds, around 10 people eventually died from

⁵ Not listed, 2020 February 8, "Clashes in the south of Kazakhstan: 10 killed, almost 140 wounded." ("Столкновения на юге Казахстана: 10 погибших, почти 140 раненых. Главное"). Настоящее время <https://www.currenttime.tv/a/kazakhstan-conflict-masanchy-pogrom/30423725.html>

injuries. According to preliminary information, more than 30 private houses, 15 trade objects, and 23 vehicles, which belonged to Dungans, were damaged. The official version of the causes of the conflict is unclear but most sources and officials argue that the cause of the mass conflict was a domestic conflict, which led to the escalation. It led to the mass migration of ethnic Dungans from Kazakhstan to neighbouring Kyrgyzstan, where the Dungan's diaspora is also significant. Officials do not provide exact version of what happened in Masanchi, but some sources argue that the domestic fight between the Kudashpayevs and Dungans led to ethnic mobilization. Kazakhs from neighbouring villages joined to avenge Dungans destroying their properties and beating them⁶.

b. Uyghurs

Shelek is located in Almaty Oblast and has a significant number of Uyghurs and Kazakhs. And there are more Uyghurs in the village than Kazakhs. Overall population of Shelek is 34 370 people. Shelek had a clash in 2006 between Kazakhs and Uyghurs. Chundja is a place, which is also located in Almaty Oblast approximately 2 hours away from Shelek. It is an administrative center of Uyghur district with a population of around 17 500 people. However, no ethnic clash has ever occurred in Chundja. Chundja and Shelek have a Uyghur majority. Both regions are mostly agricultural. It also has mostly Kazakh and Uyghur residents⁷.

In 2006, an ethnic clash occurred between Kazakhs and Uyghurs in Shelek. It all began as a domestic fight in the local café, where several Uyghurs beat up one Kazakh. As a result of the fight the mobilization of Uyghurs, who wanted to participate in the conflict had increased. In order to prevent escalation of the conflict additional security forces were dislocated in the region, which eventually suppressed it. The Uyghur community of Kazakhstan argued that the conflict was provoked because domestic fights had regularly occurred, but the mobilization along ethnic lines was a unique case.

c. Tajiks

Bostandyk and Yntymak are adjoining villages located in Turkestan Oblast. The former has around 2 700 people and the latter has around 5 500 people. Both places are an example, where Kazakhs and Tajiks coexist together. Enkes with around 4 000 people is 11 kilometres away from Bostandyk and Yntymak with the exactly similar settings, but without incidents of ethnic conflict. Another Tajik's densely populated area is Gulistan with the population of 2 500 people, which is in the same Oblast, but in the different district. The village is only 2 hours away from other villages,

⁶ Not listed, 2020 February 8, "Na Yuge Kazakhstana vspihnul konflikt mezhdu kazakhami i dunganami" (Conflict between Kazakhs and Dungans erupted in southern Kazakhstan). Khabar 24, <https://bit.ly/3ffrxtF>

⁷ Sурганов, В., 2007 January 31, "Uyguri Sheleka: "Nam ne nuzhno kazahskoi zemli" (Uighurs of Shelek: " We don't need Kazakh land!"). Zona.kz, <https://bit.ly/3kSw46m>

with very similar settings (e.g. lifestyle and ethnic coexistence). Bostandyk and Yntymak experienced ethnic clashes, Erkes and Gulistan did not⁸.

In 2015 an ethnic clash occurred in Bostandyk and Yntymak. In accordance with the official version, the beginning of the clash was a private conflict between a Kazakh and a Tajik resulted in the murder of a former not far from Bostandyk, in the neighboring Yntymak. Relatives of the killed began to demand a punishment for the guilty on street meetings. On February 5 in Yntymak about 200 representatives of Tajik nationality and 250-300 representatives of Kazakh nationality assembled, armed with truncheons and pieces of metal for a fight. As a result, houses, retail outlets and cars were burnt, and people were injured during the fights. In addition, windows and doors in a Tajik school were broken⁹.

CHAPTER 5. EMPIRICAL SECTION

5.1 Poverty and inequality as a precondition to clashes

As I mentioned in the previous chapters, relative deprivation can be the cause of ethnic clashes due to several reasons. These reasons are: poverty, ethnic inequality and grievances. In this section I am going to specifically explain the connection between Kazakhization, relative deprivation theory and ethnic clashes supporting my arguments with the results from my data collection. In this study I focus on three pairs from the Sample located in three respective Oblasts of Kazakhstan: Zhambyl, Turkestan, and Almaty Oblasts. The samples of the villages were chosen based on their similarities as it is explained in the Chapter 1. Given that the villages are similar in many respects (e.g. population size, location, government etc.), the major difference between these two samples is the outcome. To be more specific, villages from one sample have experienced ethnic clashes and villages from another sample have not. My focus was to understand what exactly caused variation in the results between these two samples of the villages.

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Ethnic group	Dungans	Uyghurs	Tajiks
Village 1 (conflict) Sample 1	Masanchi/Sortobe, Kordai district (Zhambyl Oblast) = 33% from the overall population of Kordai district	Shelek (Chilik), Enbekshikazakh district (Almaty Oblast)	Bostandyk/Yntymak, Saryagash district (Turkestan Oblast) = 5000-7000 Tajiks
Village 2 (no conflict) Sample 2	Zhalpak-Tobe, Zhambyl district (Zhambyl oblast)	Chundja, Uyghur district (Almaty oblast)	Gulistan, Maktaaralsk district (Turkestan Oblast) = 98% of Tajik population (2514 people)

Table 1

⁸ Lillis, D., 2015 February 12, "Kazakhstan: Local inter-ethnic conflict revealed the broken line within our country" ("Казахстан: Местный межнациональный конфликт обнажает линию разлома в масштабе всей страны"). Eurasianet, <https://russian.eurasianet.org/node/61766>

⁹ <https://rus.azattyq.org/a/saryagash-besporiyadki/26833482.html>

As I explained in the previous chapter, I argue that Kazakhization project implemented by government of newly independent Kazakhstan created a feeling of ethnic superiority among representatives of titular ethnic group. One of the contributing factor to the feeling of superiority is economic position. Thus, the feeling of deprivation becomes particularly acute among the titular ethnic group in places, where Kazakhs experienced inequality and/or poverty. In such circumstances Kazakhs tend to feel aggrieved, which eventually trigger ethnic clashes. Therefore, I argue that inequality causes the variation in the outcome between two samples of the villages. This factor was decisive in determining the outcome. And Kazakhization played a contributory role promoting alleged perception of ethnic superiority among Kazakhs, which created certain expectation among them. Whenever this expectation had not matched with the reality, it could easily provoke grievance, which means that the expectation created by the project of Kazakhization contributed to the feelings of grievances. Moreover, poverty is another essential factor that contributed to the feelings of failed expectations and subsequent grievances. Hence, the main question that I am focusing to resolve is what exactly impact the variation between the sample of villages 1 and the sample of villages 2. I argue that inequality creates a feeling of relative deprivation, which is an ultimate driving force that responsible for the occurrence of clashes. And as I discussed in the Chapter 1, grievance is a factor that ultimately spark the conflict.

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I also need to explain here that during the field trip I found the theory of political entrepreneurs irrelevant due to insufficient evidence. Therefore, I decided to move with the relative deprivation theory. The rest of the paper represent the analysis of this theory and the data that I collected during my field study.

5.2 Kazakhization and Legitimization of Kazakh Supremacy

The Kazakhization was meant to favor Kazakhs as an ethnic group, which led to the significant outflow of various ethnic groups, including the huge amount of Russian population. Before the independence when Kazakhstan was part of the USSR, the Kazakh identity was heavily suppressed by the stringent Soviet policy, which almost resulted in its extinction. Kazakh customs, traditions, values and language were almost forgotten. However, with the emergence of independence Kazakh identity was precipitously seeking to revive itself. Various national patriots emerged trying to establish political parties (Laruelle, 2016). The popularity of various inspiring leaders that were promoting nationalist values and Kazakh national-patriotic landscape were growing exponentially among ethnic Kazakhs, which could be an indication of the mood. After decades of suppression that they experienced, they wanted to establish sole control over its land. The evidence of a tendency to support nationalist sentiments that promote Kazakhness, which means to build a state

centered around Kazakh identity, can be found in a popularity of various nationalist movements during the perestroika time, such as: Azat, Alash, and Zheltoksan movements (Laruelle, 2016). The popularity of these movements forced state government led by Nursultan Nazarbayev to either establish control over its leaders or dismiss this type of organizations, which posed threat to ethnic stability. Eventually, Nazarbayev's politics dominated the political arena in Kazakhstan and became a determinant force in ethnic landscape of the country with its unofficial Kazakhization project. However, it would be a mistake to ignore the emergence and popularity of various nationalist movements with which significant amount of Kazakhs agreed. Nazarbayev chose more smooth way towards ethnic situation in Kazakhstan. He was avoiding radical approach to the issue rather preferring gradual and unofficial reforms towards Kazakhness. Nevertheless, despite more tolerant politics of Nazarbayev, there were still many Kazakhs, who believed that their ethnicity shall provide them superiority considering that they should have superior rights within the territory.

It is important to clarify that nationalist sentiments existed even before the project of Kazakhization was launched. In fact, it is difficult to identify when exactly Kazakhization was launched due to its unofficial character, but it arguably began since perestroika. Kazakh nationalism was also revived due to the fact that Soviet policy had been suppressing Kazakh identity for a long time. However, I argue that Kazakhization encouraged, promoted and even legitimized this expectation of alleged ethnic superiority and ownership of the land. The evidence of this ethnic promotion can be seen via the implementation of ideological and propagandistic guise to revive language, culture and tradition of Kazakh people. Different educational, cultural and informational events organized by state and non-state actors together with mass media and private individuals promoted basic Kazakh values sacrificing the values of nonindigenous population (Karin and Chebotarev, 2002).

In order to trace the evidence of Kazakhization in cultural life of people in Kazakhstan, I refer to the dimension of cultural events that were sponsored by state budget in the country. Thus, during the period of independence Kazakhstan got used to conduct countrywide celebration of the anniversaries of various influential figures in Kazakh history, such as Abai and Zhambyl. It is safe to say that the funds for such events were provided from state budget and included expenses on the event and advertisement campaigns. It is important to point out that there were no celebrations of similar dimension of any prominent historical figures of other ethnic groups, despite the fact that after the independence significant amount of Russian population were living here.

It clearly shows discrimination in cultural life of Kazakhstan because such events exclusively strengthened Kazakh identity at the expense of other ethnic groups.

Furthermore, I conducted content analysis of various speeches of the First President of Kazakhstan that clearly show strong evidence of interlink between Kazakhization and the promotion of Kazakh ethnic superiority. I analyzed the excerpts of Nazarbayev's speeches from different events that took place in the consecutive years after the independence. In my opinion it is the best way to reflect state ideology due to the fact that Nazarbayev was a strong figure, who significantly determined ultimate direction of the state policy. His speech can be characterized as revivalist and patriotic for the Kazakh people. Also, it can serve as an evidence of conscious introduction of Kazakh ethnic mentality into the civic consciousness. The following excerpts represented only small portion of relevant information out of many and were taken from the speeches of Nursultan Nazarbayev to the nation in his yearly messages to the people of Kazakhstan. The speeches were made during the first five years of independence in Kazakh language:

"We are the children of the majestic mountains and the boundless steppes. Here, hundreds and hundreds of generations of Kazakhs were born, gained strength, and reached manhood. These boundless spaces are our cradle, our inheritance, our legacy. It is here that our glorious predecessors would hoist their banner of statehood, which was recognized by states near and far. Our native tongue acquired the status of a state language. The historical names of localities are returning; the good names of renowned sons of Kazakhstan have been restored, and their anniversaries are commemorated. In preserving this national distinctiveness, much has been done in the past several years. We have carefully restored everything that was lost: half-forgotten traditions, historic rights, culture, language, belief. My duty, as a person and as president is to be concerned constantly about the preservation and development of the Kazakh nation, its unique national characteristics.¹⁰"

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"And I sincerely believe that the republic's peoples relate with a sense of understanding to the changes taking place in the consciousness of the Kazakh people and will show them spiritual and intellectual support. It is Kazakh state patriotism, in fact, that serves as the main support for a rebirth of the republic and all nations and nationalities residing within it.¹¹"

¹⁰ N. Nazarbaev, Speech at the World Kurultai of Kazakhs, 1992. "Suverennomu Kazakhstanu — 10 let," 1992, in Russian.

¹¹ N. Nazarbaev, Speech at the Forum of Peoples of Kazakhstan, 1992. "Suverennomu Kazakhstanu — 10 let," 1992, in Russian.

From Nazarbaev's work entitled "*A Strategy for Creating and Developing Kazakhstan as a Sovereign State*": "*What strategic goals do we set for ourselves today? In politics, they consist of the following. It is quite appropriate if in our state where, regardless of ethnic affiliation, the principle of equality of opportunities for all and equality before the law is valid, if in particular cases special provision is made for the interests of the native nation, the Kazakhs, as happens in many states. The relevant areas would be the revival of national culture and language; reestablishment of spiritual, cultural, and other links with the Kazakh diaspora; and the creation of the preconditions necessary for the return of those who were forced to leave Kazakhstan.*"¹²

In the aforementioned excerpts it is clearly seen a strong emphasis on the praise of the past of Kazakh people and the importance of its preservation and appreciation. Also, the focus was on Kazakh nation, which is a clear reflection of Kazakhization. Since Kazakhization is unofficial, the best way to observe it is through the ceremonial speeches of the first president and implementation of Kazakh mentality through organizing cultural events. Also, as one can observe, the president himself adhered to Kazakhization project. The perception of Kazakh supremacy can even arise from political symbols that clearly manifest main values of Kazakh people. Thus, the state flag consists of the elements directed with the Kazakh culture including such elements as: eagle and national ornament. While the state emblem reflects shanyrak, which is a part of *yurt* (historic shelter for Kazakh nomads) and horses (the animal traditionally associated with nomad Kazakhs). All of these reflect the values and superiority of Kazakh people in Kazakhstan. Furthermore, promotion of Kazakh superiority can also be observed in the state planning of two major cities of Kazakhstan – Almaty and Nur-Sultan, which mainly contain numerous sculptures and monuments, which depict significant tragical moments from Kazakh history (e.g. Saka, a golden man, a Kazakh boy with the wolf etc.) (Karin and Chebotarev, 2002).

Kazakhization explained how the expectation of ethnic superiority was legitimized and reinforced by the government across the country. It is true to say that Kazakhization itself can't explain ethnic clashes because it was project realized on the state level, which means it does not account for the variation between the Group 1 and the Group 2. However, the feeling of superiority is important for this research because it is a contributing factor that reinforces feeling of deprivation among the titular ethnic group especially in places where their position looks disadvantaged. In order to check the existence of the expectation of ethnic superiority, I conducted a field study, where I was collecting data through survey and interviews. Overall, I collected 100 responses from the representatives of the titular ethnicity. Out of these 100 responses, 18 were received via interviews

¹² "Suverennomu Kazakhstanu — 10 let," 1992, in Russian.

and 82 were received from the survey questionnaire. The results from the data are quite straightforward. On the question “*Do you believe that Kazakh ethnic group shall have a superior economic position over other ethnic groups within the territory of Kazakhstan?*” 78% of respondents gave positive answers, which shows certain expectation. In order to find out whether economic position is perceived as a factor that displays superiority, I asked the following question “*Do you believe that higher economic position relative to other ethnic groups is a factor that reflects superiority?*”. The answer on this question was also unambiguous with 69% of positive responses and 31% negative responses. Hence, it provides supporting evidence about existence of expectations among Kazakhs.

5.3 Poverty, Inequality and Relative Deprivation

As it was mentioned in the Chapter 1, there are two main preconditions for ethnic clashes in accordance with relative deprivation theory, which are poverty and inequality. Relative inequality itself is rarely a cause of clashes if the standards of living are high in general. However, these two factors combined can eventually become the source of ethnic mobilization. In accordance with the several credible sources, rural areas are on 3.4 times poorer than urban areas and it can explain why all the clashes of interest took place in the rural villages¹³. There are three Oblasts, which are relevant for this study: Almaty, Zhambyl and Turkestan. It is worth to mention that in accordance with the information presented by the Ministry of National Economy, in 2019- 2020 rural areas of Turkestan Oblast are considered to be the poorest of all Oblasts and Zhambyl Oblasts took the third place in the chart¹⁴. However, throughout the independence these three Oblasts were usually at the top of the chart. Furthermore, in accordance with the statistics on the average level of salary, out of all Oblasts the lowest average level of salary is in Turkestan Oblast - 35.8% less than the national average; the second lowest level is in Zhambyl Oblast – 33.1% less than the national average; and the third place is in Almaty region – 28.3% less than the national average¹⁵. If one considers general statistics for several years to evaluate regions with the poorest rural population, then Turkestan and Zhambyl Oblasts are regularly at the top averaging 9,8% and 5,2% respectively. With respect to Almaty region, the level of poverty in the region is lower and equal to around 3,5%¹⁶. However, it is also important to mention that the level of poverty is calculated in accordance with amount of people, who earn less than living wage, which has a very low threshold. It means that people, who earn slightly more but still not enough to keep sustainable

¹³ <https://lsm.kz/samye-bednye-kazahstancy-prozhivayut-v-yuko>

¹⁴ <https://timeskz.kz/70682-v-kakih-regionah-kazahstana-samyy-vysokiy-uroven-bednosti.html>

¹⁵ <https://stat.gov.kz/>

¹⁶ https://forbes.kz/stats/v_kakom_regione_kazahstana_bolshe_vsego_bednyih/

life, are generally not included in the calculation. The reality with poverty in Kazakhstan looks different from numbers. There are still majority in rural areas of Almaty, Zhambyl, and Turkestan, who do not have proper sanitation and nutrition. Unfortunately, statistics do not display all of these factors, which are crucially important because all of these contribute to the feeling of unfairness and grievance. Furthermore, it is definitely not in line with the expectations of superiority among Kazakhs. Thus, in order to understand the attitude of people and real situation with poverty, it was necessary for me not only to focus and trust numbers and statistics, but to go on the field and evaluate the situation myself. Poverty is an important variable because it makes people feel miserable, which leads to grievances.

Inequality is also another significant variable that ignites grievances. According to the relative deprivation theory, it is inequality relative to the corresponding ethnic group that matters. Gini coefficient is well-known and recognized barometer that statistically measures the level of inequality across all regions. According to the coefficient, Almaty Oblasts have the highest inequality among all 20 Oblasts of Kazakhstan having the index equal to 0.23300000000000001¹⁷. With respect to Zhambyl and Turkestan districts, the inequality is a little bit lower with 0.223 and 0.1769999999999999 respectively. In general, these numbers show that these three Oblasts have high inequality in comparison with other Oblasts. However, it is necessary to take into account that Gini coefficient has a lot of significant drawbacks, which especially can't accurately reflect allocation of income among individuals¹⁸. The major drawback of Gini coefficient is the fact that it is based on income level, which means the salaries or profits that are registered in the relevant state organ. Therefore, the data that is taken into calculation is severely limited because many people in Kazakhstan avoid state regulations. Thus, as it is recognized by a lot of experts, this is especially relevant in post-Soviet countries, where most of the wealthy social groups often operate outside the formal tax regime, and significant wealth is underestimated or hidden at all¹⁹. In short, Gini coefficient can't be used as a purely reliable source of information. Moreover, the coefficient account for general inequality not making any differentiation across ethnic groups, which is major interest for my study. However, their index still indicates the existence of the inequality in the respective Oblasts.

Since the Gini coefficient can't provide us with complete and accurate information regarding inequality, I am relying on the data from my field trip. It is also important to say that two samples of the villages are unique in the sense that there are only few such kind of samples across the

¹⁷ <https://knoema.ru/WEFTIDI2018Jan/inclusive-development-index>

¹⁸ <https://kursiv.kz/opinions/2017-05/pochemu-koefficient-dzhini-ne-stoit-vosprinimat-bukvalno>

¹⁹ <https://kursiv.kz/opinions/2017-05/pochemu-koefficient-dzhini-ne-stoit-vosprinimat-bukvalno>

country, where a group of densely populated ethnic minorities coexist with the titular ethnic group. These areas are relatively small and represent separate villages in three respective Oblasts. The only and best way to sufficiently assess actual inequality in these regions were the field trip. There are two main reasons for that. The first is that there are no available statistical data that would clearly show the level of inequality among ethnic groups in the corresponding villages. The second is that for the theory of relative deprivation to be proven, it is important to understand people's perception and attitude regarding inequality and poverty. For the theory the feeling of deprivation is more important than actual deprivation. Furthermore, the existence of the expectation about superiority makes the feeling of deprivation easier to occur and does not necessarily require actual inequality.

During my field trip I managed to collect the data from 35 interviews and 140 survey questionnaires. In order to find out the existence of feelings of relative deprivation among Kazakh ethnic group in the region, I asked the following questions to the representatives of titular ethnic group:

Do you think that Kazakh ethnic group has poorer economic position than the respective ethnic group?

Do you feel that Kazakhs are economically relatively deprived to the respective ethnic minority group?

Do you think that the superior position of respective ethnic minority, if there is one, is at the expense of the titular ethnic group?

Here I found a straightforward variation in the answers of the respondents between the Sample 1 and the Sample 2. As one can see from the Table 1, the Sample 1 represents villages that have experienced a clash and the Sample 2 represents villages that have not experienced a clash. Overall, I received 102 responses from the representatives of Kazakh ethnic group. The results from the answers were the following:

Questions:	Sample from the villages that experienced violence (51 responses)	Sample from villages that did not experience violence (51 responses)
Do you think that Kazakh ethnic group has relatively disadvantaged economic position than the opposite ethnic group?	69% of positive answers	37% of positive answers
Do you feel that Kazakhs are economically relatively deprived to the respective ethnic minority group?	72% of positive answers	35% of positive answers
Do you think that the superior position of respective ethnic minority, if there is one, is at the expense of the titular ethnic group?	60% positive answers	29% of positive answers

These responses indicate on the existing attitude of local Kazakhs in the regions. It also can explain the existence of grievance showing that from my sample size the majority of Kazakhs from Sample 1 had a feeling of relative deprivation, while from the Sample 2 only minority had the same feeling. Thus, provided that the poverty exists in the villages of both samples, the perception of economic inequality relative to the respective ethnicity can indeed cause a variation between two samples.

5.4 Causes of perception of relative deprivation

As it was discussed, relative deprivation is about people's perception. Observation of people can be subjective and with premises of prejudice, but there still has to be a trigger that provokes the perception of relative deprivation. Here I am focusing to explain the causes of the differences in perception between the Samples. I argue that the actual inequality between two ethnic groups can play only a minor role, if any, but it is who control the business, which creates enough information for locals to judge about economic positions. In the small areas such as in my samples, people usually tend to know well the information about one another. It is especially relevant when it comes to businesses and properties. Here I am not really interested in the facts, but rather in the people's thoughts because the latter reflects information based on which people build their perceptions. However, I must admit that most of the information that I obtain from the interview sounds reliable because people in the villages tend to know one another quite well. Further, I will analyze every village separately relying on the information that I received from the interviews and

internet research. In the following section I will discuss the data I obtained from my field trip considering each pair of villages separately. *My two major focuses during the field study were:* *a) to examine the effect of poverty on the feelings of deprivation among Kazakh population; and b) to check the existence of feelings of deprivation among the titular ethnic group relatively to respective minorities.* My findings suggest that poverty is something that has a negative influence contributing to the general grievance of Kazakh ethnic group in every villages from the Sample. But the difference between the sample villages with and without the clash was reflected in the tendency of the former to see ethnic minorities as the main cause of their poverty, while in the sample without the conflict Kazakhs usually did not see ethnic minorities as their problem.

5.4.1 Dungans in Kazakhstan

Dungans' community in Kazakhstan had increased in the first decade of the 21st century. Currently there is more Dungans in Kazakhstan (62 thousand), than in Kyrgyzstan (60 thousand) and Uzbekistan (three thousand)²⁰. Dungans in Kazakhstan tend to adhere to high degree of geographic concentration. This proves the fact that almost 85 percent of all Dungans in Kazakhstan live in Kordai district, which is in Zhambyl Oblast, where this ethnic group makes up 33 percent of all population²¹. Dungans mostly stay rural and agricultural people, who support the tradition of having many children and large families. In Masanchi, Sortobe and Zhalkap-Tobe Dungans' traditions and folklore are well-preserved and relatively widespread. Dungan Association of Kazakhstan (DAK) plays a big role in preservation of Dungans' identity and culture. Dungans appeared in the Central Asian possessions of the Russian Empire as forced migrants after the defeat of the anti-Chinese uprising in Northwest China. Later the territory, which they were long occupying, became the part of independent Kazakhstan and Dungans replenished multiethnic composition of the country.

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Dungans are mostly Muslims and have Chinese ancestors. When I was visiting the villages, I personally could feel a lot of cultural differences between Kazakhs and Dungans. It was reflected in the lifestyle, cuisine, even in communication style. There aren't any local schools specifically for Dungans, but a lot of Dungans' kids still learn their native language using elective classes. Also, they tend to be less sociable and generally prefer to live on their own inside their families and little community. Children generally inherit the craft of their parents and continue the childbirth. All of the Dungans I met had at least three kids in the family. It was interesting for me to find out that Dungans and Kazakhs are quite divided, they tend to associate themselves as two

²⁰ <http://russian.people.com.cn/31516/6901040.html>

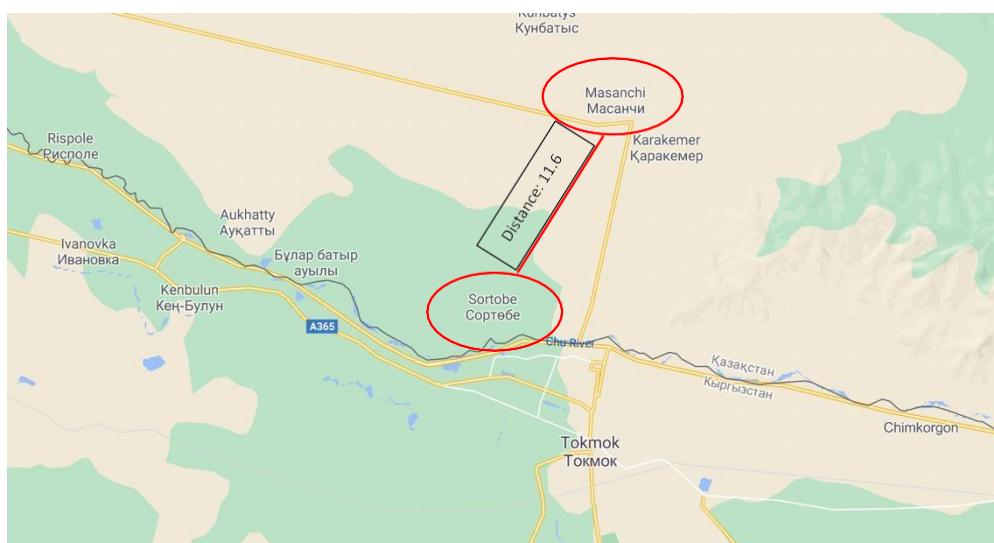
²¹ <https://nomad.su/?a=3-201011150038>

strictly distinct groups rather emphasizing their differences than commonalities. Their relationships are far from friendly. All of my interview respondents had the tendency to delineate themselves as a distinct ethnic group pointing out on how different the respective group is from them. Kazakhs tend to believe that Dungans occupy their land, while the latter believes that the land belongs to them historically. Hence, I found that Dungans have quite isolated lifestyle preferring to live strictly within their community. They prefer to speak their own language, which makes the difference between them and the opposite group quite vivid. Also, when I was attending local cafes and other public places, I never saw that Dungans and Kazakhs were sitting at the same table in neither of the villages. Furthermore, it is worth to mention that all of the villages from the Sample have a lot in common. In every village from the Sample Dungans represent the majority, which means that their culture is the most widespread there. Also, Dungan Association of Kazakhstan are constantly trying to preserve the culture in these areas. It all created the environment that is very different from the ordinary Kazakh villages.

The biggest struggle that I faced in Dungan villages was their poor knowledge of Russian and Kazakh languages. Also, they appeared to be very surly and unfriendly people at first. Fortunately, I managed to communicate with them, but they were still staying quite cold. As I found out from local Kazakhs, it is a common characteristic for all Dungans. I was particularly interested to find out mutual perception that exists between two ethnic groups. As a general response on the question "*Could you please describe your attitude of the opposite ethnic group?*", Kazakhs tended to describe Dungans as foreigners rather than their neighbors. Kazakh respondents were frequently mentioning that Dungans shall be respectful for the opportunity to live on the land. And some Kazakhs even said to me that Dungans did not act accordingly, stressing on the fact that they "act too impudently". When I wanted to understand what they meant by this, the answer was that Dungans needed to understand that they are guests on this land. It took me a fair amount of time to grasp what exactly made Kazakhs to have such kind of perception because it looked like most of the respondents did not have a clear answer to this question. Finally, it turned out that all of them meant a similar thing because I found that the source of their irritation was the fact that their expectation regarding Kazakh superiority did not meet. By saying that Dungans are guests, Kazakhs means that Dungans have to be inferior to them. This question invokes very powerful emotions among Kazakhs because it is related to their dignity. Kazakhs in rural areas tended to believe that Kazakh identity needs to dominate in Kazakhstan. Whenever it does not happen, it is perceived as a damage to Kazakh dignity. I heard a lot of time how Kazakhs were saying: "we respect other nationalities, but they need to understand that Kazakhs are dominant ethnicity here" or "it is a shame that our land is dominated not by Kazakhs". I do not know whether the same kind

of attitude is dominant in more liberal urban areas, but this mentality is very widespread in more conservative rural areas. Especially in the areas with high concentration of ethnic minorities. This pattern was staying across all the villages from the Sample. At the same time when I visit the village of my grandparents, where we are minorities, we usually have different treatment. Disrespectful attitude from Dungans to Kazakhs was also mentioned by several Kazakh respondents, who pointed out on inappropriate behavior of local Dungans, who used to say "*Dungans act as this land belongs to them*". Meanwhile, Dungans generally have a negative outlook of Kazakhs as well. They used to perceive Kazakhs as despotic people, who want to control everything. Hence, in general both ethnic groups prefer not to communicate with each other rather staying withing their own ethnicity, which causes ethnic division.

a. Dungans and Kazakhs in Masanchi and Sortobe



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Figure 1. represents the villages in Zhambyl Oblast that experienced a clash

Masanchi and Sortobe are neighboring villages and identical in many respects. When you are moving from one village to another, you can't even notice the difference because everything is identical. However, as in many villages in Kazakhstan poverty and unemployment are very evident. Unfortunately, statistics can't reflect the real conditions. Young people usually struggle to earn money to provide their families. This is the reason why after the incident, the government implemented the state program called: "Atameken". The program was initiated by the National Chamber of Entrepreneurs. The program was launched in Kordai district to "*relieve social tension among the population and significantly solve the issues of unemployment via involvement into*

*entrepreneurship*²². Thus, the purpose of the program was to help local population to start small businesses by offering an opportunity to obtain certain qualifications. Most of the people here are involved in agriculture and small entrepreneurship. In both of these villages Dungans and Kazakhs coexist together, which eventually led to a clash at the beginning of 2020. It is important to emphasize that Dungans are descendants of Chinese Muslims, who occupied Kazakh and Kyrgyz lands around two centuries ago. During this period Dungans have always been very good in agriculture. They have been mastering this skill for decades and reached outstanding successes. Dungans are historically successful in agriculture and their successes are well-known among Kazakhs, who live in the Dungan villages. I obtained this information during my interviews with local Kazakhs. Furthermore, they tend to run various small businesses such as: local cafes with Dungan cuisine, markets and shops. Also, Dungans reinvest their savings in houses trying to build big houses, where they live altogether. Usually, from two to four families are living in one house. From my personal observation during the field trip, I found that the average Dungan house is bigger and more expensive than the typical Kazakh house. As interviews and survey indicated, Kazakhs shared the same opinion. Thus, better property and agricultural success create a feeling among locals that Dungans live better. Furthermore, Kazakh Dungans use their connections with Kyrgyz Dungans to purchase and resell clothes, which is why clothing stores are popular in Masanchi and Sortobe, and Kordai district in general. It is mostly run by Dungans. Thus, I argue that a lot of small businesses in Kordai districts are run by Dungans. Also, it is worth to mention that during the clash in Masanchi Kazakhs attacked several properties, which belong to Dungans. They set on fire solely big and relatively expensive properties, such as houses and entrepreneurial real estates. It also looks like an indication on grievance on relative inequality existing in the region between two groups.

During my field study to these villages, I was trying to find out the causes of clashes that took place roughly a year ago. The difficulty was that the incident happened very recently and people still had a lot of pain associated with the event. It would be fair to say that Dungans were major victims of this conflict because all casualties and property damages were suffered by them and none for Kazakhs. It is also relevant for all the incidents from the Sample, where minorities were the only victims. During my interviews with Dungans, they were really scared and sorrowed to the past events. I found out that a lot of Dungans moved right after the incident and only small percentage of them came back. However, there were still a lot of Dungans, who were willing to

²² <https://atameken.kz/ru/projects/34987-v-kordajskom-rajone-zapustili-atameken-oldau-ortaly>

move abroad. Obviously, Dungans and Kazakhs had different views on the incident. The interviews and survey helped me to identify their views.

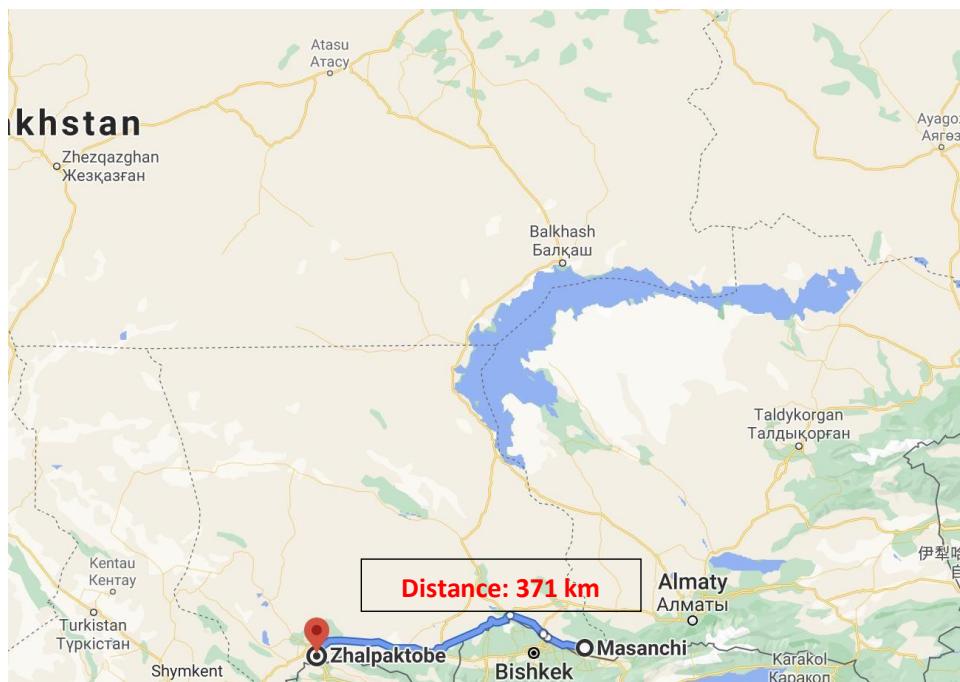
Dungans tend to believe that Kazakhs are irritated by Dungans' successes. They argued that Kazakhs attacked big houses and commercial properties that belonged to Dungans because their standard of living is better than Kazakhs'. Also, Dungans are very different from Kazakhs culturally. Kazakhs do not like these differences. Masanchi and Sortobe are two villages, where Dungans' culture is well represented due to high concentration of this particular ethnic group. On the other hand, Kazakhs were also unwilling to talk about the incident. However, there is a tendency among them to put the blame on victims. Despite the fact that the aggressors here were ethnic Kazakhs, who began mobilization, the Kazakh respondents were still inclined to defend the aggressors. They also used the same rhetoric saying something like "*if Dungang were acting appropriately (pointing out on the lack of respect), nothing like this would ever happen*". Most of my Kazakh respondents began from saying that this was unlikely incident that should never happen again, but at the same time Kazakhs still tended to justify the actions of aggressors. In order to find out what Kazakhs meant by indicating Dungans' "inappropriate behavior", all responses came down to the following answer "*they need to know their place*". It clearly shows the general grievances on the existing differences in standard of living. This perception shall come down from something that Kazakhs observe on the daily basis. Therefore, I asked the respondents regarding who owns what in the area. Surprisingly for me locals are very familiar with this information. Most of them provided me this kind of information. Indeed, it turned out that Kazakhs believed that Dungans owned major businesses and properties in Masanchi and Sortobe and this fact creates grievances among local Kazakhs. They see it unfair and inappropriate. All of my Kazakh respondents said "*This is not how things have to be in Kazakhstan*". They described Dungans as greedy and cunning people.

And lastly, there is a pattern that I found in Masanchi and Sortobe, which is reflected in the tendency among Kazakh population to blame Dungans for their economic position. All respondents told me that Dungans have to be grateful to Kazakhs, who allowed them to live on its land. Also, Kazakhs used to say that Dungans are living better at the expense of Kazakhs. This is something that Kazakhs aggrieved on.

The analysis from the interviews and survey that I obtained from my field trip demonstrated the existing ethnic division between Dungans and Kazakhs that had been existing long before the clash. The same division took place in Zhalkap Tobe as well. I received similar responses between

the villages in the pair. All three villages from the Sample had a strong ethnic division. However, there is a significant difference between these two pairs that I will discuss in the next section.

b. Dungans and Kazakhs in Zhalkap-Tobe



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Figure 2. maps the distance from Masanchi to Zhalkap-Tobe in Zhambyl Oblast

The life of Dungans and Kazakhs in Zhalkap-Tobe is different. Its close proximity to the Kordai district where the business activity is relatively high and its close proximity to Kyrgyzstan borders created more vivid inequality between Dungans and Kazakhs in Masanchi/Sortobe. But the situation in Zhalkap-Tobe, which is quite isolated from trade centers, led to the different lifestyle with less business activities. The population of the village is also struggling with poverty. However, the standard of living here is relatively equal and there are two reasons for that. The first reason is that the population here is mostly involved into animal husbandry. And the second is that there are not many business activities due to the isolation of the village. There is no visible inequality as it can be in Masanchi/Sortobe.

As I mentioned earlier, the ethnic division is also an issue for Zhalkap Tobe. When I was talking to Dungans in this village, all of them were familiar with the incident that happened in Masanchi and Sortobe. They were also scared but nothing similar happened in Zhalkap Tobe. Fortunately, the clash in Masanchi did not impact this village. The striking difference in the responses between this pair of cases was in the perception of the respective ethnic group. Contrary to a hostile perception of Dungans by Kazakhs that was found in Masanchi and Sortobe, I did not find such

attitude in Zhalkap Tobe. Here I noticed the tendency among Kazakhs to rather consider Dungans as their distinct neighbors, who share the same lifestyle. They did not have friendly relations, but they also did not have such an apparent hate and grievance either. On my question: “*what ethnic group do you think is better off in the village?*”, Kazakhs from Zhalkap Tobe usually replied that both groups were equal. Indeed, in Zhalkap Tobe I did not notice such a contrast in economic conditions between two ethnic groups as I found in Masanchi. There were no visible differences, which created a perception of equality. It was probably the reason why I had never heard from Kazakhs, who said that Dungans were better off at the expense of Kazakhs. This was a very strong explanation why Kazakhs did not have the same amount of hate and grievances in Zhalkap Tobe.

5.4.2 Uyghurs in Kazakhstan

Uyghurs similarly with Dungans began to occupy Kazakhstan approximately at the same time between 1860s and 1880s after the suppression of Uyghurs’ uprising in China. Thus, they also have Chinese ancestors. In accordance with the latest population census, Kazakhstan has 227 000 Uyghurs, which is 1,39 percent of all population of the country. In general, Uyghurs occupy rural areas and are mostly involved in agriculture. Most of them speak on three languages, which are Kazakh, Russian and their mother tongue. In accordance with the information provided in 2012, there were 14 exclusively Uyghur schools in the Republic²³. The history of Uyghurs and Dungans has a lot in common. Uyghurs as well as Dungans are Muslims. I personally did not notice a lot of differences between these two ethnic groups during my field study. They even have a very similar cuisine. The difference can be noticed in their mother tongue. Both groups prefer to use their native language for communication. However, Uyghurs are also able to communicate on Kazakh language, while Dungans generally can not.

Both Shelek and Chundja also have a huge concentration of Uyghurs in a similar manner as it is with Dungans in their corresponding villages. The villages like this are very different from majority of villages, where Kazakhs are majority. The gatherings of Uyghurs brought different culture to the region, which can be observed and felt even without thorough analysis. Everything is on the surface. However, Shelek and Chundja are different from Dungans’ villages due to constant migration of people from across Kazakhstan. These are touristic places of the country therefore it hosts many guests throughout the year. As I mentioned earlier, Uyghurs and Dungans have a lot of similarities, nevertheless the former are closer to Kazakhs than the latter. A lot of Uyghurs speak on Russian and Kazakh languages. However, due to the differences in culture the cultural division still exists between two ethnic groups. In my communication with both groups,

²³ [http://koresaram.kz/nationalnye-shkoly-v-kazaxstane/](http://koresaram.kz/nacionalnye-shkoly-v-kazaxstane/)

Kazakhs and Uyghurs also tended to emphasize their differences and commonalities. The biggest difficulty during my field trip to Uyghur' villages was the fact that the conflict here took place in 2006, which is about 14 years earlier. It meant that I needed to find respondents, who still remembered the incident. I found that the situation hasn't really changed after the conflict. There are still some tensions between two ethnic groups, but they managed to avoid clashes. In fact, none wants the repetition of the same incident.

During my conversation with Uyghurs, I noticed that the distance between them and Kazakhs are not the same as with Dungans. Uyghurs are more open and hospitable. There is less hostility between two ethnic groups. Despite that both groups tended to delineate themselves from each other, the division between two groups are not so stark. Some of them even had interethnic friendships. Furthermore, a lot of Kazakhs visited both places and attended local Uyghur cafes every year. Their cuisine is very popular in Kazakhstan and Kazakhs, Russians and other visitors like to attend the cafes. Thus, there are much more interaction between Kazakhs and Uyghurs. Moreover, a lot of Uyghurs speak Kazakh language, which help them to communicate and integrate into Kazakh environment.

In Chundja and Shelek I received different answers on the question "*what ethnic group do you think is better off in the village?*". As I mentioned earlier, villagers are usually familiar with the economic condition of their neighbors. They frequently discuss economic condition of other villagers in daily conversations. In Chindja respondents mostly did not notice any inequalities between two ethnic groups. On the question about business ownership, I found out that major complexes and properties are owned by ethnic Kazakhs. Meanwhile, respondents in Shelek pointed out on the ownership of Uyghurs. This was the major differences between the responses that I collected from two villages. Hence, I found that Kazakhs generally aggrieved in Shelek because they apparently see it as an unfair situation.

a. Uyghurs and Kazakhs in Shelek and Chundja

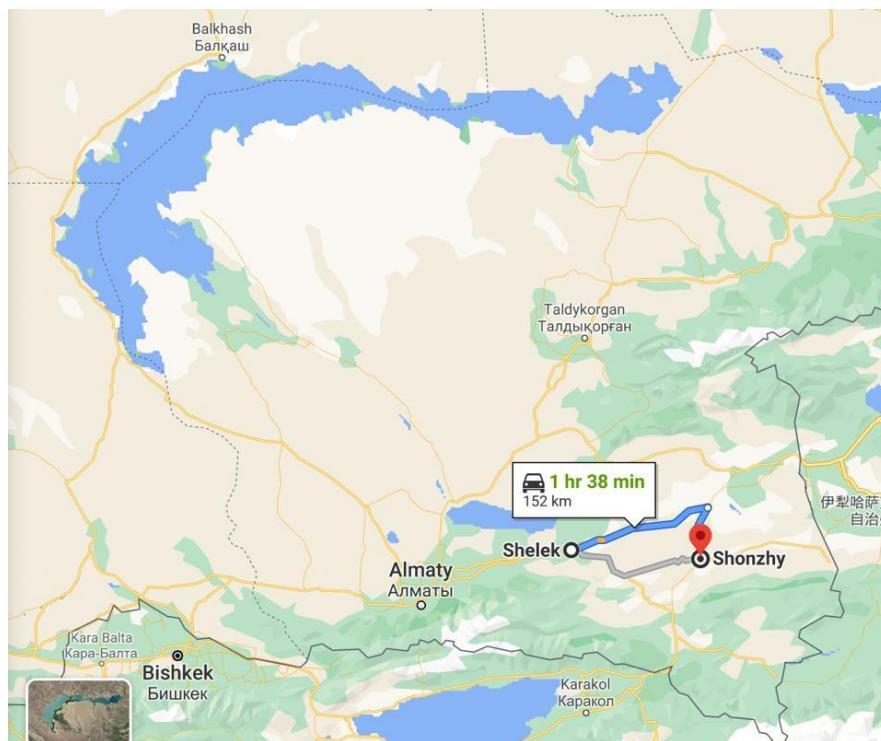


Figure 3. maps the distance from Shelek to Chundja in Almaty Oblast

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Uyghurs' ancestors also moved to Kazakhstan from China. Shelek is one of the biggest and relatively more developed village in the country. Shelek witnessed the clash in 2006. At that time the economy of the village was mainly agricultural. The village was famous for its cultivation of tomatoes and tobacco. Also, Shelek is an intermediate point between Almaty and China. And a lot of tourists from around the world used to visit the place because it is an intermediate point to various touristic sights: Charyn canyon, Kapchagai and Bartogay reservoirs, Kolsay lake etc. However, one of the most profitable business in the region is tobacco cultivation. And since the 1970s Uyghurs have been playing significant role in tobacco business, which generated a lot of profit for them²⁴. This put Uyghurs forward and made their average economic position higher than Kazakhs. The grievances that had been accumulated among Kazakhs eventually sparked the clash in 2006.

The situation with Uyghurs in Chundja is different. The village is famous for its natural healing thermal springs. Its existence led to the appearance of many wellness complexes, which host many visitors across the country. Hence, Chundja generates most of its income from the visitors, who

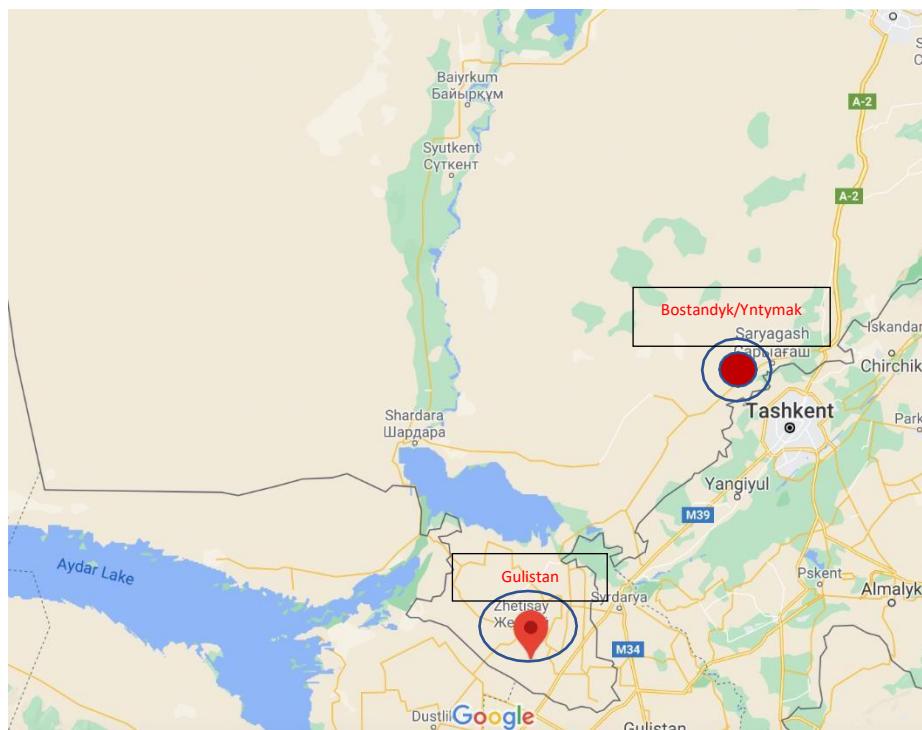
²⁴ Yerganat Uralbay. "Uyguri Sheleka: "gosudarstvo vashe, a zemlya nasha" (Uyghurs from Shelek: "The government is yours, but the land is ours").

arrive for treatments and relaxation. Despite the fact that a lot of Uyghurs are living here, wellness complexes, which are major source of revenue, are owned by Kazakhs. I found out this information from the locals, who were frequently familiar about who owned it.

5.4.3 Tajiks in Kazakhstan

Tajiks in Kazakhstan appeared on the territory of contemporary Kazakhstan in 1920s, when the government of USSR transported several thousands of Tajik families on the territory with the purpose to improve local irrigation agriculture. They were dislocated to the area of modern Saryagash region because the climate was very suitable for irrigation with its warm and sunny weather. In fact, this is one of the warmest places in Kazakhstan. The arriving Tajiks settled on swampy, previously not developed collective farm lands, which in several decades were turned into vegetable gardens by them. Today Saryagash is famous for its fields and greenhouses of cucumbers and tomatoes. It is predominantly people of Tajik nationality still working in these greenhouses.

I found out that Tajik's mother tongue is preserved via a network of Tajik secondary schools founded during the Soviet era. In the Turkestan Oblast, there are two fully Tajik-language schools, where principals and students are Tajiks, as well as several schools with a mixed language of instruction. In Gulistan, where ethnic Tajiks make up 98% of the population, there is a Tajik school named after Mirzo Tursun-zade, who was a prominent Tajik political leader in USSR. Hence, Tajiks generally communicate on Tajik language among one another. However, most of them also have a good Russian language, while Kazakh language is not very popular among them. When I was talking with them, they prefer to talk with me on Russian rather than on Kazakh.

a. Tajiks in Bostandyk/Yntymak and Gullistan**Figure 4. maps the distance from Bostandyk/Yntymak to Gulistan in Turkestan Oblast**

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Neighboring Bostandyk/Yntymak and Gullistan are very identical villages in many respects. Both places are very poor and only around two thousand people live in each of the villages. Out of all samples, these two villages have less evident inequality comparing to other examples, rather having a lot in common. Both of the villages are located in the Saryagash district, which is famous for its recreation complexes, where people can improve their health visiting different massages and other health treatments. A lot of people from around the country usually visit the district every year investing in their health. However, people from the villages of interests are quite isolated from the activities of recreational complexes. Most of the local population is living on stock raising and cattle breeding. And in Bostandyk/Yntymak it is mostly Tajiks, who are involved into these activities. Compared to Kazakhs, who generally live on social aids and agriculture, which is very small in the region, Tajiks managed to sell meat to bigger markets in Saryagash districts, which are located closer to the recreational complexes. At the same time, in Gullistan 98% of population are ethnic Tajiks and their standard of living is even poorer comparing to ethnic Kazakhs living in the neighboring villages.

5.5 Kazakhization, relative deprivation and grievances

As I mentioned earlier, my analysis examines small villages of Kazakhstan, which are unique because it represents a rare case when high concentration of ethnic minorities coexist with Kazakh population. There are not a lot of samples like this across the country. Usually, there are no separate and thorough statistics available that could clearly show the evidence of inequality between two ethnic groups in the villages due to its small size. Therefore, field trip was the major source of information for me to obtain complete information. Fortunately, I was able to obtain full picture from the survey and interviews. Nevertheless, in my analysis I am not solely relying on the data from survey and interview trying to analyze statistical data that is available for the regions and districts, which is represented in Gini coefficient and poverty rate.

Hence, I found a direct correlation between Kazakhization, poverty and inequality, on the one hand, and feelings of relative deprivation and clashes on the other hand. Kazakhization is important to understand because it raises Kazakh expectations legitimizing the belief that Kazakhs have to be at the center of state building and play a superior role. The promotion of Kazakh culture by the government played a significant role in the general expectation of Kazakh population. The main idea of Kazakhization is to raise the importance to preserve Kazakh identity at the expense of other ethnic groups. In short, Kazakhization legitimized the belief of Kazakh superiority. Furthermore, statistics make it clear that poverty is quite widespread in rural areas particularly in Turkestan, Almaty and Zhambyl districts. Hereof, Kazakhization helps to explain the expectations about superiority of titular ethnic group, while poverty is an essential precondition to clashes. Nevertheless, these two factors are common for all villages of interest and does not account for the variation. This study suggests that the perception of inequality is an ultimate factor that spark the clashes and cause variations between the Sample 1 and the Sample 2. Since for relative deprivation it is not important to have actual inequality but rather the perception of it, I focused to find out the perception of people. The perception usually comes from the information about major business activities in the area. I found the correlation between business ownership and clashes. To be more specific, in the Sample 1, it is ethnic minorities, who had wealthier properties and run more businesses. The different situation can be observed in the villages from the Sample 2, where ethnic minorities do not have a superior position over Kazakhs. Furthermore, if we combine the existing expectation among ethnic Kazakhs about their supposed superior position, which was triggered by Kazakhization, and reality that Kazakhs face in the Sample 1 village, we can understand why they feel themselves relatively deprived. It obviously leads to grievances, which subsequently spark clashes.

5.6 Correlation between business and property ownership, and feelings of relative deprivation

As it appears from my filed trip analysis, which mainly consists of observation, interview and survey, I was able to identify the source of variation in the outcomes between two Samples. Therefore, it is vital to explain and justify the correlation between the business ownership and the feeling of deprivation in more details. In order to justify the existence of this correlation, I will be using the example of Masanchi and Zhalpak-Tobe. Due to limitations mentioned in the methodology section I was able to thoroughly analyze only two pairs of case out of three. However, due to similarities across cases, I expect that this correlation will be similar in other cases as well. Although further examination is highly desirable.

Correlation across business ownerships and property are the only common factors that differentiates two Samples. As I previously mentioned, I argue that the perception of inequality in the small regions such as villages, where usually the population is small, poor and relatively equal in terms of occupation and daily activity, the strongest perception about the economic success comes from the ownership of business and quality of real estate property (houses). All the more so, people in the small areas tend to be familiar with one another because it is usually a close circle of people, which makes rumors daily and widespread activity. As I confirmed from my field trip, people usually know a lot about who owns local businesses, properties and other general information about economic standing of their neighbors. Provided that people generally share a lot of similarities in their village lifestyle with regards to economic position, occupation and daily routine in general, individuals, who owns better properties and control local business activity, are usually in the view. I have no doubts in the correctness of such type of information because I conducted several interviews in every village and receive identical answers from different respondents. The perception of feelings of deprivation is formed based on something that is highly visible and above the standards of average locals. Therefore, business ownership and property ownership are crucial factors that create associations based on which locals tend to make judgements.

In Masanchi, according to the information provided by respondents, the biggest properties and best houses tend to belong to Dungans. As I mentioned previously, Dungans tend to be more successful in agriculture, which makes them financially better established. We can observe this fact from the commercial real estates that operate in Masanchi and Sortobe, such as markets, shops and cafes. As I found out from the local population, most of these properties generally belong to Dungans. The evidence of the grievance that was caused by inequality can be found if one looks at the

property of Dungans that Kazakhs set on fire during the clash in Masanchi. All of the houses, shops, cafes and markets were quite visible in the place and much more expensive than the average house of local Kazakh²⁵. The fact that Kazakhs directed their anger on these properties can also indirectly demonstrate the source of their grievance. Below, I provided the list of the biggest local businesses that belong to Dungans. However, in order to follow norms of ethics, I will provide only general information avoiding any specific data that might breach confidentiality. Nevertheless, I preserve all the undisclosed information in a protected file in my own laptop.

Table 3.

Type of Business	Ethnicity of the owner	Name of the owner
A large cafe with a capacity of 100 people	Dungan	Not a subject for disclosure
Big market	Dungan	Not a subject for disclosure
Big flock of agricultural land	Dungan	Not a subject for disclosure
Five biggest private houses in the village	Dungan	Not a subject for disclosure

Thus, the business and property ownership trigger the association about economic position and the judgement by local population is made based on this association. Since business and property ownership are something very visible, these are strong factors that influenced the feelings of deprivation.

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CHAPTER 6. DISCUSSION

The data collected from my field study and the analysis of the speeches of the first president proved the arguments I proposed at the theory section. First of all, I demonstrated how the rhetoric of Mr. Nazarbayev encouraged to build a state centered around Kazakh ethnic group at the expense of other minorities. Taken into account super-presidential nature of government structure, the words by the first president represents the whole direction of the country politics. In the excerpts of his early speeches we can observe the encouragement to promote Kazakh identity and superiority. This kind of expectation was noticed among Kazakhs across all the villages that I traveled to. Grievances usually exist when Kazakhs feel that they do not control the land because it is directly connected to their dignity. I was constantly hearing the phrases as: “it is a shame that other nationalities control our land”. Furthermore, poverty also essentially contributed to the overall

²⁵ <https://www.currenttime.tv/a/kazakhstan-conflict-masanchy-pogrom/30423725.html>

damage of Kazakh identity. Poverty and feelings of deprivation relative to other ethnic minorities are ultimate forces, which are responsible for grievances strong enough to spark clashes. The main triggers that create feelings of deprivation are business and property ownership.

Furthermore, in my literature review there were initially three main approaches proposed. The analysis shows that Circumstantial/Constructivist approach is the most suitable approach that explains identity and ethnic clashes in Kazakhstan. My research shows that ethnic identity is constructed by circumstances. Kazakhization played a role in construction of Kazakh-centric approach of state building. It created the perception of Kazakh ethnic superiority, which in turn created expectations and shaped Kazakh identity. At the same time, we can also see that Kazakhization project was implemented to resolve ethnic situation that appeared with the independence. It was necessary to strengthen state sovereignty and it was circumstantial. We may assume that circumstances impacted the decision of the government to implement the project. Moreover, poverty is also the factor that shapes Kazakh identity. It contributes to the feelings of unfairness and angriness. It damages the dignity of the titular ethnic groups. Poverty is the circumstances with which a lot of Kazakhs in rural areas have to deal with. They can feel themselves betrayed by the government and they can blame it. But they can't do anything with the government. There are no any options for them to clash with the government. However, when they face with relative deprivation, which is not in their favor, they can switch their blame and anger from the government to an opposing ethnic group. This is exactly when the clashes occurred. And it is solely circumstantial. If the blame and angriness of own misfortunes can be switched to ethnic minorities, negative consequences might arise because in this situation Kazakhs can actually act violently. My findings revealed what might trigger this transition of blame and anger from government to an ethnic minority. It has to be something visible and obvious in a daily life of Kazakhs, which create a source of irritation and damages dignity. This is something that makes Kazakhs feel that they do not control their own land. Business and property ownership are two main indicators that reflect inequality and relative deprivation. These are visible in a daily life, which means that it is something that impacts the judgement of local people.

CHAPTER 7. CONCLUSION

The current study was aiming to understand the causes of variations between two Samples of villages with most similarities but different outcomes. Initially there were two rival theory that both looked as a potential explanation of the clashes: theory of political entrepreneurship and relative deprivation theory. Therefore, in order to decide what theory suited the most, I decided to

conduct a field study, which eventually helped me to choose what theory to test. After my field study I became more confident in my theory choosing to use relative deprivation theory.

Since my Sample consists of villages, I realized that there would not be a lot of statistical information available. It is also important to emphasize the sensibility of my research question, which obviously also contributed to the availability of data. Therefore, I was considering available statistics, such as poverty rate and level of inequality, solely as a secondary source, which only could support my arguments rather than be my primary justification. At the same time, my primary source of data came from the survey and interviews. Despite the existing limitations, which I mentioned in the Chapter 2, I managed to collect 30 interviews and 120 survey responses from 6 corresponding villages. The data confirmed the theory demonstrating that two factors are essential for relative deprivation to be proven, which are: poverty and inequality. The existence of poverty is very obvious, it comes from the statistics and personal observation. And in general, it is a well-known fact that poverty is a widespread phenomenon in Kazakhstani villages. However, since poverty is common to all villages from the Sample, this factor can't explain variation between the villages in Table 1. Therefore, inequality became another possible explanation that I needed to check. Based on my analysis, it eventually appeared that the perception of inequality indeed was responsible for the variations. In order to explain this feeling, I was using property and business ownership as factors that shape such perception. Also, it is important to mention the role of Kazakhization project, which, as it appeared, impacted legitimization of perception of ethnic superiority. Hence, Kazakhization created a certain perception, which made it much easier for a group to become aggrieved in cases of ethnic inequality.

Further studies of ethnic clashes in Kazakhstan could potentially avoid limitations that I encountered during my data collection. More data would double check the results due to bigger sample size, which would allow to eliminate possible biases. Also, it could possibly go further and propose solutions that might be helpful for policy makers to prevent possible ethnic mobilization in the future.

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Appendix 1

Interview questions:

1. Could you please tell me how the conflict occurred?
2. What do you think was the reason of the clash?
3. Were there any interested party, who might be willing to create a clash?
4. Do you think that there is economic inequality between respective ethnic groups?
5. Do you think that another ethnic group has a better standard of living and more advantages than yours?
6. How do people generally earn money in this area?
7. What ethnic group owns main businesses in the area?
8. What ethnic group owns more expensive properties in the area?
9. Do you think that there are grievances among ethnic groups? If yes, what can be a cause of this?
10. Do you feel yourself relatively deprived to the respective ethnic group? Why? What is the reason for that?

Appendix 2

Survey questionnaire:

1. To what ethnicity do you belong?
2. To what age group do you belong?
3. What is your occupation?
4. What is your major source of income?
5. How would you evaluate ethnic relationships in your region?
6. What is your personal attitude towards the representatives of respective ethnic group?
7. What do you think was the cause of ethnic clash in your region?
8. Was there anyone, who were interested in instigating the clash?
9. What is your perception of economic inequality?
10. Do you believe that ethnic inequality takes place in your region?
11. If yes, what makes you feel that ethnic inequality exists?
12. What is the main source of income for local population?
13. The representatives of what ethnic group own major properties in your region?
14. The representatives of what ethnic group own major businesses in your region?
15. Do you feel yourself economically relatively deprived to the respective ethnic group? If yes, why?
16. Do you feel grievance to another ethnic group? If yes, why?
17. Do you believe that the respective ethnic group lives at the expense of your ethnic group?

TÜRK MÜSİKİSİ SAZ ESERLERİİNDE MÜSİKİ TASVİRİ

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ÖZET

Türk müsikisi zengin makam, usûl ve form yapısıyla önemli ölçüde saz eserleri repertuvarına sahip bir müsikidir. Peşrev, sazsemâisi, medhâl, zeybek, özgün saz eserleri, oyun havaları ve çeşitleri, çalgılar için yazılmış alıştırmaları olmak üzere çeşitli formlarda bestekârlar yaklaşık bin yıldan bu yana eser üretmişlerdir. Saz eserlerinde bestekârların duygularını ifâde etmeleri, sözlü eserlere göre daha zorlayıcıdır. Bestekârların duygusal, hayâl ve fikir dünyalarını müsikî cümleleriyle ifâde etmeleri tarafımızdan *müsikî tasvîri* olarak adlandırılmaktadır. Müsikî tasvîri içeren eserlerde târihî olayların, gelenek ve göreneklerin, inanç dünyasının, yaşam tarzının, duyguların müsikî cümleleriyle âdetâ resmedildiği ve somutlaştırıldığı ezgiler görülmektedir. Türk müsikisinde Hüseyin Sadettin Arel (1880-1955), Şerif Muhittin Targan (1892-1967), Haydar Tatliyay (1890-1963), Reşat Aysu (1910-1999), Cinuçen Tanrıkorur (1938-2000) gibi bestekârlar müsikî tasvirlerine âit önemli eserler vermişlerdir. Ayrıca bestekârı bilinmeyen zeybek, oyun havaları ve halk müsikisi eserlerinde de pek çok örnekleri mevcuttur. Bu çalışmada Targan ve Arel'in eserlerinden örnekler verilerek müsikî tasvîrini nasıl yaptıkları ve hangi konuları seçikleri üzerinde durulmuştur. Türk müsikisinde şimdîye kadar göz ardı edilmiş ve tanımlanmamış bir konu olması bakımından çalışma önem arz etmektedir. Bundan sonra yapılacak pek çok araştırmaya kaynak teşkil edecek için önemlidir. Müsikî tasvirinin anlatılmasına örnek olması amacını taşımaktadır. Çalışmanın evrenini: Türk müsikisi saz eserleri, örneklemesini ise: Şerif Muhittin Targan'a âit "Koşan Çocuk" ve "Kanatlarım Olsaydı", Hüseyin Sadettin Arel'e âit "Fâni Hayat" ve "Zillerle Raks Eden Kız" adlı dört eser oluşturmaktadır. Çalışmada bestekârların sözsüz eserlerde müsikî tasvîrini nasıl ifâde ettiklerine ve bu anlatımda makam, usûl ve müsikî unsurlarını nasıl kullandıklarına dair sorulara cevap aranmıştır. Nitel araştırma olup, betimsel tarama modeli kullanılmıştır. Bestekârların gözlemlediği ya da tasavvur ettiği olayları, ezgilere dönüştürerek anlatmaları, örneğinden hareketle, Türk müsikisi saz eserlerindeki müsikî tasvirlerine dikkat çekilmiş ve önerilerde bulunulmuştur.

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Anahtar Kelimeler: Şerif Muhittin Targan, Hüseyin Sadettin Arel, Müsikî Tasvîri, Saz Eserleri, Müzik Terimleri, Tasvir.

MUSICAL DEPICTION IN THE INSTRUMENT COMPOSITIONS OF TURKISH MUSIC

ABSTRACT

Turkish music is a music that has a substantial repertoire of instrumental composition with its rich maqam, usûl and form structure. Composers in various forms, including peşrev, sazsemâisi, medhâl, zeybek, distinctive instrumental composition, oyun hava and varieties, exercises written for instruments, have produced compositions for nearly a thousand years. It is more difficult for composers to express their feelings in instrumental compositions than vocal compositions. The composers' expressing their worlds of emotion, imagination and ideas in musical sentences is referred to by us as a depiction of music. In the works that contain musical depictions, there are melodies in which historical events, traditions and customs, the world of belief, life style and emotions are depicted and embodied in musical sentences. In Turkish music, composers such as Hüseyin Sadettin Arel (1880-1955), Şerif Muhittin Targan (1892-1967), Haydar Tatliyay (1890-1963), Reşat Aysu (1910-1999), Cinuçen Tanrıkorur (1938-2000) are important works of music depictions. In addition, there are many examples of zeybek, oyun havası and folk music, whose composer is unknown.

In this study, examples of Targan and Arel's works are given, and it was dwelled on how they create their musical description and which subjects they chose. The study is important in terms of being an ignored and undefined subject in Turkish music. It is important as it will serve as a source for many future researches. It aims to set an example for the description of music description. The universe of the study is: Turkish instrumental musical, the sample is: "Koşan Çocuk" (Running boy) and "Kanatlarım Olsaydı" (If I had wings) by Şerif Muhittin Targan, and "Fâni Hayat" (Ephemeral Life) and "Zillerle Raks Eden Kız" (Girl Dancing with Cymbals) by Hüseyin Sadettin Arel.

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In the study, answers were research about how the composers express their musical depiction in instrumental composition and how they use the maqam, usûl and musical elements in this expression. It is a qualitative research and descriptive survey model has been used. Based on the example of composers' narrating the events they observed or imagined by transforming them into melodies, attention has been drawn to the musical depictions in the instrumental composition, recommendations have been present.

Keywords: Şerif Muhittin Targan, Hüseyin Sadettin Arel, Musical Depiction, Instrumental Composition, Music Terms, Depiction.

1.GİRİŞ

Mûsikî san'atı genel olarak duyu ve düşüncelerin ezgilerle ifâde edilme hâli olarak tanımlanmaktadır. Beste, bestekâr ve icrâcılar mûsikînin oluşmasını sağlayan üç önemli faktördür. Bestekâr tarafından bestelenen eser, icrâcılar tarafından seslendirilir. Bir bestekârin iç âlemine ait duyu ve düşünceleri ne kadar çeşitlilik gösteriyorsa bestelerindeki mûsikî nağmeleri de o nispette çeşitlilik göstermektedir. Ezgi çeşitliliği bestenin oluşmasında önemli bir bütünlük sağladığı gibi bestekârin duygularını ifâde etmesinde ve ortaya koymasında da önemlidir. Her duyu ve fikir farklı ezgilerle bestede yerini almaktadır. Sevinç, üzüm, efkâr, neşe, üzüntü gibi kişisel duyguların yanı sıra toplumun yaşamışlıklarını ortaya koyan ortak duygular ve düşünceler de bestelerde önemle işlenmektedir. Toplumsal olayların, gelenek ve göreneklerin, savaş, barış, kahramanlık, yiğitlik, duygularının anlatıldığı temalar üzerinde oluşturulan bestelerdeki ezgi, usûl, söz birlikteliğiyle farklı makamlarda bin bir çeşit ezgi ile oluşturulan bestelerden bir dağarcık ve repertuvar oluşturulmaktadır. Türk kültürüne âit bir düğün alayının, asker uğurlamasının, kına gecesinin, yeni doğan çocuğun, insanların üzerinde bıraktığı izlenimleri ya da duyguları ezgilere dönüştürülmüştür. Türk toplumunda karşılık bulan bu duygular bestelere yansımış ve önemli bir Türk mûsikisi repertuvarı oluşturulmuştur. Bu repertuvarın büyük bölümü sözlü olmakla birlikte sözsüz olanları da önemli bir yekün tutmaktadır. Bunların dışında doğa olaylarının da bestelere yansındığı görülmektedir. Türk mûsikisinin türüne göre çeşitlilik gösteren saz eserlerinden peşrev, sazsemâisi, oyun havaları, saz eserleri, çalgılar için yapılmış alıştırmalar, makam tariflerini içeren seyir örnekleri bunlardan bazalarıdır. Saz mûsikisi formlarına ait bu eserlerde söz unsuru olmadığından dolayı nota üzerine yazılan kelimeler, ifâde unsurları, tartım özellikleri ve ezgi yapılarıyla anlatılmak istenen duygular tasvir edilmektedir.

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Tasvir: Genel anlamı ile anlatılmak istenen olayın, objenin, şahsin, canlı ya da cansız bir varlığın özelliklerini gözlemleyerek ifâde etme san'atıdır. Çeşitleri olmakla birlikte konumuzla ilgili olarak, özellikle subjektif tasvir çeşidi öne çıkmaktadır. Bu tasvirde san'atkâr, çeşitli edebî san'atlara başvurarak, hislerini katarak, hayâl dünyâsında süslediği olayları, güçlü ifâdelerle anlatmaktadır. Besteci şâirin anlatımına uygun olarak şâirin hislerini mûsikî nağmeleriyle anlatmaya çalışmaktadır. Burada şâirin ifâdeleri, tasvir ettiği olay, his ve duyguları ile bestekârin nağmeleri arasında bir benzerlik, amaç birliği, bir örtüşme meydana gelmektedir. Sözdeki anlam mûsikî nağmeleriyle ifâde edilir. Mûsikî nağmeleri ile yapılan bu tasvir tarafımızdan “*Mûsikî Tasvîri*” olarak adlandırılmıştır. Bu terminoloji ilk defâ tarafımızdan, mûsikî literatürüne kazandırılmıştır. Burada şâirin tasvirlerini bestekâr Türk mûsikisinin zengin makam ve usûllerini kullanarak nağmelerle anlatmaktadır. Mûsikî tasvîri sâdece bestelenmiş sözlü eserlerde değil irticâlî ve sözsüz eserlerde de görülmektedir.

Çalgı ile yapılan nağmelerle ve kullanılan tekniklerle de sözsüz mûsikî tasvîri yapılabilmektedir. Tanbûrî Cemil Bey, Hüseyin Sadettin Arel, Hasan Ferit Alnar, Şerif Muhittin Targan, Cinuçen Tanrıkorur, Mutlu Torun gibi bestekârların eserlerinde de mûsikî tasvîrine rastlanmaktadır. Tanbûrî Cemil Bey'in kemençe ile yapmış olduğu Çoban Taksîmindeki köpek havlamaları ve ulumaları, Fatma Hanım, Yangın Var, Komşu Hû... gibi kemençe ile âdetâ çalğıyı konuşturarak yapmış olduğu tasvirleri mevcuttur.

Gelenekte saz mûsikîsi örneklerinin makam adıyla anılmalarına karşı, bestekârların mûsikî tasvîri içeren eserlere tasvir etmek istedikleri konuya göre isim koydukları görülmektedir. Bahar'da Kuşlar, Ege'de Yağmur Sevinci, Eğlence, Çeçen Kızı, Düğün Evinde, Yağız Küheylen, Su Samurunun aşkı, Kapris gibi saz eserlerinde mûsikî tasvîrinin konusuna uygun eserlere adlar verildiği görülmektedir.

20.yüzyıl Türk mûsikîsi saz eserlerinde karşımıza çıkan mûsikî tasvirlerinde nüanslar, ezgi yapıları, ifâde unsurları ve teknikleri bestelerde etkin olarak kullanılmakta, Batı mûsikîsi etkileri de kendini göstermektedir. Türk mûsikîsinde şimdiye kadar göz ardı edilmiş ve tanımlanmamış bir konu olması bakımından çalışma önem arz etmektedir. Bundan sonra yapılacak pek çok araştırmaya kaynak teşkil edeceği için de önemlidir. Mûsikî tasvîrinin anlatılmasına örnek olması amacını taşımaktadır.

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Bu çalışmada, Türk mûsikîsinin iki önemli bestekârı Şerif Muhittin Targan ve Hüseyin Sadettin Arel'in örnek olarak seçilen eserlerinde mûsikî tasvîrini nasıl yaptıkları ve hangi konuları seçikleri üzerinde durulmuştur. Çalışmada bestekârların sözsüz eserlerde mûsikî tasvîrini nasıl ifâde ettiklerine ve bu anlatımda makam, usûl ve mûsikî unsurlarını nasıl kullandıklarına dair sorulara cevap aranmıştır. Bestekârların gözlemlediği ya da tasavvur ettiği olayları, ezgilere dönüştürerek anlatmaları örneğinden hareketle, Türk mûsikîsi saz eserlerindeki mûsikî tasvirlerine dikkat çekilmiş ve önerilerde bulunulmuştur.

Buna göre:

Problem Cümlesi

Türk mûsikîsi saz eserlerinde mûsikî tasvîri nasıl kullanılmıştır? Sorusuna cevap aranmıştır. Alt problemler olarak da aşağıda belirtilen sorulara cevap verilmiştir.

Alt problemler

1. Hüseyin Sadettin Arel “*Fâni Hayat*” bestesinde mûsikî tasvîrini nasıl kullanmıştır?
2. Hüseyin Sadettin Arel “*Zillerle Raks Eden Kız*” bestesinde mûsikî tasvîrini nasıl kullanmıştır?
3. Şerif Muhittin Targan “*Koşan Çocuk*” bestesinde mûsikî tasvîrini nasıl kullanmıştır?
4. Şerif Muhittin Targan “*Kanatlarım Olsaydı*” bestesinde mûsikî tasvîrini nasıl kullanmıştır?

Amac

Çalışmada örneklem olarak seçilen eserler üzerinden Türk mûsikîsindeki mûsikî tasvîri içeren eserlere dikkat çekmek öncelikli amaçlardandır. Ayrıca saz eserlerindeki mûsikî tasvirlerinin tespit edilerek yorumlamaların bu tasvirler üzerinden yapılabilmesini sağlamaktır.

Önem

Çalışmada ele alınan eserlerin mûsikî tasvîri ilk defa açıklanmıştır. Bu bakımdan önem arz etmektedir.

Sınırlılıklar

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Çalışma, araştırmacının arşivinde bulunan nota nüshaları ve araştırmada ele alınan dört adet sözsüz eserle sınırlıdır. Türk mûsikîsinde şimdîye kadar göz ardı edilmiş ve tanımlanmamış bir konu olması bakımından çalışma önem arz etmektedir. Bundan sonra yapılacak pek çok araştırmaya kaynak teşkil edeceği için önemlidir.

2. YÖNTEM

Araştırmacı Modeli

Nitel araştırma olup, betimsel tarama modeli kullanılmıştır.

Evren-Örneklem

Türk mûsikîsi saz eserleri, örneklemi ise: Şerif Muhittin Targan'a âit “*Koşan Çocuk*” ve “*Kanatlarım Olsaydı*”, Hüseyin Sadettin Arel'e âit “*Fâni Hayat*” ve “*Zillerle Raks Eden Kız*” adlı eserleri oluşturmaktadır.

Verilerin Toplanması

Verilerin toplanmasında literatür tarama, doküman inceleme ve arşiv tarama teknikleri kullanılmıştır.

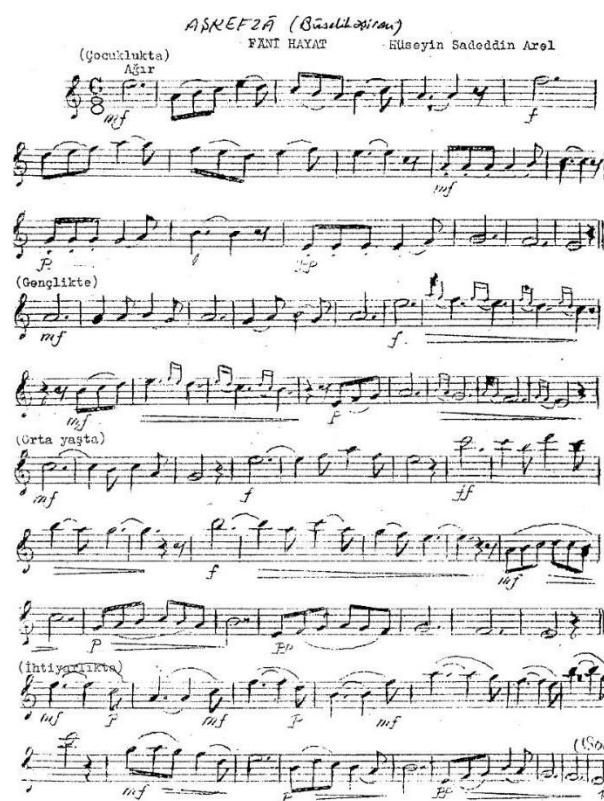
Verilerin Analizi

Çalışmada bestekârların sözsüz eserlerde mûsikî tasvîrini nasıl ifâde ettiğlerine ve bu anlatımda makam, usûl ve mûsikî unsurlarını nasıl kullandıklarına dâir sorulara cevap aranmıştır.

3. BULGULAR VE YORUMLAR

3.1. Hüseyin Sadettin Arel'in "Fâni Hayat" Bestesinde Mûsikî Tasvîri

Eser Aşkefzâ makamında ve Yürük Semâî usûlünde olup dört bölümden oluşmaktadır. Çocuklukta, Gençlikte, Orta Yaşıta, İhtiyarlıkta olmak üzere insan yaştısının dört farklı çağını dört bölüm olarak adlandırmış ve mûsikî tasvîriyle anlatmıştır. Çocuklukta, Gençlikte ve Yaşlılıkta bölümleri 16, Orta Yaşıta bölümü 24 ölçüden oluşmaktadır. Türk mûsikîsi saz eserlerinde her bölüm Hâne olarak adlandırıldığı halde Arel bu eserinde her bölüme bir ad vermiştir. Esere âit nota örneği aşağıda görülmektedir.



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Bölümlere âit mûsikî tasvirleri söyledir:

Cocuklukta: Bu bölüm makâmın tiz durak perdesi olan Hüseyinî perdesiyle başlamaktadır. Makam dizisinin en tiz perdesidir. İnsan hayatının başladığı en zirve noktası gibi düşünülebilir. Çocukların ince ve tiz frekanslara sahip olan ses tonlarına uygun olarak ninni yumuşaklığında duygulu ve sâkin ezgilerle bir çocuğun ruh hâlini tasvir etmektedir. Ezgiler son derece duygulu ve bir çocuğun mâsumiyetini anlatırcasına sâdedir. Vals edâsiyla dans edişi tasvir edilmiştir. Düğah ve Hüseyinî

perdelerinde aynı ezginin tekrarları bulunmaktadır. Bir çocuğun aynı şarkıyı söyleyerek farklı yerlerde dans edişini canlandırmaktadır. Sekvens cümleleriyle dansın sonuna ulaşır ve Rast, Acemâşiran ve Hüseyinâşiran perdeleriyle karara yönelir ve çocuk da kendi çağını tamamlamış olmaktadır.

Gençlikte: Ezgi Düğah perdesinden başlamaktadır. Düğah perdesi makâmin güçlü perdesidir. Bu bölümde ezgilerin karakteri değişmiştir. Daha net, keskin, kararlı ifadeler görülmektedir. Kendine güvenen, baskın karakterli olan, dediğini yaptırmaya çalışan, gergin, asabî gençlik döneminin hissiyâtı tasvir edilmiştir. Ezgideki inici mordanlarla asabiyet ve gerginlik hâlet-i rûhiyyesi tasvir edilmiştir. Gençlik çağы tiz perdelerden makâmin karar perdesine (Hüseyinâşiran perdesine) bu hâlet-i rûhiyye ile ulaşmakta ve dönemini tamamlamaktadır.

Orta Yasta: Aşkefzâ makâminin etkin perdeleri olan Hüseynî ve Düğâh perdeleri ilk iki bölümde kullanılmıştır. Bu bölüm Çargâh perdesiyle başlamaktadır. Çargâh perdesi makâmin destekleyici perdelerindendir. Güçlü, karar ve tiz durak perdelerine destek olarak makâmin oluşmasına büyük katkı sağlamaktadır. Aynı insan hayatında olduğu gibi orta yaşıların gençlere ve çocuklara vermiş oldukları destek gibidir. Orta yaştaki insanın hayatında yaşadığı olayların çoğalması, yaşanmışlıkların artması gibi müzik cümleleri de çoğalmıştır. Müzik cümlelerindeki ses alanı pestlerden tize genişlemiştir. Orta yaşta yaşanan hayat tecrübesini yaşamışlıklarını tasvir edercesine pek çok perde kullanılmıştır. Sâkin, vakurlu, efkârlı motif ve cümlelerin olduğu görülmektedir. Cümleler karar perdesine bu tasvirle ulaşmakta ve dönemini bölümünü tamamlamaktadır.

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İhtiyarlıkta: Bu bölüm de birinci bölümdeki gibi Hüseynî perdesinden başlamıştır. Aynı çocukluk çağındaki gibi. Yaşlı kişi çocuklaşmıştır. Çocuklar gibi başa dönülmüştür. Tiz perdelerden başlayan ezgiler inici-çıkıcı bir seyir göstermektedir. Efkârlı ve mütevekkil nağmelerle hayatın inişli-çıkışlı anları inici-çıkıcı seyirle tasvir edilmiştir. Cümleler karar perdesine bu tasvirle ulaşmakta ve eser Rast, Acemâşiran perdeleri gösterilerek Hüseyinâşiran perdesinde sonlanmaktadır. İhtiyarlık dönemi de tamamlanmaktadır.

3.2. Hüseyin Sadettin Arel'in "Zillerle Raks Eden Kız" Bestesinde Mûsikî Tasvîri

Eser, Bûselik makâmindâ, Semâî usulünde, dört bölümden oluşan bir Oyun Havasıdır. Bir İspanyol kızının zillerle dans edişini tasvir etmektedir. Eserin birinci bölümü aynı zamanda Nakarat bölümü olarak düşünülmüştür. Esere âit nota örneği aşağıda görülmektedir.



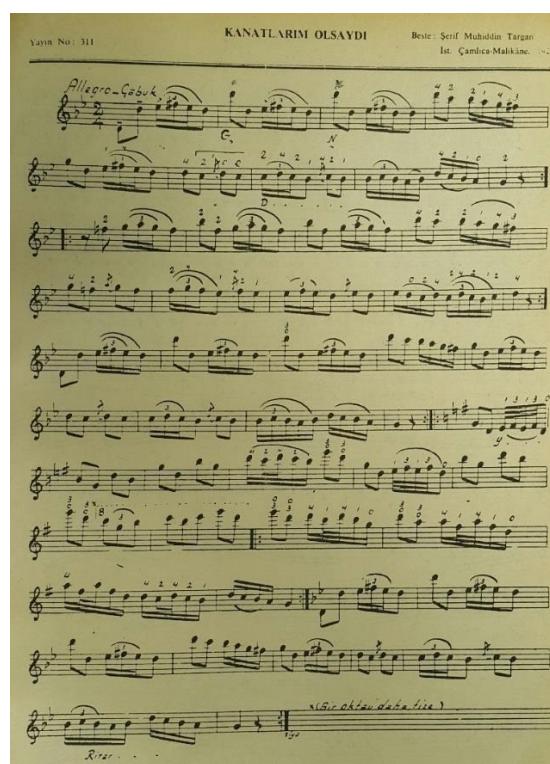
Eserin 1. Bölümünde (Nakarat) Dans eden İspanyol kızının kastanyet çalarken çakardığı ritmik hareketleri semâî usûlünde kullanılan tartımlarla tasvir edilmektedir. Hareketli ritmik tartımlarla hızlı bir dans söz konusudur. Her bölümün sonunda makâmın güçlü perdesinden karar perdesine inen ve yedenli karar veren bir teslim motifi bulunmaktadır. Bu motif karar perdesiyle sonlanmaktadır. Ezginin sonlanması dans eden kızın dansın sonundaki final hareketini tasvir eder niteliktedir.

2. Bölümde Zillerle dans eden kızının farklı tartımlarla ve İspanyol ezgilerinde yer alan kromatik yürüyüşlerle dansı tasvir edilmektedir.
3. Bölüm uzun seslerden oluşmaktadır. Bu bölümde Dans yavaşlamıştır. Adeta yürüyüş temposundadır. Buradan tekrar Nakarat bölümüne bağlanarak dans hızlanmaktadır.
4. Bölümde dans hırçın ve daha sert hareketlerle devam etmektedir. Ezgiler zorlaşmış ve tiz perdelere çıkmıştır. Tizlerden inici bir seyirle Hüseyinâşiran perdesine ulaşarak nakarat bölümündeki tartımlara ve dansa dönmektedir.

Eserin sonunda bir final bölümü bulunmaktadır. Burada bölüm sonrasında yer alan teslim motifi tizden ve pestten tekrarlanmış ve uzayan seslerden sonra Düğâh perdesindeki eşit ve staccato tartımlarla son perdeye ulaşarak dansın bitiş etkisi sağlanmaktadır. Böylece bir İspanyol dansının farklı ritmik hareketlerle oynanması ezgilerle ve tartımlarla tasvir edilmektedir.

3.3. Şerif Muhittin Targan'ın “Kanatlarım Olsaydı” Bestesinde Mûsikî Tasvîri

Japonya'da yaşayan bir arkadaşından gelen ve kendisini o uzak diyâra dâvet ettiğini bildiren cümleleri ihtiyâ eden mektubunu okuduktan sonra, duygularını dile getirmek üzere bestelediği bir eserdir. O gün için bir takım imkânsızlıklar sebebiyle isteyip de icâbet edemediği bu dâvete, “Kanatlarım olsaydı, uçup gelmek isterdim” sözünü tasvir ettiği, çok ünlenmiş bir eseridir (Karaca, 2001:47). Rahmi Kalaycıoğlu tarafından hazırlanmış olan Türk Mûsikîsi Bestekârları Külliyatı 23 numaralı fasikül Şerif Muhittin Targan'a ayrılmıştır. Burada yer alan eserin üzerindeki noftan da anlaşılacağı üzere 1924 yılında İstanbul-Çamlıca-Mâlikânede bestelemiştir (Kalaycıoğlu, 1977). Esere âit nota örneği aşağıda görülmektedir.



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Eser Nihavend makâmında ve Nim Sofyan usûlündedir. Nihavend makâmı dizisine sâhip bir eser olmakla birlikte hem ezgi hem de teknik olarak Batı mûsikîsi üslûbunda bestelenmiştir. Ud için bestelenmiştir. Diğer çalgılarla da çalınabilen bir eserdir. Üç bölümden oluşmaktadır. Birinci bölüm aynı zamanda nakarat olarak kullanılmaktadır. 1.,2. Bölümler 9'ar ölçü, 3. Bölüm 12 ölçüdür. Bir kuşun uçmasını, her seferinde daha da yükseklere çıkışmasını, kimi zaman zarif kimi zamansa kanat çırپışlarını kuvvetli hareketlerle tasvir eden bir eserdir. Uduн farklı tellerinde atlamlı, üçlemeli tartımlarla ve çarpma süslemeleri kullanarak ezgilerle ifâdelendirilmiş bir eserdir. Üçlü ve zaman zaman da Uzak Doğu coğrafyasının pentatonik müziğini çağrıştıran beşli atlamlı aralıklar duyulmaktadır.

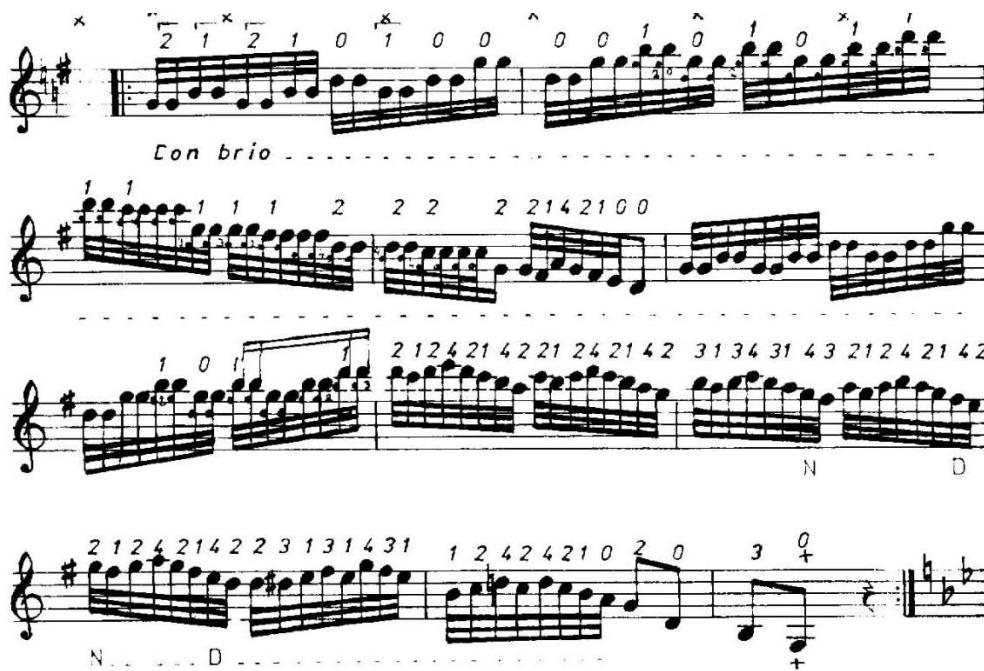
1. Bölümde Yegâh perdesinden başlayan ezgi Nevâ perdesine oradan da Tiz Neva perdesine sıçramaktadır. Bu sıçrayışlar flajöle teknikleriyle yapılmakta ve her sıçrayışın arasında Nevâ perdesi üzerinde onaltılık üçlemelerle kanat çırpımlarının tasvir edildiği notalar bulunmaktadır. Üç defa tekrarlayan bu kanat çırpma hareketlerinden sonra inici sıralı seslerle geri dönüş ezgileri başlamaktadır. Nevâ perdesi üzerinde üclemeye tartımları ve her seferinde küçük çarpma notalarıyla kuşun kanat çırpışları hissettirilmiş sonrasında inici ezgiyle karar perdesinde ezgi durmuştur. Kuşun kanatlarını çırparak uçması ve konması tasvir edilmiştir.
2. Bölümde ezgiler arasına Acem perdesinden başlayan ve Sümbüle perdesini de vurgulayan yine flajöle tekniğiyle icrâ edilen motifler yer almaktadır. Flajöle icrâları arasında bulunan üçlemelerle kuşun kanat çırpışları tasvir edilmektedir. Tiz Nevâ perdesine kadar yükselen ezgi Gerdâniye perdesine geri dönerek üçlemelerle makâmin güçlü perdesi olan Nevâ perdesinde karış göstermektedir. Kuşun kanat çırpışları ve Tiz perdelere yükselişi daha sonra da inici ezgilerle bir önceki perdeye göre daha yüksekte ve tizde olan bir yere çıkarak uçması ve orada duraklaması tasvir edilmiştir. Eser buradan aynı zamanda nakarat olan birinci bölüme dönmektedir.
3. Bölüm diğer böülümlere göre daha uzundur. Diğer böülümlerde sâkin ezgi hareketi birden zorlayıcı ve Yegâh perdesinden Tiz Tiz Gerdâniye perdesine kadar ulaşan bir yapıya bürünmektedir. Üçlü aralıklarla Tiz Gerdâniye perdesine yükselen ezgiyle kuşun uçuşu daha da ayrıntılı tasvir edilmektedir. Ancak bu bölümde ezgiler daha zorlayıcıdır. Udda en tiz ve en son perdelerden Tiz Tiz Gerdâniye perdesinden sonrası da kullanılmamaktadır. Kuş çıkışabileceği yüksekliğe kadar bu ezgilerle çıkmaktadır. Tiz Tiz Gerdâniye perdesinden inici on altılık ve otuz ikilik nota değerlikli tartımlarla ezgiler hızlıca karar perdesine ulaşarak durmaktadır. Kuşun bu uçuşu da farklı perdeler ve farklı tartımlar üzerinden tasvir edilmektedir. Bestekâr ud için bestelemiş olduğu bu eserde kuşun en tiz perdelere kadar çıkışını yüksekklere çıkış ve uçuş olarak düşünmüştür. Sekizli tizden icrâ edilmekte kuşun kanatları hızlanmakta ve en yüksek perdelerde adeta çırpılmaktadır.

3.4. Şerif Muhittin Targan'ın “Koşan Çocuk” Bestesinde Mûsikî Tasvîri

Nihavend makâmında Nim Sofyan usûlünde olan etüt ud için bestelenmiştir. Şerif Muhittin Targan'ın Çocuk Havası, Koşan Çocuk adını verdiği eserleri çocukları çok sevdiği için bestelediği eserlerdir. Koşan Çocuk adlı eserini 1924 yılı Nisan ayında Amerika Birleşik Devletlerine yaptığı yolculuğu sırasında Atlantik'te gemide bestelemiştir. Batı müziği üslûbuna sahip bir ezgi yapısı hâkimdir. Eserin başında Allegretto (çok hızlı) yazmaktadır. Ajilitesi yüksek bir eserdir.

Koşan Çocuk, üç bölümden oluşmaktadır. Bu bölümler, Nihavend, Mâhûr ve Nihavend makâmi dizilerine sahiptir. Ancak eserde gelenekte var olan makam seyirlerine bağlı ezgi yapısından ziyâde bu makam dizilerinin kullanımıyla oluşturulmuş minör ve majör dizilerine âit bir ezgi yapısı bulunmaktadır.

Sıra seslerle hızlıca başlayan ezgi bir çocuğun hızlıca koşmasını tasvir etmektedir. Bu koşma bazen düz bir çizgide koşan bazen de inici-çıkıcı ezgilerle daireler çizen bir koşmayı tasvir etmektedir. Dizi sesleri ve inici-çıkıcı seyirler udun bütün tellerinde yapılmaktadır. Çocuk farklı alanlarda farklı bölgelerde koşmaktadır. Ayrıca Yegâh, Nevâ ve Gerdâniye perdelerinin pedal ses olarak tuttuğu bölgelerde atlamlı aralıklar oluşmakta ve yine hızlıca icrâ edilmektedir. Burada da çocuğun atlayarak koşması tasvir edilmektedir. Yerinde koşar adımlarla hareket eden çocuk ise aynı perdede (Nevâ) tekrarlayan otuz ikilik notalarla tasvir edilmiştir. Buradan sonra yeni bir bölüm başlamaktadır. Majör ezgilerle ve üçlemeli aralıklarla yapılan ezgilerde adeta zıplayarak koşan çocuk tasvir edilmektedir. Esere âit nota örneğinden bir bölüm aşağıda görülmektedir.



Eserin son bölümünde Nihavend ezgilerle çocuğun düz bir çizgide koşması, daireler çizmesi, zıplayarak koşması bir özet hâlinde tasvir edilmiştir.

SONUÇ ve ÖNERİLER

Türk Mûsikî tasvîri içeren bestelerin pek çoğu bestekârin duygularını ve kültürel unsurları anlatan konuların işlendiği görülmektedir. Çalışmada incelediğimiz “Fâni Hayat”, “Koşan Çocuk” adlı eserler duyguların tasvîrini “Kanatlarım Olsaydı”, “Zillerle Raks Eden Kız” ise hem duyu hem de kültürel unsurları içeren mûsikî tasvîri örnekleridir. Kültürel unsurlar içeren

eserlerde tartım özellikleri, kullanılan aralıklar ezginin mûsikî tasvîrinin oluşturulmasında kullanılmıştır. Bunun yanı sıra süsleme ve icrâ teknikleri, nüanslandırma ve ifâde biçimleri açısından da Batı mûsikîsi uslûbunun önemli derecede etkisi olduğu görülmektedir. Türk mûsikîsi makam yapısına sâhip saz eserlerinde dahi Batı mûsikîsi kültüründen aktarılmış icrâ, süsleme ve ifâde tekniklerinin önemli ölçüde kullanıldığı tespit edilmiştir. Bu tür saz eserlerindeki icrâ tekniklerinin diğer saz eserlerine göre daha zorlayıcı olduğu, teknik olarak belli bir seviyede olmak gereği görülmüştür. Mûsikî tasvîrini yorumlayabilmek ve hissettirebilmek için notadan ziyade tasvir edilmek istenen duygunun ön plana çıkarılması gereği önemlidir.

Çalışmanın sonucunda sâzendelerin icrâ gücünü arttırmak için mûsikî tasvîri içeren yeni eserlerin bestelenmesi önerilmektedir. Bu besteler bütün Türk mûsikîsi çalgıları için ayrı ayrı bestelenmelidir. Ayrıca toplu icrâlar için partisyonlu icrâlara yönelik mûsikî tasvîri içeren bestelerin yapılması sâzendeler için faydalı olacaktır. Sâzendelerin yorumculuk ve teknik gücünü artıracaktır. Mûsikî tasvîri konuları çeşitlendirilmelidir. Türk toplumunun destansı kahramanlıklarından, geleneğini-göreneğini, oyunlarını, yaştalarını ifâde eden olaylara ve konulara âit mûsikî tasvîri içeren saz eserleri bestelerinin yapılması, Türk saz mûsikîsi repertuvarını daha da zenginleştirecektir.

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THE MEDIATING ROLE OF CRITICAL THINKING IN THE RELATIONSHIP BETWEEN EFL LEARNERS' WRITING PERFORMANCE AND THEIR LANGUAGE LEARNING STRATEGIES

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ABSTRACT

This research investigated the mediation role of critical thinking (CT) about the relationship between the important ways of language learning and EFL learners' writing strategies. The population was 235 Iranian EFL learners. To homogenize the participants, Oxford Placement Test (OPT) was run and 100 intermediate learners were selected. Then, two valid questionnaires of Ricketts' (2003) Critical Thinking Disposition and Oxford's (1990) Strategy Inventory for Language Learning were administered. Then, the participants sat for a writing test. The data were analyzed through SPSS (25.00). Results showed that there was a significant relationship between a) learning strategies and learners' writing performances b) the sub-sets of learning strategies and learners' writing performances, and c) CT and learners' learning strategies. However, CT didn't play a mediating role in the relationship between intermediate EFL learners' learning strategies and their writing performance. The results may provide insights into helping EFL learners to think and write critically.

Key Words: EFL learners, Critical thinking, Language learning strategies, mediating role, writing performance.

Introduction

Recently, the focus of teacher-oriented viewpoint has changed to learner-centered perspective (Al-Sharadgah 2014; Díaz Larenas, Leiva, and Navarrete, 2017; Reshadi and Aidinlou, 2012; Yarali, K. T., & Aytar, 2021). Learners are now in charge of their own learning more than ever. In other words, more learners take more responsibility in order to make the best use of language learning strategies (LLSs) and be conscious of their own individual needs (Al-Jarrah, Mansor, Talafhah, Al-Jarrah, and Al-Shorman, 2019; Parra, Barriga, Díaz, & Cuesta, 2021; Teng, 2020). New learning strategies are introduced to the learners to develop their personable attainments in the language learning process (Sutiani, Situmorang, & Silalahi, 2021).

Learning strategies are made up of mental processes - thoughts or behaviors - that help learners understand, learn, or remember new information. Learning strategies are made up of mental processes - thoughts or behaviors - that help learners understand, learn, or sustain new information

(Jiang, Zhang, Li, & Luo, 2021; Panahandeh & Esfandiar, 2014). The concept of learning strategies plays a key role in the study of second or foreign language learning. In spite of the fact that many studies have been done to implement learning strategies, the idea of learning strategies is still obscure. Chang, et al., (2021); Dörnyei and Skehan (2003) ; Rajaee, Modaberi, and Ardestani (2017) assert that the opinion behind learning strategies has not been critically examined because the concepts and definitions have been inconsistent so far.

Learning strategies are defined as "proceedings or stages used by a learner to comfort the attainment, storage, detection or use of information" (Rigney, 1978 cited in Aslan, 2009). O'Malley and Chamot (1990) defined learning strategies as the particular thoughts or compartments that everybody uses to understand, learn, or maintain new information. On the other hand, Chamot (2004) says that learning strategies are the purposive thoughts and behavior that students take in order to earn a learning goal.

Successful learners have their own unique techniques to learn. Stern (1975) and Rubin (1975) have been the first scholars who analyze the idea of successful language learning. This idea makes us more curious to discover more about the nature of the learning and learning process. Consequently, the majority of the research performed until now has been focusing on the detection, explanation, and categorization of learning strategies (Tran, & Tran, 2021).

According to Oxford (1990), learning strategies are categorized into direct and indirect strategies. Also, each category is divided into subcategories which are placed under the labels. Direct strategies are directly used by learners in the learning process to produce the target language. These strategies include memory strategies which are responsible for retrieving and storing information, cognitive strategies which are used by learners to process new information, and compensation strategies are used by learners to compensate for lack of enough knowledge in the target language (Goudarzi & Ghonsooly 2014; Reshadi and Aidinlou, 2012; Zarrinabadi, N., Rezazadeh, & Chehrazi, 2021).

As Oxford (1990) says these strategies assist students to be more independent, to identify their learning strengths and weaknesses, and to be self-reliant in their language learning process. Therefore, learning strategies help learners to become competent in using a language.

Based on Oxford (1994), strategies are techniques or behaviors that are used unconsciously by learners to improve their understanding and using the target language. O'Malley and Chamot (1990, p. 242) proposed a very comprehensive classification of learning strategies. Their tri-faceted classification is as follows:

1. Metacognitive strategies: These strategies include supervisory processes in planning for learning, supervising one's understanding and production, and assessing to what extent individuals have achieved a learning goal.

2. Cognitive strategies: Mentally speaking, manipulating the materials to be learned through interaction by visualizing mental pictures or connecting the material with the previously learned items. Physically speaking, categorizing the items to be learned meaningfully or summarizing the significant items to be learned.

3. Social-affective strategies: Learner's interacting with others to look for help in learning such as posing questions for cooperation or using some sort of affective to control learning.

According to Ruggeiro (1984), critical thinking is "the precise inspection of a suggested solution of problem or issue to specify both its strength and weak points. In short, it means assessment and adjudication" (p. 129). Djamas, and Tinedi, 2021; NematTabrizi and Rajaee (2016) and Wilson (1988) also note that critical thinking involves predicting consequences, formulating questionnaires, and replying to text using one's values and credences.

On the other hand, Thistlethwaite (1990) noted that "the critical thinking skills often mentioned in textbooks for teaching critical thinking are similar to or may be identical to those mentioned in the books read as critical reading skills" (p. 587). For example, some of the skills that can be found in critical reading textbooks are preventing judgment, questioning, being pliable, deducing, predicting consequences, and identifying (Azizi, Nemati, & Tavasoli Estahbanati, 2017; Saenab, Zubaidah, Mahanal, & Lestari, 2021; Sherborne, 1981; Reshadi and Aidinlou, 2012; Yang Liheng and Zhang Shan, 2017).

Writing is a complex process that needs much effort to be completed, according to Golpour (2014; Myles, 2002; Nejmaoui, 2019; Wale, & Bogale, 2021), writing is the skill that requires learning and practicing. Also, El-Freihat, and Al-Shbeil, (2021); Reid (1993), and Langan (1987) note that writing is a craft skill that can be taught and learned. For effective writing in EFL classrooms, ELT practitioners (Badger & White, 2000; Flower & Hays, 1981; Gee, 1997; Paltridge, 2004; Rahayu, 2021; White & Arndt, 1991; Uzawa, 1996) suggest three following approaches: product, process and genre. According to Indah (2017); Liu and Hansen (2002) and Zamel (1983), process approach focuses on the composing process, whereby writers express their notions as they attempt to transfer the meaning. According to Gabrielatos (2002) and Hall (2017), a product approach is a traditional approach, in which students are motivated to copy a model text while the genre approach is the newcomer and an outcome of the communicative language teaching approach. The main focus of this approach is for the reader in order to be successfully accepted by its readership.

The word “writing” means the text in written form in the process of thinking, constructing, and coding language into such text (Irzawati, Hasibuan, & Giovanni, 2021; Tabibian and Heidari-Shahreza, 2016). Since writing is one of the skills in the first and second language learning, there is a relationship among all of the skills. As an instance, Harmer (1991); Rahimi and Karbalaei (2016); Taghinezhad, Riasati, Rassaei, and Behjat, 2018) and Yan (2018) believe that one skill cannot be carried out without the other and it is impossible to communicate without listening and people seldom write without reading.

This study was to examine the relationships between writing performance and language learning strategies (cognitive, metacognitive, social, affective, memory-related, and compensation). This study also intended to figure out the relationship between intermediate EFL learners' critical thinking and their writing performances.

Based on the study, one might also conclude that strategies seemed to play a more important role in the performance of learners especially their writing performances. Therefore, this study had useful contributions for students, teachers, and curriculum designers.

In the first place, the results of this study could help teachers to know learner's plans in learning writing and assist their students to be responsive to using learning plans in their learning steps, and create a good learning context for using learning plans. Thus students were able to become self-sufficient and accept responsibility for their own learning.

Secondly, curriculum developers could take advantage of the findings to include learning strategies training into the curriculum. As a result, students were able to use strategies in their learning process more easily and finally, the results might pave the way for improving the research findings.

The current study can also assist to solve the problems of EFL teachers and learners in enhancing the level of cognitive and meta-cognitive abilities. The results may apprise educators that assisting learners increase their level of analysis and monitoring in learning is abundant importance in learning.

This study attempted to find out if there was any relationship between intermediate EFL learners' learning strategies and their writing performances. To this purpose, the following research questions were proposed:

1. Is there any significant relationship between intermediate EFL learners' learning strategies and their writing performances?

2. Is there any significant relationship between intermediate EFL learners' cognitive strategy and their writing performances?

3. Is there any significant relationship between intermediate EFL learners' metacognitive strategy and their writing performances?

4. Is there any significant relationship between intermediate EFL learners' social strategy and their writing performances?

5. Is there any significant relationship between intermediate EFL learners' affective strategy and their writing performances?

6. Is there any significant relationship between intermediate EFL learners' compensation strategy and their writing performances?

7. Is there any significant relationship between intermediate EFL learners' memory-related and their writing performances?

8. Is there any significant relationship between intermediate EFL learners' critical thinking and their writing performances?

9. Is there any significant relationship between intermediate EFL learners' learning strategies and their critical thinking?

10. Does critical thinking play a mediating role in the relationship between intermediate EFL learners' learning strategies and their writing performances?

Method

Participants

The participants were all EFL intermediate learners at language institutes in Zanjan and chosen on the basis of stratified random sampling. The Oxford Placement Test (OPT) was applied to participants in order to ensure the homogeneity of the participants and their ability to understand and complete the questionnaire. In the end, 100 students were chosen, ranging from 18 to 35 years of age.

Instruments

In line with the purposes of this research, three instruments were used:

1) **Oxford Placement Test (OPT):** To meet the aforesaid purposes, at first a language skill test version 2 including 60 items matching cloze passages and multiple-choice questions were managed to sure the concord of the learners. The test items most focused on grammar and vocabulary. The participants were given 30 minutes to answer. Those learners whose scores fell between 30 and 39 were considered as intermediate ones.

2) **Ricketts' (2003) Critical Thinking Dispositions Questionnaire:** It was used to measure the intermediate EFL learners' critical thinking disposition. The questionnaire contained 33 statements on the Likert 5-point scale. The minimum, mean and maximum scores that could be achieved were 33, 99, and 145. Three sub-components of the questionnaire are called Creativity with 11 sentences, Sophistication with 9 statements and Dedication with 13 statements. The

Cronbach alpha coefficients for the invention, sophistication and commitment subcomponents are 0.64, 0.53, and 0.82, respectively. The reliability coefficient of the instrument was stated to be approximately 0.76 by Pakmehr, et al., (2010).

3) **Oxford (1990) Strategy Inventory for Language Learning Questionnaire:** The next inventory included in this analysis was the Strategy Inventory for Language Learning (SILL) questionnaire used to classify LLS students. The SILL questionnaire was developed by Oxford (1990) and was used without alteration in this research. It comprised 50 items which included 6 types of LLSs: recall strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. The questionnaire included 1 (Never or almost never true of me), 2 (Usually not true of me), 3 (somewhat true of me), 2 (usually true of me), and 5 (always or almost always true of me).

Writing Performance

In order to measure the writing performance of the participants, they were asked to sit for a writing exam in the class. An argumentative topic titled "*Using a computer every day can have more negative than positive effects on your children. Do you agree or disagree?*" was introduced to the intermediate learners to compose a well-formed essay on.

However, there were many different types of rubrics in the literature for assessing writings. One of the appropriate scales for rating the writing of learners was Cooper's (1977) scale. This rubric includes different criteria for assessing learning writing performance. Cooper's (1977) checklist is shown below:

Rating scales covered "Task Achievement", "Coherence and Cohesion", "Lexical Resource" and "Grammatical Range and Accuracy".

In holistic grading method, by which the reader assigns a single score from 0 to 6 (0, 1, 2, 3, 4, 5, or 6) to an essay based on overall writing quality, as follows:

Cooper's Classification of Writing Rating Scale

Aspects	Descriptions of performance	Scores 0-6
Task Achievement		
Coherence and Cohesion		
Lexical Resource		
Grammatical Range		
Accuracy		

- 6 — outstanding
- 5 — very good
- 4 — good
- 3 — adequate
- 2 — less than adequate
- 1 — poor
- 0 — no substantive response

Each essay was scored on the basis of the four scales of “Task Achievement”, “Coherence and Cohesion”, “Lexical Resource” and “Grammatical Range” and “Accuracy”. In the end, the average of the five scales showed the last score given to any essay by each rater. Subsequently, the average score given by the two raters represented the writer’s final score.

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Procedure

In order to obtain fair answers to the study questions alluded to above, the following steps have been taken: first, the Oxford Placement Test was spread among EFL students from different institutes in Zanjan to assess the homogeneity of the participants and to choose advanced language learners. One hundred participants receiving the scores from 30 to 39 were selected as the final sample. Second, Ricketts' (2003) Critical Thinking Dispositions Questionnaire was distributed among the intermediate EFL learners. The questionnaire included 33 - Next, the Oxford (1990) Approach Inventory questionnaire for language learning was administered to chosen intermediate learners (SILL). It was a 50-item questionnaire, a 5-point Likert scale of 1 (never or almost never applies to me) to 5 (always or almost always applies to me).

Afterward, the participants were asked to sit for an essay writing test. An argumentative topic titled “*Using a computer every day can have more negative than positive effects on your children. Do you agree or disagree?*” were introduced to the intermediate earners to compose a well-formed

essay on. All the essays were scored by two raters based on Cooper's (1977) rubric scale. The average score given by the two raters accounted for the learners' final writing score.

In the end, the scores of their writing performances as well as the data gathered from the SILL and Critical Thinking Disposition questionnaires were put into SPSS version 25 to be calculated. The study was an ex-post – facto design since there were no treatments at all. Having collected the results, the researcher recorded the scores in computer files for statistical analysis using the Statistical Package for the Social Sciences (SPSS) version 25.0. After homogenizing the students as intermediate, in order to measure the relationship between the variables (SILL and SILL components and writing performance), since the normality was met, seven Pearson correlation tests were conducted. In addition, in order to find if there was a significant relationship between critical thinking and writing performance, another Pearson correlation test was run. Furthermore, the Pearson correlation test was conducted to measure the relationship between learning strategies and intermediate EFL learners' critical thinking as a whole. Finally, in order to figure out whether Critical thinking would play a mediating role in the relationship between learning strategies and writing performance Sobel test was used.

Results

This study aimed at investigating the mediating role of critical thinking in the relationship between learning strategies, including cognitive, meta-cognitive, memory-related, compensation, social, and affective strategies, and intermediate EFL learners' writing performance. The normality assumption was met. As displayed in Table 1, the p-value in all the variables is more than .05 ($p > .05$), then we can prove the normality of the data.

Table 1

Normality Tests: One-Sample Kolmogorov-Smirnov Test

Variables	Sig	Decision	Test Result
Total strategies	0.163	The null hypothesis is accepted	Distribution is normal
cognitive strategy	0.097	The null hypothesis is accepted	Distribution is normal
meta-cognitive strategy	0.189	The null hypothesis is accepted	Distribution is normal
social strategy	0.20	The null hypothesis is accepted	Distribution is normal
affective strategy	0.20	The null hypothesis is accepted	Distribution is normal
compensation strategy	0.095	The null hypothesis is accepted	Distribution is normal
memory-related strategy	0.183	The null hypothesis is accepted	Distribution is normal
Critical thinking	0.20	The null hypothesis is accepted	Distribution is normal
writing performances	0.112	The null hypothesis is accepted	Distribution is normal

Based on statistics, when $P>0.05$, it could be concluded that all the variables benefit from a normal distribution. Thus, the researcher was allowed to utilize parametric analysis of the data.

Study questions are raised again in this segment and, depending on the interpretation of the evidence for each question, null assumptions are accepted or not. The related descriptive analysis of all variables will be discussed before defining the inferential analysis:

Table 2					
Descriptive statistics of the research variables					
	N	Minimum	Maximum	Mean	Std. Deviation
Total strategies	100	60.00	235.00	195.20	3.21
cognitive strategy	100	21.00	65.00	56.25	2.36
meta-cognitive strategy	100	13.00	42.00	32.28	1.62
social strategy	100	8.00	27.00	23.65	2.39
affective strategy	100	9.00	28.00	25.45	2.85
compensation strategy	100	8.00	25.00	22.91	5.17
memory-related strategy	100	11.00	42.00	34.62	3.09
Critical thinking	100	45.00	136.00	112.56	2.99
writing performances	100	2.00	6.00	4.22	3.27

As can be seen in Table 2, regarding the number of the participants ($N= 100$), mean and the SD of writing performance are 4.22 and 3.27 respectively. The means for critical thinking and learning strategies are 112.56 and 195.20 respectively.

Research Questions

1. Is there any significant relationship between intermediate EFL learners' learning strategies and their writing performances?

A Pearson correlation was run to probe into any significant relationship between Intermediate EFL students' learning strategies and their writing performance. Based on the results displayed in Table 4.3 ($r (98) =0.865$, $P < .05$ representing a large effect size) it can be concluded that there was a significant relationship between learning strategies and writing performance. Thus the first null-hypothesis was rejected.

Table 3

Pearson Correlation: learning strategies with writing performances

		learning strategies
	Pearson Correlation	0.865
writing performances	Sig. (2-tailed)	0.000
	N	100

**. Correlation is significant at the 0.01 level (2-tailed).

2. Is there any significant relationship between intermediate EFL learners' cognitive strategy and their writing performances?

Another Pearson correlation was run to probe any significant relationship between Intermediate EFL students' cognitive strategy and their writing performance. Based on the results displayed in Table 4.4 ($r (98) = 0.668$, $P < .05$), it can be concluded that there was a significant relationship between cognitive strategy and writing performance. Thus the second null-hypothesis was rejected.

Table 4

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Pearson Correlation: cognitive strategy with writing performances

		cognitive strategy
	Pearson Correlation	0.668
writing performances	Sig. (2-tailed)	0.000
	N	100

**. Correlation is significant at the 0.01 level (2-tailed).

3. Is there any significant relationship between intermediate EFL learners' meta-cognitive strategy and their writing performances?

Another Pearson correlation was run to probe any significant relationship between Intermediate EFL students' cognitive strategy and their writing performance. Based on the results displayed in Table 4.5 ($r (98) = 0.872$, $P < .05$), it can be concluded that there was a significant relationship between meta-cognitive strategy and writing performance. Thus the third null-hypothesis was rejected.

Table 5

Pearson Correlation: metacognitive strategy with writing performances

		cognitive strategy
	Pearson Correlation	0.872
writing performances	Sig. (2-tailed)	0.000
	N	100

**. Correlation is significant at the 0.01 level (2-tailed).

4. Is there any significant relationship between intermediate EFL learners' social strategy and their writing performances?

Another Pearson correlation was run to probe any significant relationship between Intermediate EFL students' social strategy and their writing performance. Based on the results displayed in Table 4.6 ($r (98) = 0.75$, $P < .05$), it can be concluded that there was a significant relationship between social strategy and writing performance. Thus the fourth null-hypothesis was rejected.

Table 6

Pearson Correlation: social strategy with writing performances

		social strategy
	Pearson Correlation	0.775
writing performances	Sig. (2-tailed)	0.000
	N	100

**. Correlation is significant at the 0.01 level (2-tailed).

5. Is there any significant relationship between intermediate EFL learners' affective strategy and their writing performances?

Another Pearson correlation was run to probe any significant relationship between Intermediate EFL students' affective strategy and their writing performance. Based on the results displayed in Table 4.7 ($r (98) = 0.790$, $P < .05$), it can be concluded that there was a significant relationship between affective strategy and writing performance. Thus the fifth null-hypothesis was rejected.

Table 7

Pearson Correlation: affective strategy with writing performances

affective strategy		
Pearson Correlation	0. 790	
writing performances	Sig. (2-tailed)	0.000
N		100

**. Correlation is significant at the 0.01 level (2-tailed).

6. Is there any significant relationship between intermediate EFL learners' compensation strategy and their writing performances?

Another Pearson correlation was run to probe any significant relationship between Intermediate EFL students' compensation strategy and their writing performance. Based on the results displayed in Table 4.8 ($r (98) = 0.767$, $P < .05$), it can be concluded that there was a significant relationship between compensation strategy and writing performance. Thus the sixth null-hypothesis was rejected.

Table 8

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Pearson Correlation: compensation strategy with writing performances

compensation strategy		
Pearson Correlation	0. 767	
writing performances	Sig. (2-tailed)	0.000
N		100

**. Correlation is significant at the 0.01 level (2-tailed).

7. Is there any significant relationship between intermediate EFL learners' memory-related strategy and their writing performances?

Another Pearson correlation was run to investigate whether there was any significant relationship between Intermediate EFL students' memory-related strategy and their writing performance. Based on the results displayed in Table 4.9 ($r (98) = 0.765$, $P < .05$), it can be concluded that there was a significant relationship between memory-related strategy and writing performance. Thus the seventh null-hypothesis was rejected.

Table 9

Pearson Correlation: memory-related strategy with writing performances

memory strategy		
	Pearson Correlation	0. 765
writing performances	Sig. (2-tailed)	0.000
N		100

**. Correlation is significant at the 0.01 level (2-tailed).

8. Is there any significant relationship between intermediate EFL learners' Critical thinking and their writing performances?

In order to find the relationship between Intermediate EFL students' critical thinking and their writing performance., a Pearson correlation was run. Based on the results displayed in Table 4.10 ($r (98) =0.843$, $P < .05$.) it can be concluded that there was a significant relationship between critical thinking and writing performance. Thus the eighth null-hypothesis was rejected.

Table 10

Pearson Correlation: CT with writing performances

CT		
	Pearson Correlation	0. 843
writing performances	Sig. (2-tailed)	0.000
N		100

**. Correlation is significant at the 0.01 level (2-tailed).

9. Is there any significant relationship between intermediate EFL learners' learning strategies and their critical thinking?

In order to find the relationship between Intermediate EFL students' learning strategies and their critical thinking., a Pearson correlation was run. Based on the results displayed in Table 4.11 ($r (98) =0.946$, $P < .05$.) it can be concluded that there was a significant relationship between critical thinking and learning strategies. Thus the ninth null-hypothesis was rejected.

Table 11

Pearson Correlation: CT with learning strategies

Learning strategies		
	Pearson Correlation	0. 946
CT	Sig. (2-tailed)	0.000
	N	100

**. Correlation is significant at the 0.01 level (2-tailed).

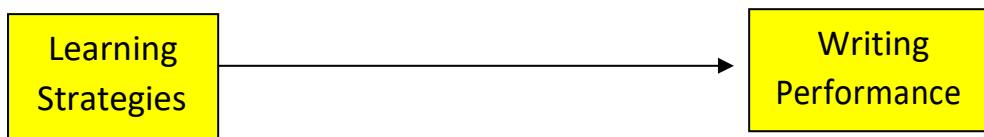
10. Does critical thinking play a mediating role in the relationship between intermediate EFL learners' learning strategies and their writing performances?

The following conceptual model was used to illustrate the direct impact of learning strategies on writing performance.

$$c = \mathbf{0.847}$$

$$S_c = \mathbf{0.05}$$

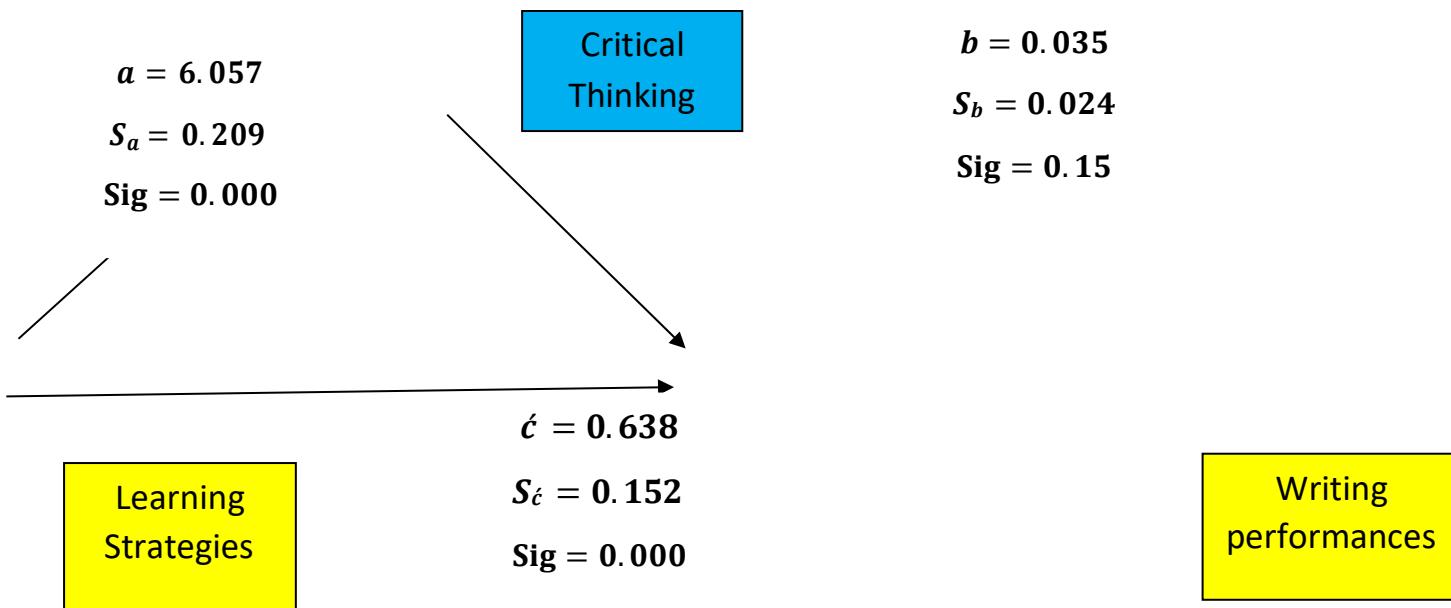
$$\mathbf{Sig} = \mathbf{0.000}$$



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As it is shown, the direct impact of learning strategies on writing performance is 0.847, with the SD of 0.05. Regarding the fact that $p < 0.05$, it is believed that direct impact is significant.

The conceptual model below shows the mediating role of critical thinking in the relationship between learning strategies and writing performance:



As depicted above, the impact of the mediating role of critical thinking (CT) on writing performance was 0.035 with the SD of 0.024. Due to the fact that P> 0.05, it is concluded that the impact of CT on writing performance is not significant.

As also illustrated above, the impact of learning strategies on CT is 6.057 with the SD of 0.209. Due to the fact that P< 0.05, it is concluded that the impact of learning strategies on CT is significant.

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Besides, the impact of learning strategies on writing performance, with the mediating role of CT is 0.638, SD= 0.152. Regarding the fact that p< 0.05, it is concluded that the impact of learning strategies on writing performance, with the mediating role of CT, is not significant because the Z value of the Sobel test is 1.46 and p> 0.14. Thus, CT does not play a mediating role in the relationship between learning strategies and writing performance.

Discussion

In this report, as stated earlier, an effort was made to find answers to all research questions concerning the relationship between the three variables CT, learning strategies, and writing efficiency. Reasonable methods have been used to obtain the answers needed for each question. The study found that high CT students outperformed low CT students. Cognitive and metacognitive techniques are not independent; they operate together as learners undertake the process of writing.

Both learning strategies and CT played an important role in students' writing performance. CT is highly related to writing performance and it was proved those with high CT did better in their writing performance, especially when the subject was a bit controversial. Furthermore, it was

shown that utilizing learning strategies would lead to an improvement in learners' writing performance. In other words, the more use of strategies, the better scores in writing performance. As seen before, the first null hypothesis stating, 'There is no significant relationship between intermediate EFL learners' learning strategies and their writing performances' was rejected. With regards to the statistical analysis and regarding the fact that $p < 0.05$, it could be concluded that there is a significant relationship between intermediate EFL learners' learning strategies and their writing performance.

In addition, the other six null hypotheses stating 'there are no significant relationships between intermediate EFL learners' learning strategies subsets, including cognitive, metacognitive, affective, social, memory-related, and compensation strategies and their writing strategies were all rejected, meaning all the six subsets were significantly correlated with writing performances.

This study was in line with Al-Jarrah, Mansor, Talafhah, Al-Jarrah, and Al-Shorman's (2019) and Chang, et al., (2021) study in that metacognitive strategies together with its subsets of planning, organizing, and evaluating strategies are related to EFL learners' writing performances. Besides, this study also confirmed Yang Liheng and Zhang Shan's (2017) findings that there was a positive correlation between English academic achievement and metacognition. In harmony with Jiang, Zhang, Li, & Luo, (2021) and Teng (2020), metacognitive strategies could yield the highest mean scores of EFL learners' writing performance.

In congruence with the finding of Parra, Barriga, Díaz, & Cuesta, (2021); Yan (2018), this study showed that there was a positive correlation between cognitive and metacognitive strategies of learners with their writing performances.

Compatible with the findings of Díaz Larenas, Leiva, and Navarrete (2017) and Rahayu, (2021), this study also showed that metacognitive and cognitive strategies would result in a betterment of EFL learners' writing performance.

As Díaz Rodríguez (2014) asserts, this study also illustrated that cognitive and metacognitive strategies are not independent from one another; they work together while the learner is performing the task of writing.

In accordance with Rajaee, Modaberi, and Ardestani's (2017) outcome, cognitive and metacognitive strategies would affect Iranian intermediate EFL learners' writing performance. Meanwhile, in line with Azizi, Nemati, and Tavasoli Estahbanati (2017), this study also confirmed that metacognitive strategies would contribute to a higher level of proficiency in writing.

In addition, as NematTabrizi and Rajaee (2016) and Tran, and Tran, (2021) put forwards, this study also concluded that both cognitive and metacognitive writing strategies would help learners

to improve their writing. Besides, in agreement with Panahandeh and Esfandiar (2014), this study showed that metacognitive strategies were positively correlated with writing performance.

However, as opposed to Rahimi and Karbalaei (2016) who didn't find any relationship between the use of metacognitive strategies and writing performance of EFL Iranian learners, this study concluded that metacognitive strategies were highly correlated with writing performance.

Compatible with Goudarzi and Ghonsooly's (2014); Wale, and Bogale, (2021) findings, the findings of this study depicted that metacognitive awareness strategies highly affect achievement scores, and there was a significant correlation between metacognitive awareness strategies and their task performance.

With regards to the eighth null hypothesis stating 'There is no significant relationship between intermediate EFL learners' critical thinking (CT) and their writing performance', it must be added that this null hypothesis was rejected as well, meaning intermediate EFL learners' critical thinking was significantly correlated with writing performance.

As Nejmaoui (2019) and Saenab, Zubaidah, Mahanal, & Lestari, (2021). claim, this study proved that critical thinking plays a great role in EFL learners' writing performances. Furthermore, consistent with the finding of Hall (2017), this study concluded that critical thinking could lead to an improvement in EFL learners' writing performances. Moreover, in agreement with Indah (2017) and Yarali, & Aytar, (2021), this study also stated that writing performance of EFL learners was influenced by critical thinking. Furthermore, in line with Al-Sharadgah (2014), this study also depicted that those benefiting from a high level of critical thinking would show a greater improvement in their writing. In line with Taghinezhad, Riasati, Rassaei, and Behjat (2018), this study proved that critical thinking would end in an improvement in students' writing performance. This study also proved Golpour's (2014) finding that critical thinking would play a crucial part in learners' writing performance. In other words, high critical thinkers were better in writing compared to low critical thinkers.

With respect to the ninth null hypothesis stating 'there is no significant relationship between intermediate EFL learners' learning strategies and their critical thinking, it could be mentioned that this null hypothesis was rejected as well. It must be confessed that these two variables were significantly correlated.

This study was in line with Bagheri (2015) and Zarrinabadi, Rezazadeh, and Chehrazi's, (2021) study that there was a significant relationship between CT and language learning strategies. Besides, this study also confirmed Nikoopour, Amini Farsani, and Nasiri (2011). They surveyed the relationship between CT and the use of language learning strategies by Iranian language learners. Their findings revealed a significant correlation between cognitive, meta-cognitive, and

social strategies with critical thinking. However, as opposed to the findings of this study, no relationship was discovered between CT and memory, compensation, and affective strategies. Besides, congruent with the findings of Ku, Kelly & Ho, Irene (2010), this study found “good critical thinkers” are more active in meta-cognitive activities. Furthermore, this study proved Mahmoodi and Dehghannezhad’s (2015) findings that there was a significant and positive correlation between CT and language learning strategies.

Regarding the tenth null hypothesis stating that ‘Critical thinking does not play a mediating role in the relationship between intermediate EFL learners’ learning strategies and their writing performances’, based on the statistical analysis and due to the fact that the Z value of the Sobel test is 1.46 and $p > 0.05$, it must be affirmed that the null hypothesis was accepted as CT did not play a mediating role in the relationship between intermediate EFL learners’ learning strategies and their writing performances. As opposed to the researcher’s expectations, and as opposed to the fact that CT was correlated with both learning strategies as well as writing performance, this study didn’t prove that CT plays a significant role in the relationship between the other two variables. In other words, and surprisingly speaking, CT does not guarantee the learners’ improvement in the writing performance.

Conclusions

In the present research, an effort was made to examine the importance of CT to learners in general and to their writing output in particular. As stated earlier, this analysis concluded that there was a substantial association between CT and the writing achievement of EFL intermediate learners. In addition, there was a major association between learning methods and writing achievements. In addition, there was a substantial association between the six subgroups of learning strategies and writing results.

It was concluded that all the sub-sets of cognitive, metacognitive, memory-related, social, affective, and compensation strategies were highly correlated with writing performance, meaning the use of these strategies would lead to a better performance in the task of writing.

In addition, as opposed to what the researcher had envisaged, it was proved that although CT had correlations with both writing performance and learning strategies, it did not play a mediating role in the relationship between learning strategies and writing performance of intermediate EFL learners.

The findings of the present study have shown that more concentration should be placed on critical thinking to enhance students’ academic writing performance. Based on the outcomes of the study, it could be concluded that students benefiting from a very high level of CT did better in their performances as compared with those lacking such a high degree.

The findings of this study demonstrate that the students could be more prosperous in their performances if they learn to think critically and if they are aware of the strategies. This attitude can be helpful for all Iranian English students who wish to be competent in perfect performances especially in their writing performances.

Construction of CT and learning methods has given rise to the viewpoint of looking at teaching, training and evaluation differently. Taking into account the needs, desires, and abilities of students, CT pedagogy provides resources for authentic learning.

The findings of this study depict that the students could be more successful writers if they boost their CT as well as their learning strategy use. This can help all Iranian English students who long to be proficient in perfect performances in their writing tasks.

In addition, educators can forecast effective language behaviors by defining CT learner profiles at various stages of growth. Teachers must also understand that different CT-level learners vary in their learning. Teachers might benefit from the findings of the study to realize their students' levels of CT and their use of learning strategies would help them develop a sense of competence while being prepared for a performance. CT is a vital tool that would alleviate writing performance and operate as a practical way to improve the quality of the language learning.

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THE CHANGE OF THE PERCEPTION OF LUXURY IN FASHION

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ABSTRACT

Fashion has dragged the masses with its great impact on human life for centuries, and has accelerated consumption with its ever-changing dynamic structure. In the multi-billion-dollar fashion sector where this consumption wheel is spinning, fashion companies benefit from all the blessings of marketing and make effective fashion marketing plans in order to become fashion brands and to reach millions of people by being recognized in the global arena.

These brands reach out to their customers' self-images by offering products that symbolize the lifestyles they have or would like to have, and thus establish emotional bonds with them.

Today, with the globalization process, there have been changes and developments in many areas. Technological developments, which are one of the factors that accelerate this process, have lost the importance of the borders of the country and made it easier to reach the expanding markets. Thus, the concept of luxury has changed and luxury became massive. While the luxury phenomenon was only in the consumption area of a certain social class in the 20th century and before, today the mass that can access luxury products has gradually expanded.

Especially despite the global recession we are in, given the dynamic growth in the luxury market and the fact that luxury goods are reaching a wider consumer group than ever before, the dynamism of the market can be seen in a tangible way.

Nowadays, the concept of luxury has become one of the mass marketing phenomena of daily life and in this context, the increase of the luxury market worldwide has attracted the attention of research companies and especially researchers.

In this context, all changes in lifestyles, habits, environment, economic, demographic, social and cultural structure deepen the theoretical and practical understanding of consumers' perceptions of luxury brands and cause changes. In this study also focused on changing the perception of luxury, especially in the fashion sector.

Keywords: Fashion, Luxury perception, Brand, Consumer Behavior, Consumption

1. INTRODUCTION

Given the dynamic growth in the luxury market and the reach of luxury goods to a wider consumer group than ever before, the luxury market has transformed from the traditional conspicuous consumption model to a new experiential luxury sensibility marked by a change in its method.

In a global context, it is essential for luxury researchers and marketers to understand what consumers believe luxury is, why they buy luxury, and how their perceptions of luxury value affect their purchasing behavior.

In this context, the main reason for not having a definitive definition of luxury is the changing nature of luxury perception from person to person. It is important to understand the personal perceptions of consumers in the recognition and understanding of luxury and in the creation of luxury brand strategies accordingly. Luxury perception is also the determinant of luxury consumption (Cornell, 2002).

Luxury is inherently a subjective concept. The subjective nature of luxury also shows that the definition of luxury can mean many different things to different people (Kapferer and Bastien, 2009). In other words, the perception of luxury varies from person to person. The word luxury in history; It was seen as a rare, limited number and accessible to the elite minority, and the negative meaning of the word continued until 14 century. Especially after the 17th century, positive meanings began to be loaded (Figure 1) (Hauck and Stanforth, 2007).

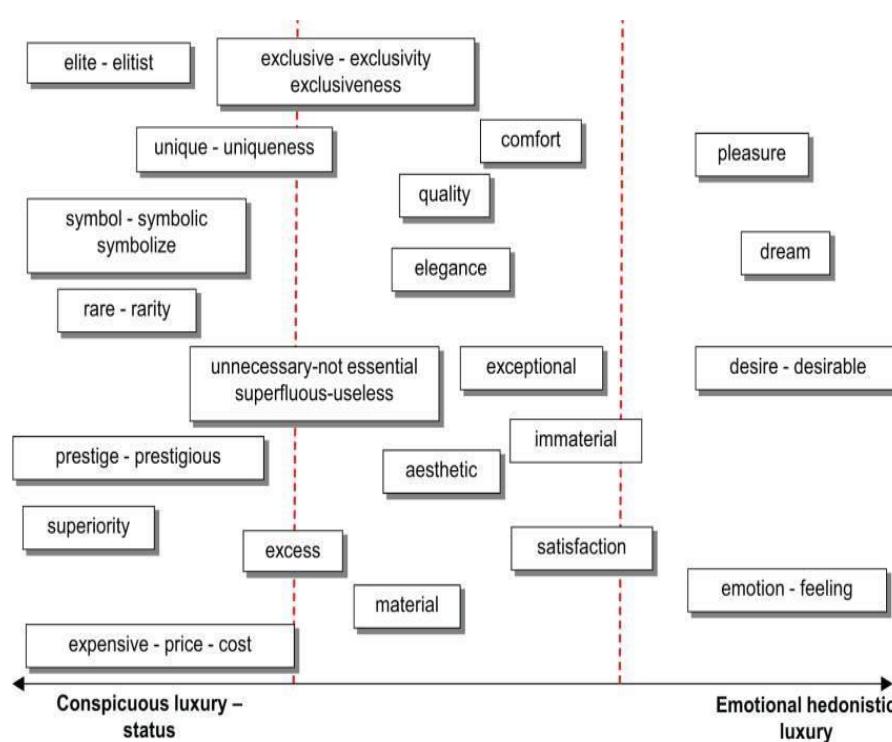


Figure 1. Semiotic representation of the lexical units contained in the definitions of the concept of luxury
(Godey et al., 2013: 232)

It is also stated that the word luxury defines beauty and is an art applied to functional elements. At the same time, luxury is also mentioned as an extension of the ruling classes, which provide extra pleasure (Barnier and Rodina, 2006) and glorify all the senses at the same time (Kapferer, 1997: 253).

The concept of luxury is complex because it is subjective and built primarily on consumer perceptions. At the same time, the meaning of luxury is determined by personal and interpersonal motives. Some consumers see the world of luxury products as a world that requires respect for quality, time and aesthetics, while others see this world as excessive and illogical. Moreover, it creates an argument for the uncertainty, hypocrisy and confusion associated with the definition of luxury brands (Turner 2016: 5).

Although the relationship between consumers and luxury brands is a one-way relationship, it has the potential to affect consumer perceptions of luxury branded products (Rahman and Ferdush, 2019: 20). However, when we look at previous studies in the field of luxury, it is seen that many factors such as economic and demographic situation, cultural structure, lifestyle, habits and social environment affect the perception of consumers towards luxury.

Luxury, which appears everywhere despite global recessions, is a term that is used routinely in our daily life. However, on the question of what the concept of luxury means, it is said that "the only consensus on the meaning of luxury is that there is very little consensus".

However, as would be expected, understanding consumers' perceptions of luxury brands is key to formulating appropriate strategies. Different perceptions of consumers towards luxury brands raise many questions about the feature or characteristics that truly define a brand as "luxury". Is it quality, price, brand history or some other indicator that defines a brand as luxury to consumers? These questions are extremely important in revealing the perceptions of luxury brands.

In addition to the efforts of marketers to understand what consumers perceive as a luxury brand, the influence of technology and the digital age is also crucial at this point. Consumers of today's world not only look at luxury brands differently, but also shop differently. Instant satisfaction is a concept that has become widespread in the purchasing habits of consumers and should be paid attention to by marketers. It is necessary to understand how consumers view luxury brands and their routine buying habits, as these perceptions and preferences will be important in creating marketing strategies that provide loyal customers (Turner, 2016: 3).

The truth here is that these luxury brands need to compromise with today's e-commerce world. It should also be noted that the luxury brand industry is now different than it once was.

At this point, in a world where luxury is a big industry, even the most closed brands have to market, and their stores are the most visible sign of their ambition (Tungate, 2006: 97).

Luxury brands undoubtedly play a very important role in today's market and their marketing strategies are constantly changing with the growth of technology. While these brands must be flexible in their own ways, the constant adaptations of the digital age cause many brands to question the appropriate approach. Family names and long histories are associated with many of these brands, leaving them afraid that developing strategies could possibly undermine the value of their brand names. However, these changes are inevitable due to the nature of today's consumer. The consumer of today's world is not the one that existed when most of these brand names were developed. This *new consumer* lives in a world where information can be accessed at the touch of a button and where exceptional customer service can have various meanings. While evaluating the perception of luxury brands and their impact on the digital age, it is necessary to examine the true meaning of a "luxury brand". The perception of luxury brands varies greatly depending on the participant and is extensively researched (Turner, 2016: 5).

Looking at personal and interpersonal luxury perceptions, different consumer groups are expected to have different perceptions of luxury value for the same brands (Yaro, 2016) and the general luxury value of a brand is expected to integrate these perceptions from different perspectives (Wiedmann, Hennigs and Siebels, 2007).

The development of the luxury market goes through five basic phases in countries. For example, the Turkish luxury market is in the "time to show off" phase, as in many developing countries. The most important feature of this phase is that luxury is seen as a symbol of economic status (Figure 2).

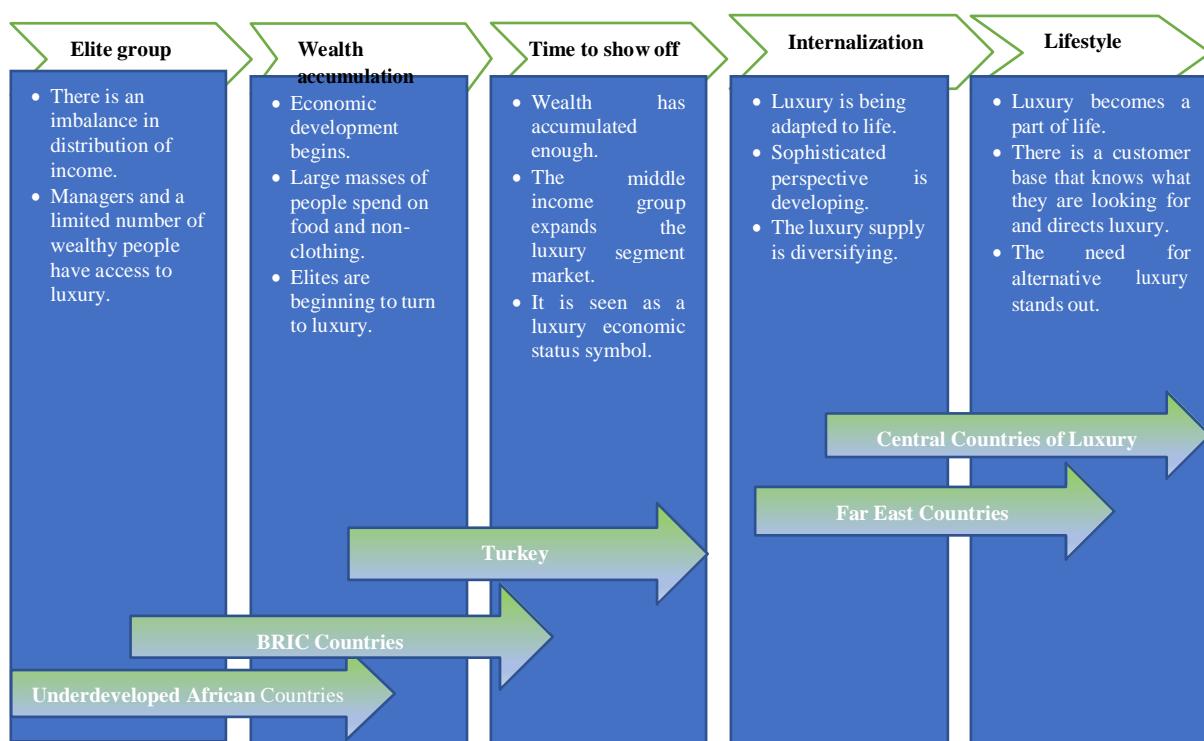


Figure 2. Development stages of the luxury market (Deloitte, 2015: 5)

Apart from the "time to show off" consumers, located outside of course different phase in Turkey, there are also luxury consumer segments (Figure 3). Consumer profiles and needs also differ significantly according to these segments. It is critical that brands targeting the luxury category develop their value proposition by taking target segments and differing demands into account.

Old Money	Climbing Elite	Power Woman	Metropolitan Man	Generation Y	Shopping Tourist
Boss families on top of the pyramid	Highly educated senior managers and new-era entrepreneurs	Career women who are increasingly involved in business life	Men with personal care and lifestyle where fashion is an important part	A new generation of bosses and young professionals	High-income tourists, especially from Middle Eastern countries
<ul style="list-style-type: none"> * Tired of traditional brands and looking for new alternatives. * Its sophistication level is high. 	<ul style="list-style-type: none"> * They have the motivation to reward their success. * They attach importance to design and brand image. 	<ul style="list-style-type: none"> * They like to pamper themselves. * They need to symbolize their power. 	<ul style="list-style-type: none"> * They attach importance to making a difference with their styles. * They create their own styles by combining different brands. 	<ul style="list-style-type: none"> * They have rational preferences for price and performance. * They attach importance to 360-degree brand interaction. 	<ul style="list-style-type: none"> * They see Turkey as a base for shopping. * They prefer global brands.

Figure 3. Luxury customer segments (Deloitte, 2015: 6)

When we look at the period we are in, it is possible to say that the luxury market and the perception of luxury has now changed. Today, many institutions and experts in the field of fashion express that the perception of luxury will change, environmentally sensitive production will increase, sustainability will become important and 'fast fashion' will be replaced by 'slow fashion' phenomenon. Considering how fast fashion changes not only our wardrobes but also the world we live in, a change in this direction will have a positive impact on the design world.

With the sustainable fashion concept, which is one of the foreseen changes, production planning is made with materials that can be integrated into nature with minimum damage to nature. Designers are preparing to design timeless pieces that are shaped according to the needs of the customers, that are more sustainable and can be worn around the clock. In addition, with the changes in life styles in the future, plain clothing styles that can be worn in home life and where comfort are at the forefront will come to the fore. The fashion design world, which works to create a production system that will be sufficient in contrast to production surplus with the changing design approach, will focus on designing the products to stay in the wardrobes for more than a season.

2. THE PERCEPTION OF LUXURY IN FASHION

The most important common point of luxury and fashion is that they have an important position in the economic system and social life.

Both luxury and fashion are tools of individual differentiation, but as Kapferer and Bastien (2009: 98) have stated, today fashion is not fashion, which is a tool of social hierarchy, but is luxury, as fashion spreads to very large masses and comes to life in different ways. Consumers think it is luxury, not fashion, that will make them different. Because while there is a harmony at the basis of fashion, at the basis of luxury, there is differentiation by reaching products and services that far fewer people have access to. At this point, fashion can function as a tool that transforms some elements of a consumer's lifestyle periodically and theoretically.

Fashion remained a phenomenon belonging to the world of luxury until the 19th century. Because people outside of a restricted elite class do not buy new items until they become unusable. In the 20th century, the distinction between luxury and fashion began to emerge. When we briefly look at the development of luxury fashion;

Gabrielle Coco Chanel started her work as a hat designer in Paris in 1910 and expanded her work by creating a niche market for herself in a short time. Jeanne Lanvin opened the design house in 1889, Paul Poiret in 1904, and Elsa Schiaparelli in 1927. Brands such as Cartier, Louis Vuitton, Burberry, Chanel and Prada, which are still active in the luxury fashion brand market today, emerged in the late 19th and early 20th centuries. These brands have changed their products and services that have developed until today, but have always adhered to their historical values (Okonkwo, 2007: 28). For this reason, these brands are still the pioneers of the luxury industry today.

In the late 1900s, the concept of luxury evolved and became a unified economic sector. Those who lead this; There have been major luxury brand groups such as Louis Vuitton, Gucci, and Richemont. In this development process; Globalization, wealth creation opportunities, new market segments, digital communication, international travel, the expansion of the luxury consumer base, and the reduction of barriers to entry into country markets have led to the growth of the sector and increased competition in all luxury categories (Okonkwo, 2009: 288).

The historical process of the concept of luxury is summarized under the names of classic luxury, modern luxury and contemporary luxury: In the 1950s, more than 2 million women around the world wore *haute couture*, the style of clothing expected from a bourgeois woman. In the 19th century, the "classical luxury" way of life dominated by objects was seen in France. During this period, large fashion houses boasted of having fashion in their hands, and clothes made up most of the fashion. The main phenomenon influencing the process was the beauty of objects and the reputation of fashion houses. "The phenomenon of modern luxury" has come into play since the 1920s. In this period, the understanding of creating value gained importance and the signatures of designers surpassed consumer tastes. The "contemporary luxury process" has started to take place

since the 1970s. In this process, which is said to have been shaped under the dominance of the media, communication support and advertising have been effective. The classical luxury era is associated with the 'Hermès model', the modern luxury era with the 'Chanel model' and the contemporary luxury era with the 'Ralph Lauren model'. The strategies of these brands best exemplify the characteristics of the relevant periods (Zeybek, 2013).

With the growth of the luxury brands market, it has surpassed other consumption categories and has been in continuous development. As there is an increasing amount of luxury categories, the consumption of luxury fashion brands constituted the biggest part of luxury profits, and it has been observed that the marketing costs of such brands are higher than other fashion categories.

Despite the increasing amount of luxury categories, consumption of luxury fashion brands (clothing, accessories, shoes, bags, glasses, etc.) constitutes the largest proportion of luxury profits and the strongest growth in the market (Fionda and Moore, 2009).

One of the most important points of luxury fashion brands is undoubtedly their relationship with quality.

Luxury brands are expected to be of higher quality than non-luxury brands. In terms of perceived quality, consumers think that the luxury brands they will buy have an excellent quality and this quality is not compromised. Without providing the quality dimension, it is not possible to embed the luxury brand image in the perception of consumers.

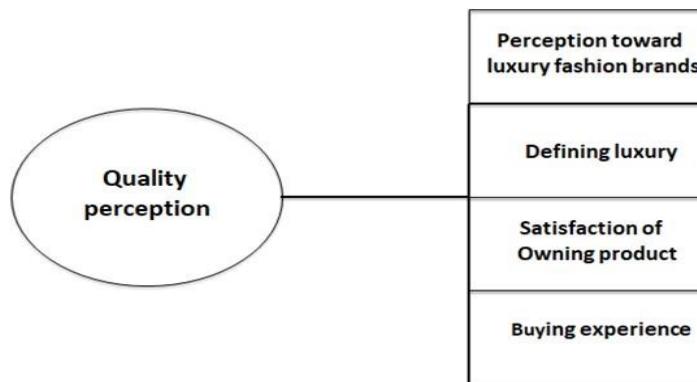


Figure 4. Conceptual frame work (Rahman and Ferdush, 2019: 21)

However, luxury fashion brands such as Chanel, Dior, Burberry and Prada have enabled product quality to interact with consumers. It has been found that the luxury brand quality perception increases the consumers' positive luxury perceptions, luxury desire and purchase intentions (Figure 4). As a result, when fashion products are expensive, quality and rare, they can create psychological and emotional values that can be categorized as luxury products.

Nowadays, the point reached in the development process of the luxury sector is expressed as "democratization". While luxury is a phenomenon that can only be reached by a certain elite, today

it is spreading to wider segments and increasing its importance in developing country markets. Most luxury purchases today are made by the middle class, not just the rich (Allison, 2008: 1). Today, not only luxury but also concepts such as "accessible luxury", "real luxury" and "new luxury" are mentioned in the luxury literature and industry (Kapferer and Bastien, 2009: 38). Since Veblen's ostentatious consumption theory (1899), luxury consumption by the wealthy class has been an interesting subject. Nowadays, besides being examined as an action carried out by the rich class, as always, luxury consumption draws attention as a phenomenon that gradually spreads to the middle of the pyramid and becomes democratized.

3. CONCLUSION

It is emphasized in many academic and commercial studies that the luxury consumption market, which is one of the markets where global dynamics change rapidly, will gain more importance in the coming years.

In the coming years, it is predicted that the cultural boundaries in the luxury market will disappear and the generations with high consciousness in brand preferences will rebuild the luxury market balances with the widespread use of the internet, social media and e-commerce.

A customer's perception of luxury value and the reasons for luxury brand consumption are not simply tied to a set of social aspects of status, success, distinction, and human desire to influence other people, but also to the nature of finance.

The perception of luxury is under the influence of many factors at this point. Consumers shape their luxury evaluations based on their perceptions of functional, experiential and symbolic properties. The perception of luxury can also be shaped depending on the situation. An important criterion of how luxury is perceived is demographic characteristics. The person's income, education level and age significantly affect the luxury perception. Consumers' perceptions of products and brands, consumer behaviors and emotions vary depending on the generation they belong to.

Almost all of the most popular luxury brands today are of western and mostly European origin. The formation of strategies used in the marketing of luxury products and services is a process initiated by European countries, especially Italy and France. Therefore, these brands were created according to the characteristics of western societies, their brand identities, images, communication strategies and all the features that enable them to meet with the consumer, were built with the cultural patterns of western societies. However, it is necessary to understand the characteristics of people from different cultures and to develop their strategies in accordance with these characteristics.

In today's conditions, where luxury fashion brands are rapidly shifting from the west to the developing eastern countries, the relationship between luxury brands and culture is of great importance. At this point, the issue of culture is of critical importance for western luxury brands to determine the right strategies while entering the developing country markets where luxury consumption is rapidly spreading, and for developing countries to create their own luxury brands. In this context, it also indicates that the new luxury and luxury consumption will gradually shift to developing countries.

Therefore, it is impossible to think of luxury independently of society, social changes and culture. The period we are in has caused the perception of luxury to change. For this reason, luxury brands need to review and reconstruct their strategies. Apart from technology and developed R&D centers located within luxury brands, innovation centers should be established and kept up with the digital era. In the fashion field where consumer demands differ and shopping habits change, there is a need for luxury brands that can adapt to change and can exist in different conditions that can adapt to digital transformation. These brands can only survive in today's conditions.

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HIDIRLEZ/ QIDIRLEZ AMONG THE TURKIC COMMUNITIES FROM NORTHERN DOBRUDJA (ROMANIA). TRADITIONAL AND CONTEMPORARY ASPECTS**Dr. Alexandru CHISELEV****ORCID ID:** 0000-0003-1225-0480

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SUMMARY

In this article we aim to analyze and decode the traditional and contemporary patterns of celebrating *Hidirlez/ Qidirlez* (6th May) at Turks, Tatars, and Muslim Roma from Tulcea County (Northern Dobrudja), highlighting from a diachronic perspective the changes in the functionality, structure, and semantics of the component rites, as well as the methods of maintaining the feast active.

Our hypothesis is that the mechanisms of the ritual dynamics of *Hidirlez*, beyond the influences of the complex human-nature relationship and the process of manipulating the imaginary, are shaped by the identity readjustments, resulting polyphonic discourses, in relation with the coordinates of the modern society, cultural memory and oral history. Also, in this multicultural and multireligious area, this tradition was influenced and shaped by different ecological, historical-social, and cultural factors, on the one hand, and by the Identity-Alterity nexus, on the other.

Although during the communist period was more difficult to celebrate this holiday, due to the nationalist policies of ethnic uniformity, now this feast constitutes an identity marker of the Muslim population from Dobrudja. Further, *Hidirlez* emphasizes an overlapping and succession of practices, gestures, and rites with different meanings (divinatory, apotropaic, propitiatory, commemorative etc.), performed in various spaces that are invested with symbolic value. In this context, a negotiation between the secular and the religious elements can be highlighted, resulting several ways in which the holiday is perceived and celebrated.

Keywords: *Hidirlez*, Turk, Tatar, Muslim Roma, Northern Dobrudja, ritual dynamics, identity

INTRODUCTION

This article is based on the field research conducted in 2017, during the doctoral studies, aiming to highlight the functional, structural and semantic dynamics of this emblematic tradition, celebrated by the Turkic population from Northern Dobrudja.

We must point out from the beginning that the Muslim community from Northern Dobrudja is characterized by a high degree of urbanization. Turks, Tatars and Xoraxane Roma live in the cities

of Tulcea, Babadag, Măcin and Isaccea, cohabiting with the Romanians and other Orthodox minority ethnic groups. But, even in this urban context, certain elements can be deciphered that refer to the structures of the rural space: grouping in *mahalle* (in the past distinct for each group), maintaining neighborhood and mutual relations as close as possible to rurality. "We are here like in the village, from all the villages. Murighiol, Caraibil (Colina), Mahmudia, we are all here. Tulcea is a great village." (Informant: A.M., 2017, Tulcea).

Another important element is related to the numerical decrease of Turks and Tatars, correlated with the population ageing and migration of young people to other polarizing urban centers, where the Muslim community is much better represented (Constanța, Medgidia). Apparently, this situation can lead, over time, to the dissolution of ethnic entities. But, at least for now, awareness of the danger of extinction leads to the consolidation of the Muslim macro-group. "We are Turkish-Tatars. Although there are some differences, we go to different communities (as forms of ethnic representation), but we stay together on holidays, in the mosque and in cemetery." (Informant: N.G., 2017, Tulcea).

On the other hand, living together, in an urban space marked by multiculturalism, in which friendships, collegiality or neighborhood with the Orthodox populations are manifested, can generate different mechanisms for perceiving one's own identity in relation to the *Others*. Perhaps not coincidentally, when discussing the significance of *Hidirlez/ Qıdirlez*, some Turkish and Tatar members use the phrase "Easter of the Dead at Muslims" as a way of translating the meanings of tradition for those from the outside sphere. This oxymoron may explain the attribution of a new meaning to an ancestral tradition, as well as its source. Obviously, the holiday included in the past elements related to the cult of the dead, but it is possible that they were re-signified following the continuous interaction with the Orthodox.

Given these aspects, today, the *Hidirlez/ Qıdirlez* tradition manifests itself in the form of overlapping or succession of festive contexts and rites with different meanings, performed in various toposes. In this context, a negotiation between the secular and the religious element can be highlighted, resulting several ways in which the holiday is perceived and celebrated (Chiselev, 2019).

MATERIAL AND METHOD

This field research took place in the Muslim cemetery from Tulcea, on May 6th, 2017. The approach was possible following the permanent communication with Ms. R.A., president of the Democratic Union of the Muslim Turkish-Tatars from Romania – Tulcea subsidiary. Thus, it was possible to contact the religious authorities and obtain the agreement to participate and audio-video

recording of the events. New research opportunities are facilitated by the phenomenon of opening the interest of communities to be known and presented in an objective way.

Another noteworthy element is the fact that our field took place in an organized and secure environment, including in terms of ensuring the order and integrity of the participants, by members of the local police, including one of Turkish ethnicity. If in the past the Roma refused, or even vehemently opposed, the recording, photography and filming, justifying that *their souls would be stolen*, now this problem no longer exists.

In these conditions, the field research used qualitative methods, meant to extract in a limited time, eloquent and representative information about the current manifestations of *Hidirlez*. In this sense, we used the following methods: participatory observation, analysis of non-verbal behavior, behavioral patterns (at the meeting between two men, between a young man and an old man, etc.) and gestures during the religious service, unstructured interview, elements of oral history (to reconstruct the atmosphere of the holiday in the past).

An essential aspect in the research economy was the identification of members of the three ethnic groups present in the cemetery: Turks, Tatars (Kırım and Nogay) and Muslim Roma. We visually analyzed the phenotypes, clothing, and then we asked verification questions to correctly classify the actors in the ethnic group and to observe their behavior in the different stages of the celebration (gestures at the grave, during the service, offering alms, etc.).

The field was doubled by an activity of identification and documentation-research of the specialized bibliography on this issue and by consulting the ethnographic specialists who have worked or are working in the Museum of Ethnography and Folk Art from Tulcea.

Although currently, among them, the people spoke their mother tongue, to my questions they changed the linguistic codes, answering in Romanian, but keeping in the dialect certain symbols of ethnicity (e.g. standardized greeting formulas, food names).

RESEARCH AND FINDINGS

Hidirlez (Turkish)/ *Qıdirlez* (Tatar) is one of the holidays with pre-Islamic origins celebrated in the Muslim communities from Dobrudja, although it is possible that in time some religious elements were inserted, represented by the memorial services in the cemeteries, with an extended participation. It is celebrated on May 5th and/ or 6th, marking the beginning of the astronomical summer in the ancient Turkic calendar.

Etymologically, and from a mythical perspective, the name of this tradition derives from the names of the twins *Hızır* / *Qıdır* and *İlyas* (according to some sources having the status of prophets or *Nebi*/ saints) who were expelled from Paradise by the Creator, one becoming the master of the

Earth and the other of Waters. According to popular belief, they can meet only once a year, on May 6th, announcing to humanity the arrival of the warm season.

On the other hand, *Hizir* (in Arabian *al-Khiḍr*) is related to the term *al-khadra*, which means green (Walker and Uysal, 1973), appearing in the Islamic imaginary as a saint, prophet, *Walī* (custodian, protector, and helper), possessor of *hikmah* (wisdom to see the essence of beings) and *ilm al-ladun* (knowledge imparted by God through illumination). This mythological thesaurus generates the important coordinates of the feast, these being related to the idea of green, as an expression of nature regeneration and inauguration of a new cycle: community members gather in the forest or near water; on this day, green leaves and vegetables are eaten, amulets are tied to the branches of trees or shrubs. On the other hand, the feast is also related to the chromatic symbolism of white, the color of the clothes of the two prophets. Therefore, on this day it is customary to eat white foods: rice, *sutlaş* (rice with milk), milk, cheese, yogurt, white meat of lamb or poultry. The Tatars believe that if yogurt is made in a household in that day, *Qıdir* will visit and bless that house (Ifram, 2020).

In Dobrudja the holiday was recorded for the first time by I. Dumitrescu under the name *Câdărlet* in the volume Annals of Dobudja, published in 1921. However, this ritual manifestation is much older in our region. One argument may be the faith preserved in the memory of the community regarding the old name of the deltaic locality Sfântu Gheorghe/ Saint George. According to it, an Ottoman official named this village *Katerlet*, when he visited it on this holiday, May 6th, 1821. I. Dumitrescu presents the holiday in the form of a secular and field party. Tatars from neighboring villages, especially the unmarried, gathered near a lake, bridge, or field. Among the practices during the transport to the chosen space were the competitions with horses and carts. On this occasion, fights (*pehlivanie* in Romanian, derived from the Turkish term *pehlivan*) were performed. Also, the table on the green grass is noticeable, the participants being seated in Turkish style (Dumitrescu, 1921). Thus, we can decipher in the structure of the holiday certain contextual ritemes (relocation in a topos with symbolic value), normative (e.g. excessive behavior, in a non-religious register), relational (e.g. meeting, association to party together in nature), economic (e.g. ritual food consumption), performative (e.g. singing *sin*, sports games) or communicative (e.g. horse racing – symbol of the expulsion of cold and winter).

Hıdirlez/ Qıdirlez is an equinoctial celebration that marks a transformation of weather, being a good time to perform divinatory, propitiatory and prophylactic practices. For healing and health, it was customary to eat green plants, fresh lamb or a soup of herbs, harvested from the forest (Türkyılmaz, 2013). An oracular practice of finding the beloved one was to put a bucket with water on the moon light on the eve of the feast. "Bedrye said that a cauldron with water was brought to

the cemetery at *Qıdirlez*, when was the new Moon. And there all the girls threw a ring inside the cauldron, and the boys took out one ring. Depending on which ring they took out, that's how they were fated, they made pairs. Now they don't do it anymore" (Informant: C.G., 2017, Tulcea).

The ludic element was represented by certain dances, songs, games, competitions, such as: *şınlaşmak* (*the act to say şın*), *Aqay hawası*, *Çoban oyunu*, *Dört qız*, *Emir Celal*, *Qaytarma*, *Qırım çiftetellisi*, *Duwak horanı*, *Yawlıq/ Mendil*, *Yükseq minare*, *koşı* (*horse racing*), *Qüreş* (Sağlık Şahin, 2002).

The holiday consists of an overlapping or succession of practices and ceremonial manifestations from different registers: a secular and social one, full of beliefs that translate the perception about the world in certain ritual gestures, and a religious one, which consists of Islamic prayers (*dua/ duwa*) and individual/ family or collective remembrance of the deceased, at the cemetery.

Among the secular or magical-ritual manifestations present or practiced in the past by the Turks from Dobrudja we mention: the meeting at the forest, spring, fountain, at the foot of a hill, near a tomb or holy space; jumping over the fire for purification; rolling through the grass, so that all evils will go to the enemies; leaving the clothes out, during the night from May 5th to May 6th, so the saints will whip them and their possessor will get rid of evil; guessing the beloved one and future of young girls, by extracting different adornments from a cauldron and interpreting their symbolism according to certain popular quatrains; practices of invoking rain and ensuring abundance; preparation of *ciorek* etc. (Chiselev, 2019).

Among the Tatars, it was customary to perform ceremonial gestures or actions such as: *qalaqay tıgırmaq* - rolling an unleavened cake on a slope, depending on the position in which it fell, guessing the abundance of the agricultural season inaugurated this day (if the *qalaqay* stopped face up it was a sign of rain and a rich harvest); the opening, on *Qızır* night, of all objects with lids or locks, to enter abundance in them; ludic and sporting elements such as *Qüreş* (Tatar fights), horse racing or girls' swinging; the interpretation of some improvised songs (*şın*), through which the group of girls dialogues with that of boys. If these practices took place on May 5th, the tradition was named *Tepreş*. Specialists say that *Tepreş* was the celebration of the coming of the warm season (*bahar bayramı*), initially celebrated on the first Friday in May. Later, under the influence of the Turks with whom they cohabited, the date of the holiday was linked to that of *Hıdırlez* (Sağlık Şahin, 2002).

A structural act of the feast is the sacrifice of lambs (Titov, 2015), from which are cooked *qızartma/ steak*, *botqa/ pilav*, *kozı sorpası/ lamb meatball soup* in which are added fresh mint.

On this day, special traditional dishes such as *maylı qalaqay/ ciorek* are consumed together, as well as pies such as *baklava*, *geantik*, *sarbirma*, *köbete* or *boqla*. In this context, one can notice

the phenomenon of commensality, the action of sitting at the table with others, transforming the biological act of feeding, into an act with social values. Commensality connects the members of a group who share a set of common rules related to the valorization of food. Thus, the participants sit together and consume each other's dishes, share their own products and recipes.

From the above, we can decipher the main functions of this calendar tradition: to propitiate a superior force (*Hızır*), to ensure the abundance and arrival of spring, but also to commemorate the dead, in the spirit of reconciliation between the religious precepts in this regard and inner feelings of humans; community cohesion, through group meetings in a non-domestic space; to rearrange the hierarchies, by conducting sports competitions; to ensure the permanence of the community (in the past), by socializing of young people and performing the practices of premarital magic.

In principle, this feast varies depending on the ethnic group, rural or urban environment and certain calendar contexts, such as the one related to the overlap between *Hıdirlez* and one of the days of Ramadan, which would phase out the consumption of alms offered after sunset.

Currently, among the Muslims of Tulcea, it prevails the religious component of the holiday, related to the cult of the dead, manifested through the service of remembrance and offering alms. In fact, in the mentality of the Muslims from Dobrudja, *Hıdirlez* gained the attribute of a holiday for commemorating the dead, in correlation with the similar tradition of the Orthodox, following the coexistence process.

One aspect worth discussing in this context is the presence of women in the cemetery, banned in the past by most of the exegetes of Islam. From this point of view there are two types of discourses of the interviewees: G.A. (Nogay Tatar) says that there was permission for women's access only on this day, on the other hand A.G. (Kırım Tatar) states that in the past, when was *Qıdirlez*, the presence of men and children was allowed, women going to the forest, on Monument Hill. M.R. (Turk) nostalgically remembers the moments from his childhood when she participated to *Hıdirlez*, playing among the graves, but she does not provide information about the participation during adolescence or adulthood. Regardless of the initial situation, in the contemporary period, the presence of the women in the Dobrudjan Muslim cemetery on May 6th is a certainty. They became an active actant, necessary for the fulfillment of the ritual of preparing the graves and offering the alms.

The framework scheme for performing individual or family commemoration ceremonies is related to the arrangement and watering of graves and tombstones, followed by a prayer said by the imam. Later, different aliments are distributed (*helwa* and *kiygaşa* - dishes prepared mainly for commemorations, but also *şuberek*, *pide*). The standardized formula for answering after receiving the alms is: *Allah kabul etsin!* Almsgiving is a form of sacrificial gift. These offerings will tame

and soothe the souls of those who have passed away. Perhaps this aspect determined the resemanticization of the tradition, at least in the urban environment, from the celebration of spring to the moment of commemoration of the dead, a situation contrasting to the initial ritual core. In fact, this may be related to the changing of the occupational profile of urban Muslims, for whom agriculture and the appropriate rites are no more an essential aspect of life. Likewise, the rites of attraction the marriage have lost their role and effectiveness in the context of modern society, based on other types of marital strategies.

Thus, the feast of remembrance of the dead is actively practiced, with small differences, from one ethnic group to another. An interesting fact is that some Romanians, who had friends, colleagues or relatives of Islamic religion, come to commemorate them, without having a clear interaction with the Muslim community. The visit is reduced to bringing flowers and possibly lighting a candle.

The Tatars participate in the cemetery, an important ceremonial moment being the collective commemoration service, for the dead whose descendants no longer exist. The traditional greeting at the meeting between two members of the group is *Qıdirlez Bayramı Qayırlı Bolsın!* The food offered as alms is placed in a specially arranged space at the entrance of the cemetery, being distributed most often after the *duwa*. The alms are reduced to a few pieces of pie, being offered, most often, at the cemetery, near the grave. The *duwa* of collective commemoration is performed by the group of men and the imam.

Currently, the Turks prefer to meet in the forest, near a spring or fountain, when are consumed certain traditional dishes, are performed songs/ quatrains (*mane*), and take place ludic manifestations. They can also gather in the cemetery, the emphasis falling on the family *dua* and less on the collective one, preferring to sit at the table, near the grave, and to consume several kinds of pies. The traditional greeting is *Hıdirlez Bayramı Mubarek Olsun!*

Muslim Roma celebrate the commemoration of the dead, involving the entire lineage, from children to the elderly. The *dua* services are carried out under the coordination of the local police, after the end of the family memorial services for Turks and Tartars and after the collective *dua*. This is due to the large number of participants. Tables are laid on the graves, being consumed different types of pies (generically named *baclava*), chicken, beef or lamb dishes. Numerous and sumptuous alms are also being prepared for home (plates with steaks, vegetables, fruits, homemade or bought sweets) that denote a certain competition between families from different areas of the city.

Regardless of ethnicity, habits or more or less preserved identity elements, all participants live the feast in an intimate way, commemorating their dead through memorial services and offering, at the end, well-cooked dishes, more or less traditional, for the soul of the decease.

Regarding the transmission of values and internalization of tradition by the new generation, the following phases can be deciphered: the involvement of children through playful elements (games in the meadow or among the graves); awareness of participation (involvement in offering alms, placing dishes on sheets, in the meadow, participation at *dua/ duwa*); conscious participation (praying and performing specific gestures, involvement in cooking different dishes); effective participation (involvement in sports competitions, in the interpretation of songs).

CONCLUSION

Hidirlez / Qidirlez is currently the only moment of common commemoration of the deceased in the cemetery - at least in urban areas, and women are unequivocally allowed in *mezarlık* with clearly defined actantial statuses (cleaning the graves, watering the tombstones, preparing and offering alms, participating to *dua/ duwa*).

Tradition was linked in the past to the arrival of spring and the beginning of the agricultural season, and even today we can highlight certain gestures related to magical-mythical thinking, in decline or in a phase of updating. It should be remembered that the association and meeting of people in a topos with vegetation attributes (in the meadow, in the forest, near the river or fountain) had a period of discontinuity, especially during the communist period, being reactivated in some places in recent years. On the other hand, the agrarian or premarital divinatory acts were diluted over time, in the context of renouncement to agriculture, as a basic occupation, and transformation of contemporary matrimonial strategies. However, the performance in the home of some gestures meant to ensure the health of family members or the abundance of the household is not excluded. The large number of Muslim participants in the cemetery, the participation in memorial services and the distribution of offerings for the peace of the deceased, show that the current form of this calendar tradition, mainly related to the cult of the dead, tends to strengthen and to diminish the secular, ancestral substratum. This resemanticization and restructuring of the feast must be seen from the perspective of the coexistence of Muslims with the majority or minority Orthodox populations, who currently have well-highlighted public commemoration holidays. On the other hand, we can discuss about the evolution of interpretations of Islamic religious norms and the changing paradigm of gender relations in the progressive Muslim community. Moreover, among the Tatars, the demarcation between the two plans of *Qidirlez* (secular and religious) tends to become increasingly clear, the ludic, sporting and recreational manifestations, generically framed to *Tepres* and performed for a long time on May 5th being today organized at institutional level

during May or even June. Specialists point out that this holiday, with ritual values related to the agrarian cult, initiation rites and erotic magic, originally celebrated on the first Friday in May, was linked to *Hidirlez*, after cohabiting with the Turks.

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THE RELATIONSHIP BETWEEN INTERMEDIATE EFL LEARNERS' READING COMPREHENSION PERFORMANCE AND THEIR COGNITIVE AND METACOGNITIVE STRATEGIES AS WELL AS TEST ANXIETY

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ABSTRACT

Reading Comprehension (RC) plays a significant role in any academic field, especially in TEFL. This study aimed to illuminate and investigate a psychological and crucial factor influencing RC performance: Test Anxiety (TA). Furthermore, this study intended to probe into the relationship between cognitive and metacognitive learning strategies and RC. In so doing, after homogenizing the students as intermediate ones via Quick Placement Test (QPT), a valid questionnaire of TA (Richmond, Wrench, & Gorham, 2001) and also The Strategy Inventory for Language Learning (SILL) (1989) were administered to the 90 intermediate students. Having administered the tests, the researcher asked the subjects to take part in a reading comprehension TOEFL PBT Test. The data collected from the questionnaires and also the scores given to their reading comprehension performances were analyzed through SPSS (25.00). Results indicated that there were statistically significant relationship between cognitive and metacognitive learning strategies and the learners' writing performance. In addition, there was a significant and negative relationship between learners' test anxiety and their writing performance. Finally, it was proved that cognitive learning strategy could better predict EFL learners' writing performance. The outcomes of this study can have benefits for both foreign language teachers and learners. They both can attain better results by focusing more on the psychological factor of TA in their roles. The findings of the present study demonstrated that more concentration ought to be placed on enhancing cognitive and metacognitive strategies and lowering TA in order to augment students' reading comprehension performances.

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Key words: cognitive strategy, metacognitive strategy, test anxiety, reading comprehension performance

Introduction

One of the problems that face EFL learners is their anxiety or apprehension in different examinations and tests. Some of the learners are highly apprehended while sitting for an exam. Moreover, test anxiety influences the task performance of learners in reading comprehension test. Test anxiety affects the learners' performance negatively. As noted by Kitano (2001), fear of negative evaluation is an issue that has attracted little attention in language learning research. One of the dominant struggles of the teachers in this area is to decrease the level of anxiety and make the environment less stressful for the learners.

Recent investigations were rarely devoted to the examination of the relationships among test anxiety, cognitive and meta-cognitive strategies, and reading comprehension performance in Iran. Kamarzarrin (1994) believes that in Iran the majority of studies are focusing on language learning with more attention on the effect of instruction on the development or learning of certain skills or sub-skills, without considering psychological factors like test anxiety. According to him, a quick review of the global literature shows that little attention is given to psychological factors which are very crucial in foreign and second language learning. In other words, learning can be accelerated in a more psychologically friendly environment. Students also should be informed about their level of test anxiety and in case they are suffering from a shortage in this psychological factor, they should be carefully guided. Learners' psychological factors should also be taken into account when being assessed in their classes. Schools in Iran are rarely aware of this psychological issue which can hinder the language learners' psychological situations.

Effective reading comprehension is one of the most critical issues in teaching and learning English. In this regard, teachers introduce new vocabularies, present synonyms and explain new grammatical rules. However, results are not satisfying and students complain about having problems in comprehending English texts. Thus, utilizing some strategies including cognitive and meta-cognitive strategies and decreasing learners' anxiety should be taken into consideration by teachers and students in order to enhance reading comprehension skill.

When the reader examines a particular opinion or fact in a text, she or he matches that information with prior knowledge and is able to establish a sort of the text's meaning (Mikulecky & Beatrice, 2008). Rubin (1975), one of the earliest researchers in the field, provides a broad definition of learning strategies as "the techniques or devices which a learner may use to acquire knowledge." Bialystok (1978) also defines language learning strategies as "optional means for exploiting available information to improve competence in second language" (p.71).

Senay Sen (2009) found a statistically significant relationship between reading comprehension achievement scores and cognitive and meta-cognitive reading strategies use. Ahmadi, Ismail and

Abdullah (2013) also argue that more successful readers used cognitive and metacognitive reading strategy in their reading comprehension more than the less successful readers. Zhang and Seepho (2013) illustrated that there was a significant positive relationship between cognitive and metacognitive strategy uses and English reading comprehension.

As mentioned above, many studies had been carried out regarding the variables of reading comprehension strategies, including especially cognitive and meta-cognitive ones, reading anxiety and reading comprehension. However, few studies had ever been done assessing the relationship between learners' reading comprehension and the interaction of both test anxiety and cognitive and meta-cognitive reading strategies. This study made an attempt to probe into the variables to figure out if there was any relationship between reading comprehension performance and test anxiety, reading comprehension performance and cognitive reading strategies, reading comprehension performance and meta-cognitive reading strategies, and finally between reading comprehension performance and the interaction of cognitive and meta-cognitive reading strategies.

The purpose of this research first of all was to scrutinize the relationship between cognitive strategies use and students' reading comprehension enhancement and the second purpose was to discover if there was any relationship between meta-cognitive learning strategies and reading comprehension of intermediate EFL learners. Third, this study intended to delve into the relationship between learners' test anxiety and their reading performance. Furthermore, this study was after finding out the fact that which of the two kinds of strategies, namely cognitive or metacognitive, could better predict reading performance of the intermediate EFL learners. By using cognitive and meta-cognitive strategies learners may achieve a higher ability in reading comprehension and are able to understand and learn English faster and easier. Moreover, decreasing their test anxiety may improve their confidence in their ability and heighten their motivation to learn English and, as a result, teaching and learning quality will be improved and students will be more successful in the learning process. This research will be conducted to answer the following questions:

- Q1. Is there any significant relationship between intermediate EFL learners' test anxiety and their reading comprehension?
- Q2. Is there any significant relationship between intermediate EFL learners' cognitive strategy and their reading comprehension?
- Q3. Is there any significant relationship between intermediate EFL learners' meta-cognitive strategy and their reading comprehension?
- Q4. Which one of these two variables of cognitive or meta-cognitive strategies can better predict intermediate EFL learners' reading comprehension?

This study was to examine the relationships among test anxiety, cognitive and meta-cognitive strategies and students' performance in reading comprehension test. Based on the results of the study, one might also conclude that affective factors seemed to play a more important role in the performance of learners. The present study could help to solve the problems of EFL teachers and learners in decreasing the amount of test anxiety by introducing the supreme source of fear of negative evaluation. The present study introduced test anxiety of learners and focused on reading comprehension performance and examines if test anxiety had any significant effect on reading ability of the learners. The findings of this study could help the EFL learners to find out how they could achieve the best performance in their reading comprehension tests without stress. The results of this study might also provide insights into helping EFL learners to reduce their test anxiety and also increase the level of their confidence.

Teachers try to improve learners' reading comprehension by using different strategies. They can benefit from the results of this study to overcome difficulties in teaching reading and students can also learn to boost their reading skill to get better results.

One of the broadest research areas in recent years has been test anxiety and its dimensions. Researchers have attempted to identify and define the construct of anxiety, a key Individual difference in language learning, for many years. Horwitz et al. (1986) claim that foreign language anxiety is a unique type of anxiety specific to foreign language learning, and their concept has been buttressed by MacIntyre and Gardner (1989, 1991a) and other theorists.

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Review of Literature

Wahyono (2019) in his study named 'Correlation between Students' Cognitive Reading Strategies and Reading Comprehension' illustrated that most of students usually use four cognitive reading strategies included in this research and cognitive reading strategies correlate significantly to students' reading comprehension with p value of 0.00 and coefficient value of 0.61.

Habók and Magyar's (2019) claimed that EFL reading proficiency and strategy use patterns are not directly linked. However, the findings of this research showed that there were significant relationships between cognitive as well as metacognitive strategies and reading performance. They also claimed that this is learners' attitude, approach, and motivation that play a great role in EFL learners' performances.

As Saks and Leijen (2018) concluded, there was a linear and positive relationship between language learning strategies including cognitive and metacognitive strategies and learning outcomes based on learners' perceptions. Their result indicated that cognitive strategies have a direct effect on learning outcomes, whereas metacognitive strategies affect outcomes indirectly.

This study also showed both cognitive and metacognitive strategies have positive relationships with learners' reading performance.

Djudin (2017) in his research named 'Using Metacognitive Strategies to Improve Reading Comprehension and Solve a Word Problem' illustrated that Developing students' metacognitive strategies in any content areas play a powerful role in the learning processes in order to assist students to be independent and strategic learners. Teachers should model and train explicitly their students of these metacognitive strategies during classroom periods.

Zahal (2014) and Yücel (2011) studied the relationship between cognitive ability and their reading comprehension academic success and found that there were significant positive correlations between them.

Zhang and Seepho (2013) depicted that there was a significant positive relationship between cognitive and metacognitive strategy uses and English reading comprehension.

According to Leckie (2013), the term interaction involves two different concepts: First, it is related to the interaction between the reader and the text by which the reader limits concepts according to the knowledge drawn from the text and through the background knowledge that she has in mind. Second, it refers to the interactivity happens simultaneously between the components of the skills which leads to reading comprehension.

According to Beale (2013), learners who utilize skimming and scanning are adaptable learners and competent in speed reading strategies. These learners read according to their intention and grasp the information of the text quickly without wasting time

According to Macleod (2013), skimming involves a thorough overview of content of the text and includes reading competence. However, Scanning is a more limited activity, only recovering information related to the main idea of the text.

In another study titled 'Alleviating Test Anxiety for Students of Advanced Reading Comprehension', Bensoussan (2012) depicted that Involving students in the testing process may increase their motivation and decrease anxiety in language learning. To encourage involvement from the beginning of a course, there could be a discussion of student expectations about evaluation and assessment in a course.

Stainthorp and Babayigit (2011) state that reading comprehension is a complex process that includes many variables. These variables are general language skills, background knowledge, comprehension strategies, knowledge of the text and working memory.

Senay Sen (2009) explored the relationship between reading comprehension and cognitive and meta-cognitive strategies and found there were significant relationships between them. However,

Alper and Deryakulu (2008) state that there is no significant relationship between these two variables.

Phakiti (2006) in his study titled ‘Modeling cognitive and metacognitive strategies and their relationships to EFL reading test performance’ came to this conclusion that (1) memory and retrieval strategies facilitated EFL reading test performance via comprehending strategies; (2) monitoring strategies performed an executive function on memory strategies, whereas evaluating strategies regulated retrieval strategies; (3) planning strategies did not directly regulate memory, retrieval or comprehending strategies, but instead regulated these cognitive strategies via monitoring and evaluating strategies; and (4) only comprehending strategies were found to directly influence EFL reading test performance.

Taheri, Sadighi, Bagheri, Bavali (2020) assert that a substantial majority of EFL learners perceived the use of language learning strategies as advantageous. They found that the frequency of cognitive strategies outnumbered the metacognitive strategies. Besides, Task achievements depend on the use of learning strategies including cognitive and metacognitive ones.

Zare’ee (2019) in his study entitled ‘The Relationship between Cognitive and Meta-cognitive Strategy use and EFL Reading Achievement’ showed that the test-takers use metacognitive strategies more than cognitive strategies. In addition, the findings of the present study suggest that the use of cognitive and, particularly, the use of metacognitive strategies can account for variation on language test performance across different achievement groups.

Nourdad and Ajideh (2019) in their article entitled ‘On The Relationship between Test-Taking Strategies and EFL Reading Performance’ concluded that the use of metacognitive test-taking strategies more than cognitive ones. These findings can have beneficial implications for language testers, teachers, learners, and course developers.

Siregar, Afriazi, and Arasuli (2019) confirmed that there was a significant correlation between reading strategies and reading comprehension achievement.

In a study called ‘The Effects of Test Anxiety on Learners’ Reading Test Performance’, Javanbakht and Hadian (2014), showed that at the intermediate level of proficiency, learners did not feel anxious during reading test performance and no correlation existed between test anxiety and performance on reading comprehension tests.

Ahmadi, Ismail and Abdullah (2013) argue that more successful readers used cognitive and metacognitive reading strategy in their reading comprehension more than the less successful readers.

Ahmadi, Kabilan, and Ismail (2013) in their study entitled ‘The Importance of Metacognitive Reading Strategy Awareness in Reading Comprehension’ came to this realization that

Metacognitive reading comprehension skill has a positive effect on learning a second language and learners can gain the skills they need for effective communication in English.

According to Rahmani and Sadeghi (2011), reading comprehension is defined as the level of recognizing a text/message. This recognition comes from the communication between the words that are written and how they activate knowledge outside the text/message.

Method

Participants of this study were 90 all female and male English language learners in the intermediate level of English at Almas Institute in Zanjan. They were selected out after conducting the placement test. The participants were selected through convenience sampling and their ages ranged between 18 and 34. The degree of their homogeneity was evaluated through Quick Placement Test. Prior to conducting the study, the procedure was explained to the students.

Four instruments were used in this study: First of all, Quick Placement Test (QPT) was conducted in order to determine learners' homogeneity. In addition, a TOEFL PBT Test was used to evaluate students' reading comprehension. Furthermore, the Strategy Inventory for Language Learning (SILL) was distributed among the participants to estimate learners' strategy use in learning a foreign language, and finally Richmond et al's (2001) Test Evaluation Anxiety Questionnaire was used to test learners' test anxiety. The instruments are described more in the following:

Quick Placement Test (QPT)

The Quick Placement Test was conducted to determine if students were homogeneous. It was distributed among all the participants to determine their level of proficiency. This test included different questions on vocabulary, grammar, and reading comprehension. Total score was 60 and those learners whose scores fell within the range of 30- 39 were selected as intermediate.

Test Anxiety scale

A standard questionnaire of test anxiety by Richmond et al. (2001) was distributed among the participants in the present study to achieve their general test anxiety. The Test Evaluation Anxiety Questionnaire was used to assess test anxiety in this study. It could be described as a 20-item, 5-point, Likert-type instrument. Students were required to read the assertions, and then check the scale number which indicated how much they were frightened in the mentioned situations (1= strongly disagree, 2 = disagree, 3 = are neutral, 4 = agree, 5 = strongly agree). Scores were between 20 and 140. Scores of 105 and above indicated high test anxiety and scores of 55 and below indicated low test anxiety. This questionnaire had already been piloted on 20 participants prior to this study and the reliability had come to .77 (Cronbach's $\alpha = .77$).

The Strategy Inventory for Language Learning (SILL)

SILL Questionnaire (1989) is a standard questionnaire developed to evaluate the frequency of strategy use by non-native speakers (ESL/EFL, 50 items). It includes the following subscales (strategies): memory, cognitive, compensation, metacognitive, affective, and social strategies (Oxford & Burry-Stock, 1995). In order to abide by the reliability and the validity of the authentic questionnaire, the learners were required to attempt all the 50 items. However, due to the purpose of the study, only cognitive and metacognitive sections including 14 and 9 items were evaluated. This questionnaire had been previously piloted with reliability of 0.82 of Cronbach Alpha.

TOEFL PBT Test

TOEFL PBT is a paper-based version of TOEFL test which evaluates reading, listening and writing. In this study, only the reading comprehension section of the PBT test was analyzed. The learners had 145 minutes to answer the questions. As it is crystal clear, TOEFL tests benefited from a high degree of reliability as well as validity.

To obtain reasonable answers to the research questions mentioned earlier, the following steps will be taken:

First of all, Quick Placement Test was distributed among the EFL participants in Almas Institute in Zanjan to determine the homogeneity of the participants and select the intermediate language learners. Total score was 60 and after analyzing the test results, 90 students who achieved 30-39 were identified as intermediate ones.

Afterwards, SILL and Test Evaluation Anxiety questionnaires were handed out to the students. SILL questionnaire by Oxford (1990) consist of 50 items. Learners were asked to determine whether it was never or never true of me (1), usually not true of me (2), somewhat true of me (3), usually true of me (4), always or almost always true of me (5). Then they were asked to respond to the Test Evaluation Anxiety questionnaire by Richmond et al. (2001) which included 20 items. Finally, a TOEFL PBT Test was administered in order to determine students' reading comprehension ability.

The design of the research was an ex-post facto design since there were no treatments at all.

Data Analysis

Descriptive statistics related to the research variables were calculated and results were depicted in table 1.

Table 1

Descriptive analysis of the research variables

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Reading performance	90	12.10	36.10	34.57	0.93
Cognitive Strategy	90	26.20	68.80	47.63	10.75
Metacognitive Strategy	90	10.00	40.80	30.07	9.86
Test Anxiety	90	51.13	127.13	91.95	13.63

As it was interpreted from Table 1 and with regards to the number of individuals (n=90), the mean and standard deviation of the reading comprehension were 45.67 and 0.93 respectively. Means of cognitive, metacognitive, and test anxiety were 47.63, 30.07, and 91.95 respectively. Data that was collected through implementing the test was analyzed via inferential statistics. In order to determine the relationship among the variables, Pearson correlation coefficients were used.

Inferential Analysis

In this section, the three research questions are re-introduced, and based on the data analysis carried out for each question, the null hypotheses are accepted or not. The analyses are described.

Research Questions

For the ease of inquiry, research questions are brought before the relevant analysis:

Research Question One

1) Is there any significant relationship between intermediate EFL learners' Reading performance and Test Anxiety?

Pearson correlation coefficient was calculated to explore the relationship between EFL students' test anxiety and their reading comprehension. Based on the results depicted in Table 2, it was shown that there was a significant and negative correlation between the two variables ($P<0.05$). So the first null hypothesis was rejected.

Table 2

Pearson Correlation :Reading performance with Test Anxiety

Reading performance		
Pearson Correlation	-0.654	
Test Anxiety	Sig. (2-tailed)	0.000
N		90

**. Correlation is significant at the 0.01 level (2-tailed).

2. Is there any significant relationship between intermediate EFL learners' cognitive strategy and their reading comprehension?

Pearson correlation coefficient was calculated to search for any significant relationship between students' cognitive strategy and their reading comprehension. Based on the results displayed in Table 3, it was revealed that there was a significant relationship between cognitive strategy and reading comprehension ($P<0.05$). Therefore, the second null hypothesis was rejected.

Table 3

Pearson Correlation :Reading performance with Cognitive Strategy

Reading performance		
Pearson Correlation	0.66	
Cognitive Strategy	Sig. (2-tailed)	0.000
N		90

**. Correlation is significant at the 0.01 level (2-tailed).

3. Is there any significant relationship between intermediate EFL learners' meta-cognitive strategy and their reading comprehension?

A Pearson correlation coefficient was calculated to search for any significant relationship between students' metacognitive strategy and their reading comprehension. Based on the results displayed in Table 4, it was revealed that there was a significant relationship between metacognitive strategy and reading comprehension ($P<0.05$). Therefore, the third null hypothesis was rejected.

Table 4

Pearson Correlation :Reading performance with Metacognitive Strategy

Reading performance		
Pearson Correlation	0.59	
Metacognitive Strategy	Sig. (2-tailed)	0.000
N		90

**. Correlation is significant at the 0.01 level (2-tailed).

4) Which one of these two independent variables of cognitive or metacognitive strategies can better predict intermediate EFL learners' reading comprehension?

In Table 5, the multiple correlation coefficient as well as the coefficient of determination was depicted. The multiple correlation coefficient was 0.658 ($R = 0.658$). This showed that there was a significant relationship between the dependent variable and independent variables. Squared coefficient ($R^2 = 0.432$) suggested that 43 percent of the dependent variable changes could be predicted by independent variables.

Table 5

The correlation coefficient and coefficient of determination

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.658	0.432	0.419	0.709

a. Predictors: (Constant), cognitive strategies, metacognitive strategies

A one-way ANOVA results ($F = 33.138$, $P < .05$) indicated that at least either of the independent variables could predict the dependent variable.

Table 6

One-Way ANOVA

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	33.321	2	16.661	33.138	.000 ^b
Residual	43.741	87	.503		
Total	77.062	89			

a. Dependent Variable: Reading performance

b. Predictors: (Constant), Metacognitive Strategy, Cognitive Strategy

A regression analysis was also run to predict the effect of independent variables on dependant variable.

Table 7

Regression analysis coefficients^a

Coefficients^a

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Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	31.743	.403		78.810	.000
Cognitive Strategy	.067	.019	.768	3.550	.001
Metacognitive Strategy	-.011	.020	-.121	-.559	.577

a. Dependent Variable: Reading performance

Based on Table 7, and as it was crystal clear, with regards to the significance values ($P<0.05$), only cognitive strategy was significant. It means, in the regression analysis, the metacognitive strategy is not significant ($p>0.05$).

In other words, cognitive strategy could better predict and influence reading comprehension than the other variable of metacognitive strategy.

In this study, as mentioned before, an attempt was made to find answers to the four questions concerning the relationship among the three variables of cognitive, metacognitive strategy, test anxiety, and reading comprehension performance. Appropriate statistical procedures were

followed to obtain the required responses for each question. The analysis demonstrated that students with low test anxiety outperformed students with high test anxiety. In addition, students using cognitive and metacognitive strategies outperformed the ones who didn't take much advantage of those strategies although cognitive strategies were more effective than metacognitive ones.

Discussion

Discussion regarding the first null hypothesis

The first null hypothesis that 'There is no significant relationship between intermediate EFL learners' test anxiety and their reading comprehension', was rejected. Due to the statistical analysis and with respects to the fact that $P < 0.05$, it was concluded that there was a negative and significant relationship between test anxiety and reading comprehension performance. Less anxious leaners outperformed the high anxious ones. In other words, as test anxiety increases, reading comprehension scores decrease.

This study was in line with the findings of Sarason (1987), Sarason & Sarason (1990), and Spielberger and Vagg (1995) that test anxiety makes it hard for students to concentrate on test and perform adequately.

In addition, this study proved that as Spielberger and Vagg (1995) and Zeidner (1998) realized, for test anxious students who spend a lot of their time in achievement contexts that involves regular testing, anxiety may tremendously affect their well-being. In addition, test anxiety can impair performance.

This study was also consistent with the findings of Horwitz (2001) and Zahrakar (2008) that there is a moderately negative relationship between foreign language anxiety overall and language achievement. High level of anxiety threatens individuals' mental and physical health and has a negative effect on their personal, social, familial, occupational, and educational performance. According to the outcomes of this study, as Abulghasemi (2008 asserts, there is a negative correlation between test anxiety and students' performances. They also believe that a high level of anxiety creates intrusive thoughts which do not associate with test and don't let them concentrate on the test. All these cut and off thoughts cause failure in learning.

The findings of this research were also in line with Cassady and Johnson (2002and Sarason (1980) that test anxiety during the preparation for a test may lead to poor understanding and organization of the concepts and hence make the retrieval cumbersome. While test anxiety during the test decreases test takers'('test-taker') attention and thereby increases the number of errors.

This study was in line with Zeidner (1998) that “test-anxious students tend to be easily distracted on an exam, experience difficulty in comprehending relatively simple instructions, and also have difficulty organizing or recalling relevant information during the test” (p. 4).

Consistent with the findings of this research, there are a number of studies reporting text anxiety as one of the major cause for students’ underachievement and low performances at different levels of their educational life and has been shown to affect students’ ability to profit from instruction. Cassady and Johnson (2002) and Jing (2007), found that test anxiety is negatively correlated with academic performance. Greater anxiety would be associated with poorer academic achievement. However, this research was not consistent with Chapell et al. (2005) who believe that for some students some anxiety might be a good thing. It might motivate longer periods of study and more careful attention to questions on the exam. This research didn’t prove Cheraghian et al.’s (2007) finding that no relationship has been indicated between test anxiety and students' performances.

Discussion regarding the second null hypothesis

The second null hypothesis stating that ‘There is no significant relationship between intermediate EFL learners' cognitive strategy and their reading comprehension’ was also rejected. It was found that there was a significant relationship between the two variables.

As Hamdan, Ghafar, Sihes, and Atan (2010) explored, this study that during the phases of reading the students used high frequency of cognitive strategies such as using titles to predict the content of the text, using pictures to guess the content of the text, skimming, rereading to remedy comprehension.

In line with Rokhsari (2012), this study also revealed that high-scored readers would use cognitive strategies whereas low-scored readers would use other kinds of strategies especially test-taking strategies.

In line with Alharabi (2015), this study proved that there was a significant correlation between cognitive learning strategies and their reading comprehension performances. In addition, in accordance with Ahmadi, Ismail, and Abdullah (2013) this study revealed that the correlation between cognitive reading strategy and reading comprehension is positively significant.

This study also supported the findings of Zahal (2014) and Yücel (2011) in that there is a positive and significant relationship between learners' cognitive strategy use and their reading comprehension performances. However, the findings of this study didn't approve the findings of Alper and Deryakulu (2008) that learners' cognitive abilities had nothing to do with their academic achievements such as reading comprehension.

Discussion about the third null hypothesis

The third null hypothesis stating 'There is no significant relationship between intermediate EFL learners' meta-cognitive strategies and their reading comprehension' was rejected as well. It was proved that metacognitive strategy was highly and significantly correlated with learners' reading comprehension performance. Those benefiting from a high level of metacognitive strategies outperformed those who less frequently utilized this strategy.

However, it must be confessed that learning strategies were significantly correlated with intermediate reading comprehension performances. In line with Siregar, Afriazi, and Arasuli (2019), this study confirmed Siregar, Afriazi, and Arasuli's (2019) findings that there is a significant correlation between reading strategies and reading comprehension achievement.

This study was in line with Nourdad and Ajideh's (2019). They also showed that there was a positive relationship between strategies and reading test performance and that successful, moderately, successful, and unsuccessful test-takers differed in their use of cognitive and metacognitive strategies. This study also depicted that the more use of cognitive and metacognitive strategies, the better scores of reading comprehension performance.

Unfortunately, this study did not prove Habók and Magyar's (2019) findings. They claimed that EFL reading proficiency and strategy use patterns are not directly linked. However, the findings of this research showed that there were significant relationships between cognitive as well as metacognitive strategies and reading performance. They also claimed that this is learners' attitude, approach, and motivation that play a great role in EFL learners' performances.

As Saks and Leijen (2018) concluded, there was a linear and positive relationship between language learning strategies including cognitive and metacognitive strategies and learning outcomes based on learners' perceptions. Their result indicated that cognitive strategies have a direct effect on learning outcomes, whereas metacognitive strategies affect outcomes indirectly. This study also showed both cognitive and metacognitive strategies have positive relationships with learners' reading performance.

This study was congruent with the findings of Sheorey and Mokhtari (2001). The results revealed that those learners who put more emphasis on cognitive as well as metacognitive strategies in comparison to other learning strategies outperformed the others in their performances.

Last but not least, regarding the fact that which one of the two variables of cognitive and metacognitive strategies could better predict learners' reading comprehension performances, statistically speaking, it was proved that cognitive strategies could better predict reading comprehension performances.

This study confirmed Taheri, Sadighi, Bagheri, and Bavali's (2020) claims that a substantial majority of EFL learners perceived the use of language learning strategies as advantageous. They found that the frequency of cognitive strategies outnumbered the metacognitive strategies. Besides, Task achievements depend on the use of learning strategies including cognitive and metacognitive ones.

Conclusions

As mentioned in the literature of review, a lot of studies such as the study by Carrell (1998) were conducted on the relationship or the effect of cognitive or metacognitive strategies on/with reading comprehension and the relationship between test anxiety and reading comprehension performances of EFL learners; however, few studies had been done on the basis of comparing and correlating the cognitive and metacognitive learning strategies, test anxiety, and intermediate EFL learners' reading comprehension performances. Accordingly, this study was launched to scrutinize the relationship among the above-mentioned variables. An attempt was also made to probe into the interaction of the independent variables of cognitive and metacognitive learning strategy to realize which one could better predict reading comprehension performances. In other words, the present study made a rigorous and vigorous attempt to investigate how significantly psychological factors such as test anxiety and cognitive and metacognitive learning strategies could have parts in learners' learning in general and in their reading comprehension performance in particular.

The main aim of this research was to find any significant relationship between test anxiety and reading comprehension performance, cognitive and metacognitive learning strategies and reading comprehension performance, and the interactional effect of both metacognitive and cognitive learning strategies on reading comprehension performances of the intermediate EFL learners.

Prior to individually deal with the hypotheses, the study came up with the conclusion that test anxiety correlated negatively and significantly with reading comprehension performances. In other words, the highly anxious learners did poorly the test than those with less test anxiety ones. On the other hand, cognitive and metacognitive strategies were able to make considerable improvements in participants' reading comprehension performances though cognitive could better predict the reading comprehension performance of the learners. This could be advocated by Oller & Perkin (1978) asserting that affective factors influence how effectively one learns. This is also backed up by Dornyei (2003) who emphasized that factors including cognitive learning strategy play a pivotal role in the quality of learning. The same remark was made by Brown (2005) proposing that it is critical to attain a broad understanding of psychological factors in language learning. When more attention is paid to these aspects, learning is fostered more effectively.

In terms of the effect test anxiety has on learning, the first conclusion of the study was that test anxiety negatively affect the reading performance of the learners. As Sarason (1987) and Spielberger (1995) claim, anxiety is considered a sturdy barrier to success in general and academic achievements in particular. Anxious learners are said to be suffering from lack of concentration, lack of confidence, insecurity, and self-doubt, all of which will result in a very poor performance. Furthermore, cases with high test anxiety are observed to have problems such as heart contraction, increasing the pulse rate, blood pressure, body temperature, blood sugar, stomach acid, enlargement of the pupil of the eyes, difficult breathing, muscle tension and sweating.

The other corner of the study was to do with cognitive learning strategies and their effect on language learning. Regarding the conclusions of the study, the higher use of cognitive strategies is, the more ambitious the students are to settle language learning. This is on the same route with O'Malley and Chamot, (1990) that strategies can potentially heighten learners' awareness of their learning processes and develops learners' ability to use appropriate strategies. This was also supported by Oxford (1990) that applying cognitive strategies would enhance learners' comprehension and understanding of reading passages.

This study concluded that there was a significant and positive relationship between intermediate EFL students' metacognitive strategies and their reading comprehension performances.

Finally, it was proven that the interaction of both independent variables of metacognitive and cognitive learning strategy on intermediate EFL learners' reading comprehension was effective; however, cognitive learning strategy can better predict the dependent variable of the reading comprehension performances.

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IDENTITY VALUE OF THE ROMANIAN POPULAR COSTUME PROMOTED BY THE ROMANIAN ROYAL HOUSE

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ABSTRACT

The Centenary of the Great Union brings in front of us the will of all Romanians. The Royal House of Romania accomplished a great role in this process. Carol the Ist opened ways to Europe for Romania. His wife, the Queen Elisabeth embraced the Romanian civilization. She loved the Romanian popular costume and she promoted it to her closest friends, the women from upper class aristocracy. The Queen Maria of Romania, she also wore the Romanian popular costume and encouraged the princesses and the ladies from the court to like them the same. The Queen Maria of Romania had a key role during the First World War in accomplishing the Great Union.

The Romanian popular costume represents the symbol of the social identity of the nation; it integrates the social values of the Romanians during the centuries. It will always represent the beauty of the Romanian civilization and will speak with dignity on the particularities of the Romanian nation.

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Key words: Royal House of Romania, Great Union, Romanian popular costume, symbolical representations, Romanian identity.

BARRIERS IN TEACHING READING TO ELLS AND WAYS OF OVERCOMING THOSE OBSTACLES

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ABSTRACT

Reading is one of the language skills, which is imperative in English learning and the requirement for exploring the effect of instructional strategies on instructing reading to the students have elevated in recent years. The purpose of this study was to determine what knowledgeable and expert teachers of ELLs in the junior high schools make out as the barriers to the reading accomplishment of English students and what are the methods for conquering those barriers. The information were gathered from 60 successful teachers who taught in junior high schools of Zanjan, Iran. The successful educators were identified based on student accomplishment using purposive sampling. A Likert scale was utilized for the questionnaire. The successful teachers sort effective instructional tactics in the five constituent of reading and had the capacity to set up supplementary instructional tactics, barriers, and ways they overwhelmed barriers in an open-ended question on the questionnaire. The study was mixed-method research, which, as stated by Isaac and Michael (1995), is utilized " to explain systematically the realities and the features of a given population or domain of interest, factually and precisely ". The open-ended questions of questionnaire were intended to gather data in regards to barriers and methods for overcoming barriers for instructing reading to English students. The findings uncovered that the participants' thoughts regarding barriers and ways of overcoming those barriers in instructing reading to English students.

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Key words: reading, reading tactics, reading comprehension

INTRODUCTION

Recent developments in the field of teaching English have heightened the requirement for investigating the impact of effective instructional tactics on instructing reading to the students. Reading, as one of the four basic skills in language learning and teaching, is extremely significant as a language skill, as well as language input for other abilities to develop. In reality, many students feel that they can't productively and efficiently comprehend what they read. One principle reason representing this reality is that students have not gotten a handle on effective reading tactics . Reading tactics or strategies mean "the intellectual procedures entangled when readers intentionally approach a content and make meaning of what they read " (Barnett, 1988, p.66). Specifically, reading tactics utilized by readers, their metacognitive awareness, and reading

proficiency are firmly related. Basically, effective readers use more tactics in contrasted with less successful students and utilize them more frequently (Temur, T. U. R. A. N., & Bahar, O. Z. G. E., 2011). As well, better readers have higher metacognitive consciousness of their own strategy use, that cause associate increased reading skill (Baker & Brown, 1984; Garner, 1987; Afflerbach, 2002 as cited in Hamdan et al., 2010, p.135) .

Reading tactics are an imperative piece of a talented reader's occupation with content and his or her following accomplishment with that text. In favour of proficient reader, strategic reading is an mechanized process before, throughout and after reading (Brushaber, 2003, p.3). Reading strategies need to do with perceiving the object of reading, activating the interconnected background knowledge one has, focusing on key ideas, keep an eye on comprehension, and consequencing (Brown, Palincar, Armbruster, 1984; cited in Magno, 2008). They furthermore screen when they are having issues while reading. Because of the awareness of the complications they experience, they can modify their reading, for example, speeding up, slowing down, or stopping to read another text to get some background information about the current content (Pressley & Gaskins, 2006, p.101). In any case, as poor readers don't have these basic reading procedures, they put strenuous effort into the substance to have the capacity to understand it. If taught a way to utilize and apply the reading ways, poor readers, as well, will finally end up plainly very important readers.

The present study endeavors to study the existing situation of using reading tactics among English teachers and learners of Zanjan middle schools. To be more exact, this study intends to examine the frequency of various sorts of reading tactics implemented by English teachers to instruct, and EFL students to get the hang of reading skill and comprehend the content and furthermore to identify the barriers in teaching those tactics and the ways the instructors use to overcome them . The purpose of this study is to determine what instructional tactics master educators of English language students (ELLs) in the junior high schools observe as most proficient for instructing reading to ELLs. For normal content teachers without a background in English as a second language, defining relevant teaching [tactics] for [English learners] pretends a significant and incomparable challenge. The results of the present examination can be similarly theoretically and practically significant in that the teachers ought to know about the best instructional tactics and apply them in their reading comprehension classes. At the best, they can increase their students' consciousness about the effective instructional tactics and persuade them to use in their practices of reading comprehension. The findings even can be significant for the understudies in that they can conquer the best instructional tactics so as to comprehend the readings proficiently .

Many researchers believe that the topic of effective instructional tactics have not been adequately investigated or that they have not conclusive findings or replies on the topic. Especially, they lack information concerning what expert teachers of ELLs in the junior high school identify as the obstacles to the reading accomplishment of English students and considerably further to date not any tactics suggested by the expert teachers that would be useful or considered barriers. In the researcher's opinion, the studies that have explored the barriers in teaching reading are not very many. Given the absence of research in this line there is plainly needed for studies that consolidate the barriers and methods for overcoming them in teaching reading. The purpose of the current study; consequently is to identify the barriers in teaching reading and methods for overcoming those obstacles from the expert teacher's perspective.

2- LITERATURE REVIEW

2-1 Definition of Reading Comprehension Tactics

Since late years, more consideration has been put on comprehension tactics and henceforth, a wide range of definitions were proposed to identify these strategies (Afflerbach & Pressley, 1995; Barnett, 1988; Billman, Duke, Pearson, & Strachan, 2011; Dehjalali, & Izadpanah, 2017; Goudvis & Harvey, 2007; Keene & Zimmerman, 1997; Lienemann & Reid, 2006; Oxford, 1990). In order to accurately identify reading comprehension tactics and determine strategic from nonstrategic readers, it wound up plainly fundamental to describe what is implied by the term " comprehension tactics " (Folman & Sarig, 1990) .

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Along these lines, Garner (1987) characterized understanding strategies as "generally deliberate, planful exercises go up against by dynamic students, ordinarily to resolve perceived subjective disappointment" (p. 50). As indicated by The National Reading Panel report (2000), understanding strategies were seen as "specific methodology that guide understudies to end up plainly mindful of how well they are fathoming as they attempt to read" (NRP, 2000, p. 40). Brantmeier (2002) depicted comprehension strategies as "the understanding procedures that readers use keeping in mind the end goal to comprehend what they read " (p. 1). The expressions " activities," " procedures," and " processes " were utilized diversely to denote similar implications and were all performed by readers. Moreover, the results of these recommendations were contrastingly named however may allude to a similar expansive idea of comprehension: "cure perceived subjective disappointment" (p. 50), "well fathoming while at the same time reading" (p. 40), or "understand reading" (p. 1).

2-2 Understanding What Strategic Readers Do

Understanding what good readers do before, during, and after they read has turned into a basic essential to build up tactics for poor and non-skilled readers (Duke, 2001; Gallagher & Pearson,

1983). To make sense of what nice and strategic readers do, Dole, Duffy, Pearson, and Roehler (1992) indicated that strategic readers associate what they apprehend to the new data that they need to find out, raise questions on what they scan and discriminate vital from lower ideas. Moreover, strategic readers are apt in coordinating information and observing their understanding. As acknowledged by Vacca (2002), strategic readers will use their previous learning before, during, and once they scan. whereas they're utilizing their previous data, they will confirm what's vital within the content, orchestrate, construe, raise queries, monitor understanding, and fix any faulty understanding. Correspondingly, Flood, Jensen, Lapp, and Squire (2003) recorded the accompanying highlights to recognize strategic readers from less or non-strategic readers: extricating meaning from the content, observing comprehension, addressing, reviewing, rereading, summarizing, evaluating, anticipating, and inferring. Moreover, Boardman, Klingner, and Vaughn (2007) used comparative methods and side " visualisation " to the list. additionally, Dole, Duffy, Pearson and Roehler (1991) found that strategic readers are often able to comprehend the reading piece virtually, inferentially, or in some contexts evaluatively. In different words, strategic readers will opt for what, when, and the way to utilize ways whereas reading.

2-3 Recent Studies

In a very recent study, Hayati and Jalilifar (2010) completed a test to explore the effect of reading abilities instruction passing on through TBLT on English reading perception of understudies. Forty-two understudies majoring in MBA were picked and randomly allocated to two groups as participants. The experimental group was taught four reading skills namely, scanning, skimming, 1 contextual clues, and critical reading through task-based language teaching, while the control group got the common translation instruction. Having taken a last examination, the members reading micro-skills were checked. Independent samples t-test was utilized to find possible differentiations between the two groups. The results uncovered that understudies in the experimental group having been instructed on reading abilities by means of TBLT outflanked their counterparts in the control group demonstrating a better academic performance and effective reading comprehension.

Khosravi (2000) attempted to look into the impact of scanning and skimming, as two reading tactics, on Iranian EFL understudies' reading rate and reading comprehension. The examination of the data demonstrated that scanning could fundamentally upgrade the understudies' both reading rate and reading perception, while in the meantime skimming represented huge change of the reading comprehension of the subjects. Shokrpour and Fotovatian (2009) conducted an experimental study to uncover the impacts of consciousness-raising of metacognitive tactics on a group of Iranian EFL understudies' reading comprehension. The results of this examination

showed that contrasted with the control group, the experimental group showed a significant change in reading comprehension at the end of the treatment period.

McKeown, Beck, and Blake (2009) worked a two-year study in which institutionalized comprehension guideline for portrayals of two noteworthy strategies was composed and executed. The adequacy of the two experimental comprehension instructional conditions (Content and Strategies) and a control condition were taken a looked at. Content instruction focused undergraduates' thought on the substance of the content through open, meaning-based queries in connection with the content. In strategies instruction, undergraduates were demonstrated particular strategies to subsume their entrance to amid reading of the substance. The consequences of the investigation uncovered that there was no refinement between the presentations of the two experimental groups for some aspects of comprehension. However, for narrative recall and expository learning tests, the students following content instruction beat those following tactic instruction. In still another examination, Shang (2010) investigated a group of Taiwanese EFL students' utilization of three reading strategies (cognitive, metacognitive, compensation strategies), their perceived impact on the students' self-adequacy, and the connection between reading tactic use and perceived self-efficacy on their English reading comprehension. The results of this study demonstrated that metacognitive strategy was utilized most as often as possible, followed by compensation strategy, and afterward cognitive strategy. In addition, a noteworthy positive relationship was found between the usage of reading strategies and impression of self-viability. Regardless, reading techniques were disconnected to reading achievement. Taking a look at studies reported above, one can reach the conclusion that the region of reading comprehension tactic instruction still requires additionally research about, particularly in an EFL context such as Iran and the present paper intends to explore the barriers in teaching reading tactics all the more profoundly by addressing a number of variables such as students' consciousness of reading tactics, the expansion of the scope of strategies utilized by students, and the effectiveness of reading comprehension strategy instruction, barriers and methods for conquering those obstacles from the instructors perspective.

3-METHODOLOGY

3-1 Research Design

The study was qualitative research, which is utilized to portray efficiently the certainties and the qualities of a given population or territory of interest, authentically and precisely. As this study inspected instructional strategies used by master educators and their view of organizing strategies, a qualitative study was the best way to deal with recognize the strategies supporting the instructors' endeavors in the classroom.

The quantitative part of the study enabled the researcher to gather data to distinguish barriers and recognize strategies to conquer recognized obstructions. The quantitative questions of the questionnaire were intended to gather data in regards to effective instructional strategies, perceived priority skills and utilization of strategies, barriers, and techniques for conquering boundaries for instructing reading to English students in the intermediate grades in junior high schools.

3-2 Participants

The population for this study was English instructors of junior high schools in Zanjan province. Members were picked in light of work at schools by the utilization of assessment of the five components of reading, and the suggestion of school principals who recognized the instructors as master junior high school teachers of English students in view of understudy accomplishment and reading levels. Purposive sampling was utilized to choose the members of the study. Extreme case sampling was the kind of purposive examining used to study the instructors whose understudies worked abnormally well (Isaac and Michael, 1995). There were a total of 69 junior high schools in Zanjan that met the criteria. The participants were teachers in junior high schools who were identified as experts in teaching reading to English learners.

3-3 Materials

3-3-1 Questionnaire

The questionnaire queries were originated by the researcher based on the National Reading Panel's (NRP's) recommendation of the five elements of reading and therefore the literature review on English learners (see Appendix A). The questionnaire questions focused on instructional tactics for teaching reading to English learners in the junior high schools, intermediate skills, and methods to overcome barriers. The researcher created a Likert-scale questionnaire, which was distributed among participants to gather data. The questionnaire instrument contained questions about participants' perceptions considering instructional tactics, use, barriers, and strategies to beat declared barriers. Implementation of instructional tactics, time spent on instruction, and barriers were as well noted supported questionnaire results.

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3-3-2 Field Test

With a specific end goal to guarantee the instrument was dependable, field tests were directed for the questionnaire. Two instructors who met the criteria as master educators took the questionnaire. Once the specialist dissected the information, he imparted the outcomes to the two educators who were a piece of the field test. After discussing the Likert-scale questionnaire, the questionnaire questions were reexamined and refreshed in view of the members' suggestions and results of questionnaire comes about. (Content validity ratio (CVR) and content validity index (CVI)).

3-4 Procedure

At the start of the study, the researcher sent the teachers a ranking-scale questionnaire. The questionnaire questions addressed the five elements of reading and were supported the literature review. When the questionnaires were completed, all data were analyzed. Teachers were asked to finish one questionnaire with both quantitative and qualitative data consequences about effective instructional tactics, the main target or priority of their instructional day, and overcoming barriers. After the data assortment, the researcher analyzed the responses to spot the instructional tactics and activities perceived as more vital to the teachers.

4- RESULTS

This study was designed to identify the barriers in teaching reading to ELLs and ways of overcoming those obstacles. To this end, the open-ended questions were developed to identify barriers and tactics to overcome those barriers (See Appendix A). The data from the open-ended questions were checked again, coded, and categorized based on participants' responses. Every respondent's write-in responses were scan and color-coded based on identified barriers, and methods to overwhelm barriers. Once all questionnaire were analyzed, patterns and themes associated with these areas were discovered and documented.

Table 4.1 themes, categories and codes that teachers perceived as barriers

Codes	Categories	Themes
Limited time to teach all five components	Limited time	Time
Limited time to evaluate all students		
Lack of time to teach other skills		
Students fear of punishment by the teacher	Concerns about lack of success in teaching	Anxiety
Disproportion of texts with students' knowledge level		
Lack of knowledge about teaching different tactics		
Not preparing students to enter in teaching reading section	Lack of motivation	Motivation
Lack of willingness in students to learn		
Inaccuracies of students to what have been taught		
Frequent absence of students	Lack of positive feedback	
Lack of positive feedback to teachers and students' success		

Based on themes, categories and codes which were shown in the table above (Table 4.1), the teachers perceived the limited time of the classes as one of the barriers. Limited time of the classes made difficulties for teachers to teach all five components of the reading deeply. Also, lack of

sufficient time made difficulties for teachers to evaluate the largest number of students of classes in proper times. Furthermore, the teachers had to teach other skills either, and limitation of time made difficulties for teachers.

Another barrier which teachers were faced was anxiety. Students' fear of punishment by the teachers, if they can't answer to the teachers' questions, made them anxious and they can't focus on what teacher taught. Also, sometimes the texts of books are not proportional with students' knowledge level. In addition, sometimes the teachers had not enough knowledge about all five components of reading and different tactics of teaching those components and this made anxiety which perceived as a barrier in teaching.

The next barrier in teaching of reading was lack of motivation in some students. They don't paid attention to what teacher taught, and consequently, they don't learn the components of reading. Also, frequent absence of students in classes made difficulties for teachers to teach appropriately. Finally, lack of positive feedback to those students who pay attention and learn what teacher taught, also lack of positive feedback to those teachers who had achievement in teaching components of reading, destroys their motivation and this perceived as another barrier to teach the reading components.

Holding remedial classes out of school time, were recommended by teachers to overcome the time limitation. Also, they recommended to divide the classes by a large number of students into two classes if possible in order to have enough time to teach all five components of reading and evaluate the students in each step.

Also, teachers recommended that, if the texts are not proportional with students' level of knowledge, they can want them to work on similar texts at home when they have more free time. In addition, giving positive feedback to students frequently and after every success and achievement, made them more motivated. Furthermore, giving positive feedback to teachers by the school headmasters, when the teachers have impressive achievement in teaching reading to students, made the teachers more motivated to put more energy in their classes.

4-DISCUSSION

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Other scholars expressed that, in the area of phonemic awareness and phonics, many students stir up letter shapes and sounds. The other researchers, Durgunoglu, Nagy and Hancin-Bhatt (1993); Izadpanah, Hatemi, & Asadi (2016) clarified that, in addition to predicting second language phonological awareness, the phonological capacities that kids acquire in their native language interference in their ability to perceive words in English. Also, phonological awareness is commonly observed to be a critical component of literacy improvement (Catts, Hogan & Little, 2005; Gholami, Alavinia, & Izadpanah, 2015; Jorm, McClean & Share, as cited in Ehri, 2001; Murray & Stahl 1994).

In the area of phonic, one primary contention from educators was that reading is a way to assist find what is critical to the person in a youthful child. An instructor trusted that orderly instruction is inconvenient and that teaching reading is spontaneous. Another educator had similar perspectives of how teaching reading isn't an arranged action, yet rather can be instructed in minutes. Besides, young children are not prepared to learn letters and sounds but rather to ask learning the sounds by listening to others speak.

5-CONCLUSION

This study explored the barriers in teaching reading to ELLs as perceived by successful junior high schools' educators and methods for overcoming those obstacles. Staff improvement for innovative and existing teachers ought to be directed to guarantee they possess the skills obligatory to teach all students to read. The preparation must review the meaning of phonemic awareness, as this is frequently confused for phonics. Giving the definition and examples of phonemic awareness instructional strategies, lessons, and exercises should to be a part of the preparation. It would be advantageous for teachers to generate one lesson on each of the following: segmenting and

blending sounds, identifying the quantity of sounds in words, recognizing rhyming words, making rhyming words, and syllabication .

It is critical to begin students in phonics instructing in elementary school since understudies who have phonics teaching early have a propelled reading ability than those understudies who don't have a strong basis in their initial education as it is expressed in Ehri, Nunes, Stahl & Willows' investigation (2001).

Letter reversals (when students misperceive the shape or sound of one letter for another letter, for example, mistaking *d* for *b*) are frequent among children in the early grades. Concentrate on one letter at a time, teaching the first letter shape (e.g., *b*) in a variety of ways until the point when the student can recognize it promptly. At that point, instruct the student another letter or two, reviewing and reinforcing the first letter somewhat more. Finally, focus on the other letter (e.g. *d*) completely.

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DOMESTIC POLICY REFORMS OF AZERBAIJAN IN COVID 19 SITUATION

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ABSTRACT

The coronavirus pandemic and quarantine measures to contain it have had a dramatic and widespread shock to the global economy, plunging it into a deep recession. According to the forecasts of the World Bank, in 2020 the planet's economy will contract by 5.2% . The decline will be the deepest since World War II, and the decline in per capita output will affect the largest proportion of countries since 1870. The COVID-19 pandemic has gravely injured the world economy with severe outcomes impacting all societies and individuals. The COVID-19 outbreak was neither unpredictable nor unforeseen, yet it blindsided policymakers when it emerged, leading to unprecedented global restrictions on human activity and almost certainly triggering the first global economic contraction since WWII.

Amid severe shocks affecting domestic supply and demand, trade and finance, advanced economies are expected to contract by 7% in 2020. Emerging market and developing economies (EMERs) are projected to decline 2.5% this year - the first comprehensive recession in this group of economies in at least sixty years. Per capita income is expected to fall 3.6% this year - and this will plunge millions of people into extreme poverty.

Paper touches general directions of economic regulation in developed and CIS countries, at the same time particularly analyzes the directions of regulation processes in Azerbaijan.

Keywords: global recession, financial crisis, macroeconomic stability, risk assessment, monetary policy, fiscal policy, liquidity provision

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Introduction

During the period from February to June 2020 covered by this Survey, the world economy went into a tailspin as Covid-19 spread globally from China. The impacts of the virus and the economic response to it have created the biggest shock to the Indonesian economy since the Asian financial crisis (AFC) two decades earlier. The Covid-19 shock has dominated policy discussions of health, poverty and the economy during this period, and hence is the focus of the Survey.

The health emergency caused by COVID-19 led to economic and social crisis, and it will be necessary for the leaders of the various political forces to work together to enact new measures. In contrast to the last economic crisis, the banking sector was better capitalized and more liquid (Bisseker 2020; Remolina 2020).

The hardest hit are those countries in which the course of the pandemic has become particularly severe, and which are heavily dependent on world trade, tourism, export of raw materials and external financing. And while the magnitude of the shocks varies from region to region, all emerging and developing economies have weaknesses that are exacerbated by external shocks. Moreover, disruptions in access to schooling and primary health care are highly likely to have long-term negative impacts on human capital development.

The pandemic has highlighted the urgent need for health and economic policy responses, including global cooperation, to mitigate its impact, protect vulnerable populations and strengthen countries' ability to prevent and cope with similar events in the future. Emerging and developing economies are particularly vulnerable, and it is critical for them to strengthen health systems, address the informal economy and limited social safety nets, and implement reforms to ensure strong and sustainable economic growth following the current crisis.

Emerging market economies and developing countries that have adequate budgetary capacity and are able to attract funding on acceptable terms could consider introducing additional stimulus measures if the effects of the pandemic persist. These measures should be complemented by steps that make a credible recovery of fiscal sustainability over the medium term, including by strengthening the fiscal system, enhanced domestic revenue mobilization, and improving spending efficiency and transparency in the fiscal and borrowing environment.

The Eastern Europe and Central Asia region is projected to contract an average of 4.7 percent, with almost all countries affected by the recession. Thus, in Russia, by the end of the year, the economy will probably decline by 6 percent. The losses will be partially compensated only by the end of 2021: next year, analysts at the World Bank promise the Russian economy will grow at 2.7 percent.

In Belarus and Ukraine, gross product volumes will decline by 4 and 3.5 percent, and growth in 2021 is projected at 1 and 3 percent, respectively. Kazakhstan and Kyrgyzstan will receive less than 3 and 4 percent of GDP this year, and growth will resume in 2021 in these countries at the level of 2.5 and 5.6 percent.

The government of Azerbaijan has implemented a new Action Plan to reduce the damage to the economy and its impact on employment and social security in the country.

The Action Plan approved by the Presidential Decree dated April 4, 2020 envisages three groups of measures to reduce the negative impact of the spread of coronavirus:

1. Support for economic growth and entrepreneurship;
2. Employment and social welfare support;

3. Macroeconomic and financial stability.

Taxes - One of the most anticipated parts of the Action Plan is the tax breaks provided under the tax breaks to support economic activity. Tax strikes and benefits are currently on the agenda of the Azerbaijani government:

- Provision of short-term simplified tax exemptions for micro-business entities
- Granting temporary exemptions from property and land taxes;
- Providing taxpayers with periodic exemptions on profit (income) tax and simplified tax;
- Temporary exemption from current tax on profit (income) and property tax;
- Submission of reports on micro-entrepreneurship entities (income, profit, property and simplified tax) and extension of tax payment deadlines;
- Prolongation of payment of taxes in the areas of economic activity affected by the pandemic;
- Temporary exemption from VAT on imports of certain types of products necessary for food and medical needs of the population;
- Exemption from VAT of imports of raw materials and supplies related to the production of certain types of products in order to meet the needs of the population in food, medicine and other necessary products in a short time;
- Deduction of expenses for necessary preventive measures, including disinfection, carried out by the taxpayer in order to prevent the epidemic and protect the life and health of the population;
- Granting tax concessions on rent payments;
- Deferring calculation of interest on unpaid taxes, compulsory state social insurance and unemployment insurance premiums;
- Reducing the social insurance burden of a number of business entities

The Action Plan involves arrangements to preserve the employment and earnings of the community, as well as to ensure state support to entrepreneurs in diverse areas, including the arrangement of credit liabilities. Our republic plans to combat the pressure of the pandemic on economy in two stages. In the first phase, the crisis will be suppressed from deepening and stability will be preserved. In the second phase, the proceedings of economic evolution was expected to commence. Apparently, for economic restoration inexpensive finance, a light tax burden, transition to demand-creating markets is seen obviously.

Government And Strategy

The economic consequences of the crisis are already looking serious. Due to the simultaneous demand deficit and the proposal for economic activity in key European, North American and Asian markets, it decreased more strongly than during the global financial crisis of 2008–2009. According to the forecast of the OECD, under the conditions of the development of the baseline scenario of global GDP in the current year will be reduced to 4.5%. The contraction of the economy is expected in all countries of the Group of Twenty, excluding China. This means that the world's GDP by the end of 2021 will reach the indicator, approximately corresponding to the end of 2019.

With a more favorable development of events, the size of losses for two years will approach 13% of world GDP, while with a more favorable they can be limited to 4.8%. A similar perspective, in spite of all its gloom, represents its improvement in comparison with the spring: the authorities managed to react and soften the initial blow. Due to the removal of quarantine restrictions, many were able to restore economic activity. However, in many countries, judging by all, stagnation is already beginning, and confidence in the future will not strengthen, taking into account

The economic impact on the EaP countries is compounded by the recent drop in oil prices, as it directly affects Azerbaijan and Belarus, and also affects other EaP countries, especially Armenia and Georgia, as it affects trade and remittances. The fall in oil prices for the second time in five years has pushed Russia into recession: the EBRD predicts a 4.5% decline in real GDP this year.

The economic impact of the coronavirus crisis was felt primarily by the region's financial markets as foreign investors began to withdraw their investments. In March, as the severity of the current crisis became apparent, there was a rapid and sharp rise in government bond yield curves across all EaP countries. By early April, the national currencies of Georgia, Moldova and Ukraine depreciated by 10% against the US dollar. The isolation measures have saved countless lives, but the economy has stopped everywhere except Belarus, where the authorities have not imposed a nationwide quarantine.

Border closures disrupted trade and tourist flows, and prevented many seasonal workers, especially agricultural workers, from getting jobs abroad. At the same time, the decline in world commodity prices directly affected Azerbaijan, Armenia and Belarus, and the decline in remittance inflows exacerbated the negative consequences of what is happening in the region.

Financial markets tend to be the first to react to economic uncertainty, being a good indicator of investor sentiment. Trends in government bond yields and local exchange rates indicate that investors are losing confidence in the region's economy. However, the yield curves for government bonds of the EaP countries have partially leveled off compared to the end of March, although they are still going up more

noticeably than before the crisis. In all the EaP countries, with the exception of Azerbaijan, there was a significant currency devaluation (currency regulation is carried out in relation to the Azerbaijani manat) and an increase in the yield on government bonds, which indicates an increased concern about the state of the state financial system in the EaP countries. The exchange rate of the EaP countries, excluding Azerbaijan and Moldova, remains lower than before the crisis (for example, in Belarus and Ukraine it is now about 20% lower). However, the recent devaluation is associated not only with the consequences of COVID-19, but also with the instability of the political situation.

Nominal and real effective exchange rates of manat to foreign currencies, % (December 2000=100)

Year	Nominal effective exchange rate		Real effective exchange rate	
	total	non-oil sector	total	non-oil sector
2000	100.0	100.0	100.0	100.0
2015	89.7	132.9	110.0	107.6
2016	66.3	96.3	91.3	86.3
2017	65.9	97.3	94.3	89.8
2018	72.6	108.9	99.6	95.4
2019	73.4	109.3	99.0	93.4
2020	77.6	118.9	102.7	99.2

Source: Central Bank of the Republic of Azerbaijan

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In 2020, the dynamics of money supply has changed over the months. The money supply, which has been declining since the beginning of the year, increased at the end of the year as budget expenditures from the treasury increased.

Year	Broad Money Supply (M3)	of which					Money multiplier		
		M2 money aggregate	of which			Time deposits in hard currency*	Deposits in hard currency*	Ratio of M3 to Reserve money	Ratio of M2 to manat Reserve money
			M1 money aggregate	of which	Cash outside banks (M0)				
2015	21286.9	8678.3	6897.2	4775.93	2121.2	1781.1	12608.6	2.8	1.2
2016	20889.6	11546.3	8960.3	6376.9	2583.5	2586.0	9343.3	2.26	1.47
2017	22772.1	12466.4	10544.2	7490.3	3053.9	1922.2	10305.6	2.31	1.46
2018	24060.4	14643.6	12274.6	7601.4	4673.3	2369.0	9416.8	2.33	1.53
2019	28866.3	18238.6	15397.9	9501.1	5896.8	2840.7	10627.7	2.20	1.50
2020	29185.8	20305.5	17864.6	10773.4	7091.2	2440.9	8880.3	1.94	1.50

Table 02. Money aggregates, mln.manat;

* The deposits of non-residents and central government are excluded Source: Central Bank of the Republic of Azerbaijan

In 2020, exports fell by 30% as a result of shrinking global demand for the pandemic. The value of exports decreased by 36.8% for crude oil, 36.2% for oil products and 7.4% for natural gas. At the same time In 2020, commodity imports decreased by 21.5%. In particular, imports of goods in the public sector decreased by 2.3 times to 1.8 billion. USD, in the private sector decreased by 6.5% to 7.9 bln. USD, and for individuals decreased by 4.7% to 1 bln. US dollar.

In 2020, the country's strategic foreign exchange reserves exceeded the accepted norms of adequacy in the world and were sufficient for 40 months of imports of goods and services (excluding imports of goods and services for 9 months of 2020). Strategic reserves exceeded the money supply in manats (M2) 4.3 times (including the M2 monetary aggregate as of 01.01.2021), and exceeded 120% of annual GDP.

Azerbaijan's GDP grew 2.3% in 2019 and is expected to drop to -2.2% in 2020 due to the outburst of the COVID-19 and growth to 0.7% in 2021, according to the updated IMF predictions from 14th April 2020. The region has gained benefit from high oil prices and enlarged gas production, though its non-oil and gas sectors have also shown enhancement. Alternative strengths include a powerful sovereign fund, gas wealth in the Caspian Sea, an increase in exports to Turkey and Europe, serving as a geographic binding between China and Europe and a confident general business environment.

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Proper measures were initially focused in 9 programs, which included 20 areas of activity in 4 key sectors. Thus, the range of the program involves 44,000 businesses with 304,000 employees, and it is planned that the funds will be spent basically on salaries. One of the most significant features of the compatible anti-crisis programs is the financing program embracing 290,000 micro and individual manufacturer. Moreover, tax concession in various sectors will be granted, which will have a assertive effect on the mitigation of negative effects, especially on diminishing the financial burden on large taxpayers, and will give a new "natural breath" to the business sector.

Furthermore, it is estimated to increase the size of the economic stimulus program from AZN 1 billion to AZN 3.3 billion (4.1% of GDP), which will be used not only as anti-crisis measures, but also for economic development, credit expansion and can be regarded as a program of stimulating accumulative demand.

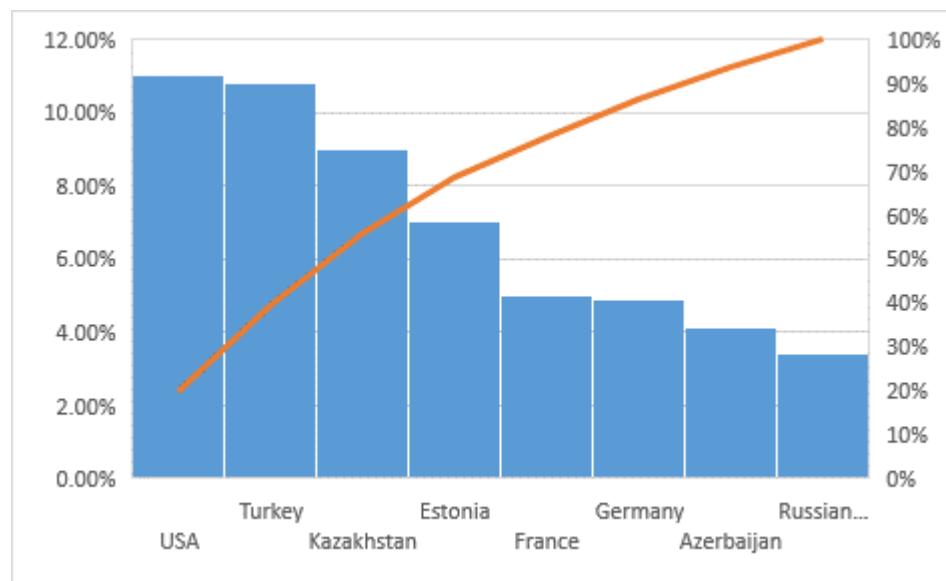


Figure 02. GDP share of countries, Stimulus package of to respond to the economic distress due to the COVID-19 pandemic

Moreover, more than 600,000 people who lost their jobs due to the pandemic have received financial assistance. In addition in the first quarter of 2020, 2.3 million citizens received 1.5 billion manat social benefits. During this period, the insurance part of all types of labor pensions was indexed by 16.6 percent.

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Conclusion

As forecasts show that the economic growth will be restored in 2021, however, the pace of economic recovery remains extremely uncertain and depends on the duration of the pandemic, the availability and availability of vaccines, as well as the rate of growth. In the case of further development of the pandemic, which requires the introduction of restrictions for a long period and (or) will lead to an increase in geopolitical tensions, the recovery process may be slower.

A coordinated global effort is required to support countries that currently do not have sufficient fiscal space to finance social policy, in particular universal social protection systems. Debt sustainability should be prioritized in this endeavour.

As part of the applied reforms to improve the administration possessions management system, State Investment Holding will be installed to manage the state owned companies from the single center on behalf of the state, expand explicitness and economic productivity of their activity, including investment programs and assure competitiveness. A new privatization program will also be developed.

More generous grants and transfers would have huge returns both in terms of well-being and material productivity, and are eminently affordable at a time when interest rates are expected to remain close to zero for the foreseeable future. With a likely slow recovery from major, world-wide depression, there is little danger of inflation. Calls for a ‘better recovery’ can only be comprehensively realized with economic democracy – worker participation in management in place of exclusive control by capital owners to improve the quality of work, and equitable sharing of the profit or surplus which is produced by the efforts of workers as intentional agents rather than passive inputs or factors of production. Such reforms generally increase both productivity and well-being but are traditionally resisted by owners and managers who fear loss of control and redistribution from their current position of profiting from the extreme inequality in wealth and power. Strong political opposition from the current beneficiaries of this inequality is inevitable and can only be overcome by widespread popular understanding of the benefits for a majority from economic democracy and redistribution. There is no better time than now to reform the economy in which we live.

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SAĞLIK HİZMETLERİ FİNANSMANINDA ÇEŞİTLİ YÖNTEMLER VE OECD ÜLKELERİNDEKİ BAZI KAMU-ÖZEL SEKTÖR ORTAKLIĞI (KÖO) UYGULAMALARININ KARŞILAŞTIRILMASI

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ÖZET

Modern toplum yapıları ve devlet örgütlerinde Sosyal Güvenlik ve Sağlık Hizmetleri Finansmanı özel bir öneme sahiptir. Bu konu; devlet örgütlenme modelinde “Sosyal Devlet İlkesi” ve “Refah Toplumu” olma hedefine ilerlemenin gereğidir. Hükümetlerin sağlık politikaları şekillenirken modern toplum bireylerinin sahip olduğu güvence ve hakların politikalara ne ölçüde yansıyacağı dikkate alınmaktadır. Öte yandan sağlık hizmetleri ve sağlanan sosyal güvencelerin finansmanı; toplumların tarihsel birikimleri ve yapılarına göre şekillenmekte buna bağlı olarak da çeşitli ülkelerde farklı uygulama modelleri ortaya çıkmaktadır. Kita Avrupası’nda geleneksel toplum yapılarına uygun olan vergilendirme ve pirim kesintilerine dayanan modeller yaygın iken, Amerika ve bazı Uzakdoğu ülkelerinde daha çok, kişilerin tasarrufları ve çeşitli özel sektör uygulamaları gözlenmektedir. Gelişen teknoloji, artan nüfus yaşılanma oranları ve modern çağımıza özgü yeni hastalıklar; “Refah Toplumu” ve “Sosyal Devlet” olma yolundaki hükümetleri giderek artan bir finansman krizine sürüklemekte ve sağlık politikalarında daha çok karma modellerin tercih edilmesine yol açmaktadır. Aynı şekilde sağlık yatırımlarında da kamu sektörü ile özel sektörün birlikte yürüttükleri proje modelleri öne çıkmaktadır.

Bu çalışmada bazı OECD ve AB ülkelerinin sağlık güvence ve sağlık hizmet sistemlerindeki farklı uygulamaları ve bu uygulamaların ne şekilde finanse edildiği araştırılmıştır. Elde edilen sonuçlara göre Türkiye'nin uygulamakta olduğu modeller ve uygulama örnekleri bu ülkelerin verileriyle karşılaştırılmıştır. Bu çalışmanın amacı, ülkemizde gerçekleşmekte olan sağlık reformlarının yakın tarihimize gelişimi değerlendirilerek, mevcut sağlık güvence sistemimizin sürdürülebilirliğine katkı sağlamaktır.

Anahtar Kelimeler: Sağlık hizmetleri finansmanı, sağlıkta finansman modelleri, sosyal sağlık sigortası, sağlık reformları, Türkiye'de sosyal sağlık sigortası

JEL Sınıflandırması: JEL: I10 - JEL: I18

VARIOUS METHODS IN HEALTHCARE FINANCING AND SOME PUBLIC PRIVATE-PARTNERSHIP (PPP) SECTORS APPLICATIONS COMPARISON IN OECD COUNTRIES

ABSTRACT

Social Security and Health Services Financing has a special importance in modern social structures and State organizations. This issue; It is the necessity of progressing towards the goal of becoming a "Social State Principle" and a Welfare Society in the state organization model. While the health policies of governments are shaped, the extent to which the guarantees and rights of modern society individuals will reflect on the policies are taken into account. On the other hand, the financing of Health Services and Social Security; It is shaped according to the historical background and structures of the societies, and accordingly, different application models emerge in various countries. While models based on taxation and premium deductions, which are suitable for traditional social structures, are common in continental Europe, people's savings and various private sector practices are observed in America and some Far Eastern countries. Developing technology, increasing population aging rates and new diseases specific to our modern age; It drives the governments on the way to become "Welfare Society" and "Social State" into an increasing financing crisis and leads to the preference of more mixed models in health policies. Likewise, in Health Investments, the project models of the Public Sector and the Private Sector come to the fore. In this study, the different applications of some OECD and EU countries in Health Insurance and Service Systems and how these applications are financed were investigated. According to the obtained results that models and practices implemented by Turkey were compared with the data of these countries. The aim of this study is to evaluate the development of health reforms in our country in our recent history and to shed light on the sustainability of our health insurance system.

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Keywords: Health care financing, health financing models, social health insurance, health reform, social health insurance in Turkey

Jel Classification: JEL: I10 - JEL: I18

ECONOMIC IMPACT OF COVID-19 IN TOURISM REGIONS IN SPAIN

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ABSTRACT

Spain was one of the most visited countries in the world before the COVID-19 pandemic. However, this pandemic led to approving the State of Alarm, which limited the entry of tourists to Spain and forced the closure of tourist establishments for several months during 2020. Despite this, the effect of COVID-19 on tourism is not equal in the whole country, as some regions present a higher tourism dependence than others. This article compares different economic indicators both before the announcement of the State of Alarm and after it. The study is carried out both for the analysis of the whole of Spain and the two most tourism-dependent regions in this country. This allows studying how the economy of these regions has evolved compared to the Spanish one. The data to carry out the study have been extracted mainly from the National Institute of Statistics of Spain. The study has focused on analyzing the effect of COVID-19 on employment, Gross Domestic Product, the Consumer Price Index and the number of active companies. The results indicate that these regions have suffered more economically than the rest of the country during the COVID-19 pandemic. Particularly, the effect of the pandemic can be appreciated in the reduction of the number of employments, the Gross Domestic Product, and the number of active companies. Despite this, the results are unclear to determine the effect of the pandemic on prices of goods and services of these regions. This study can be used as a reference to analyze the impact of crises in other tourism regions and to highlight the need for extraordinary aid for these regions in order to face economic crises.

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Keywords: COVID-19, Canary Islands, Balearic Islands, Spain, economic impact

INTRODUCTION

In Spain, the law and its Constitution empower the Government to declare the state of alarm, in full or in part of the country, if there is a health crisis that requires it. Due to this, the Government of Spain approved a decree declaring the state of alarm for the management of the health crisis caused by COVID-19 in March 14th. With this decree a series of measures were approved, limiting the activities that citizens could carry out outside their residences and establishing a curfew schedule, in addition to different sanctions, with the intention of reducing the number of trips made in the country. The Canary Islands is one of the 17 Autonomous Communities (the name given to the Spanish regions) into which Spain is divided. It is an archipelago that is administratively composed of 7 islands. This Spanish region is located approximately 60 miles west of the Moroccan coast and about 800 miles southwest of the Iberian

Peninsula, making it an outermost region belonging to the European Union. In the case of the Balearic Islands, it is another of the 17 Autonomous Communities of Spain. As in the previous case, it is an archipelago made up of 5 islands. It is located in the Mediterranean Sea approximately only 6 miles from the Iberian Peninsula. Both are part of the Spanish territory, so they have been affected by the regulations imposed by the Government of Spain during the state of alarm derived from COVID-19.

Although the crisis caused by the COVID-19 pandemic has a health basis, this crisis has ended up having an economic and social impact (Rodríguez Rodríguez, Padrón Ávila & Hernández Martín, 2020). The objective of the imposition of the state of alarm was to alleviate the health crisis caused by the pandemic. However, the economic and social crisis was increased due to the state of alarm approved by the Spanish government, since travel and the options for leisure and commercial activities were limited. In addition, social and economic crises require an intense demonstration in the tourism sector (Rodríguez Rodríguez, Padrón Ávila & Hernández Martín, 2020). In the case of the Canary Islands and the Balearic Islands, where it is estimated that tourism generates both directly and indirectly 35% of the Canary Islands Gross Domestic Product (GDP) (Exceltur, 2019) and 44.8% of the Balearic Islands' GDP (Exceltur, 2015), it is estimated that the effect of the state of alarm derived from the pandemic has had a greater impact than in other regions of the country where tourism activity is not so relevant (Rodríguez Rodríguez, Padrón Ávila & Hernández Martín, 2020).

According to various authors (e.g. Papatheodorou, Rosselló & Xiao, 2010; Perles-Ribes, Ramón-Rodríguez, Rubia-Serrano & Moreno-Izquierdo, 2016; Smeral, 2010), previous crises –both health, economic or of other nature- have impacted the economy by reducing the number of active companies, increasing unemployment, reducing GDP, or have led to substantial deflation or inflation. Furthermore, these studies have pointed out that these crises have a powerful effect on the tourist economy. As the Canary Islands and the Balearic Islands are regions in which tourist activity is particularly relevant (Rodríguez Rodríguez, Padrón Ávila & Hernández Martín, 2020), it is foreseeable that the state of alarm has had a greater impact on these destinations compared to the rest of Spain.

Reports prior to the crisis caused by COVID-19 pointed out that employment in tourist activities in the Canary Islands had an increasing weight in the total employment in the region (Padrón Ávila, Rodríguez Rodríguez & Hernández Martín, 2016). In addition, in years prior to the start of the pandemic, the regional governments had shown its concern about the renewal of the tourism sector in order to maintain or improve the competitiveness of the destination, given the great relevance of the activity in these region (Simancas-Cruz, Peñarrubia-Zaragoza, Rodríguez-Darias, Padrón-Ávila, Padrón-Candelario & Suárez-Perera, 2017).

Given the situation caused by the COVID-19 pandemic, the unique characteristics of the Canary Islands and the Balearic Islands, and the relevance of tourist activity in these regions, this study analyzes the economic and tourist impact of the health measures implemented to contain the spread of COVID-19 in the Canary Islands and the Balearic Islands compared to the rest of Spain. For this, data both before and after the declaration of the pandemic obtained from official statistical sources are compared. In this study, the following hypotheses are proposed, based on the effects that are foreseeable to identify:

Hypothesis 1 (H1): The employed population in the Canary Islands and the Balearic Islands has decreased in relative terms more than in the total of Spain compared to data prior to the COVID-19 pandemic.

Hypothesis 2 (H2): The unemployed population in the Canary Islands and the Balearic Islands has increased in relative terms more than in the whole of Spain compared to data prior to the COVID-19 pandemic.

Hypothesis 3 (H3): The Canary and Balearic GDP have decreased to a greater extent than the Spanish GDP compared to data prior to the COVID-19 pandemic.

Hypothesis 4 (H4): The number of active companies registered in the Canary Islands and the Balearic Islands have decreased to a greater extent than the number of active companies in Spain in relative terms compared to data prior to the COVID-19 pandemic.

Hypothesis 5 (H5): The prices of goods and services in the Canary Islands and the Balearic Islands will have decreased to a greater extent than in the whole of Spain compared to data prior to the COVID-19 pandemic due to the reduction of the acquisition power of the population of these regions.

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RESEARCH AND FINDINGS

In order to carry out this study, data have been extracted mainly from the National Institute of Statistics (INE). Specifically, the data relating to the active population (both employed and unemployed), the number of active companies, GDP, and the Consumer Price Index (CPI) have been extracted. All the data have been extracted both for the case of the whole of Spain and for each of the Autonomous Communities that make up the country in order to be able to compare the impact derived from the COVID-19 pandemic. In addition, this study does not analyze the impact that the pandemic derived from COVID-19 has had only on tourist activity, but on the entire Spanish economy and each region, with special emphasis on the cases of the Canary Islands and Balearic Islands. To carry out the analysis, results are presented through a series of contingency tables in which the aforementioned indicators are compared both for the case of Spain in general and the Canary Islands and the Balearic Islands in particular. This facilitates the interpretation of the results and the extraction of relevant conclusions from them.

In addition, the variation rates of the data have been calculated to help interpret the relative relevance of the economic impact of COVID-19 both in Spain and in the Canary Islands and the Balearic Islands. Table 1 makes it possible to compare the effect of the pandemic on the total number of employments. The results show that all the Autonomous Communities have seen a reduction in the number of employments. In addition, both the Canary Islands and the Balearic Islands are the Autonomous Communities that show the worst evolution in the number of employments between 2019 and 2020. The results also indicate that in the two regions in which the study is focused, it can be seen that the data shows approximately a triple reduction to that experienced on average by the country. Specifically, it seems that the pandemic has had a somewhat more severe impact on the Balearic Islands than on the Canary Islands. Through these data, it seems that hypotheses 1 and 2 could be confirmed, in which it was stated that the pandemic had had a more negative impact on employment in the Canary Islands and the Balearic Islands than in the rest of the country. However, this information is analyzed later using specific data on the employed and unemployed population.

Table 1. Variation rate of total employments in Spain and its Autonomous Communities.

	2019-2020	February 2020-2021
Spain	-2,20%	-2,27%
Andalusia	-2,60%	-2,03%
Aragon	-1,71%	-2,57%
Asturias	-2,16%	-1,86%
Balearic Islands	-8,73%	-7,63%
Canary Islands	-4,28%	-6,09%
Cantabria	-1,88%	-1,60%
Castilla La Mancha	-0,91%	-0,15%
Castile and Leon	-2,01%	-2,09%
Catalonia	-2,56%	-2,38%
Valencian Community	-1,67%	-2,25%
Extremadura	-1,97%	-0,75%
Galicia	-1,89%	-1,86%
La Rioja	-1,56%	-1,96%
Madrid	-1,41%	-2,05%
Murcia	-0,44%	-0,20%
Navarre	-0,89%	-1,45%
Basque Country	-1,53%	-2,14%

Source: INE

From the data presented in Table 2, it can be deduced that the crisis caused by the pandemic has had a much more significant impact on both the Canary Islands and the Balearic Islands compared to other Autonomous Communities in which tourism does not have the same weight in their economies. Furthermore, the results show that the impact in these two regions has been between three and four times higher, respectively, than the rest of Spain, reducing the employed population in them by values close to 10%. In fact, the table allows observing that three regions (Estremadura, La Rioja and Murcia) show a positive evolution, which contrasts even more with the data relating to the Canary Islands and the Balearic Islands. The results of this table seem to confirm H1, which stated that the impact of the pandemic in relation to the reduction of the employed population in these regions was greater than the impact in the rest of the country.

Table 2. Variation rate of the employed population in Spain and its Autonomous Communities.

	2019 - 2020
Spain	-3,12%
Andalusia	-1,69%
Aragon	-3,91%
Asturias	-1,86%
Balearic Islands	-8,12%
Canary Islands	-12,01%
Cantabria	-3,02%
Castilla La Mancha	-2,72%
Castile and Leon	-0,28%
Catalonia	-3,95%
Valencian Community	-3,44%
Estremadura	1,44%
Galicia	-1,38%
La Rioja	0,28%
Madrid	-3,37%
Murcia	0,36%
Navarre	-3,23%
Basque Country	-1,41%

Source: INE

In the case of H2, results are not so clear. As Table 3 shows, the Balearic Islands is the Autonomous Community where unemployment has increased the most in Spain after the start of the pandemic. The impact in the Canary Islands has also been high, greater than the average impact in Spain. However, in Catalonia, Madrid and Navarra unemployment has increased more than in the Canary Islands. These data may be indicative that, although COVID-19 has effectively negatively affected those regions that have a greater specialization in tourism, there are other activities that have also been widely affected by the pandemic. This would explain the growth of unemployment to a greater extent in certain regions and the negative impact experienced by unemployment in the Canary Islands.

Table 3. Variation rate of the unemployed population in Spain and by Autonomous Communities.

	2019 - 2020
Spain	16,54%
Andalusia	10,11%
Aragon	24,39%
Asturias	1,18%
Balearic Islands	75,28%
Canary Islands	28,33%
Cantabria	2,92%
Castilla La Mancha	1,34%
Castile and Leon	5,75%
Catalonia	32,55%
Valencian Community	14,80%
Extremadura	-10,44%
Galicia	-2,19%
La Rioja	5,84%
Madrid	36,25%
Murcia	-4,69%
Navarre	28,77%
Basque Country	9,11%

Source: INE

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The results in Table 4 confirm H3 since it can be seen that the evolution of GDP in the Canary Islands and the Balearic Islands shows the lowest variation rate after the pandemic caused by COVID-19. The Balearic Islands seem to be the region in which the GDP has fallen the most. It is followed by the Canary Islands. Other regions with variation rates close to that of the Canary Islands are also appreciated. The information shown in this table, together with that shown in the previous table, seems to indicate that COVID-19 has also severely affected other sectors, which explains the high rates of reduction in GDP in regions that show less tourism dependence.

Table 4. Variation rate of GDP in Spain and by Autonomous Communities.

	2019 - 2020
Spain	-12,0%
Andalusia	-11,3%
Aragon	-8,2%
Asturias	-10,4%
Balearic Islands	-22,0%
Canary Islands	-17,9%
Cantabria	-8,5%
Castilla La Mancha	-9,6%
Castile and Leon	-7,5%
Catalonia	-13,5%
Valencian Community	-10,7%
Estremadura	-7,9%
Galicia	-11,1%
La Rioja	-9,0%
Madrid	-13,6%
Murcia	-7,3%
Navarre	-8,7%
Basque Country	-9,7%

Source: Funcas (2020)

Regarding the number of operating companies, Table 5 shows that the number of Spanish companies increased in 2020 compared to 2019. However, in the case of the Canary Islands and the Balearic Islands, the number of active companies decreased by almost 10% in the case of both regions. Despite this, they are not the regions most affected by the pandemic in relation to this variable. In Castile and León, the number of companies decreased to a greater extent than in the rest of the Autonomous Communities. Excluding this region, the Canary Islands and the Balearic Islands are the most affected in relation to the evolution of the number of active companies. This seems to partially confirm H4, although it shows that there are other reasons or activities even more affected than tourism that explain the greater reduction in the number of active companies in Castile and León.

Table 5. Variation rate of the number of active mercantile companies in Spain and by Autonomous Communities.

	2019 - 2020
Spain	5,48%
Andalusia	4,90%
Aragon	12,81%
Asturias	27,78%
Balearic Islands	-9,15%
Canary Islands	-8,31%
Cantabria	37,29%
Castilla La Mancha	-18,40%
Castile and Leon	-2,96%
Catalonia	8,71%
Valencian Community	8,94%
Estremadura	40,16%
Galicia	15,31%
La Rioja	13,51%
Madrid	-0,09%
Murcia	21,63%
Navarre	23,53%
Basque Country	10,35%

Source: INE

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The data shown in Table 6 appear to be insufficient to prove the veracity or incorrectness of the H5. On the one hand, it can be seen that in 2020 compared to 2019, the Canary Islands was the region in which prices were reduced the least. This reduction was also low in the Balearic Islands compared to the national average. Despite the fact that the H5 stated that these regions should have been more affected by the pandemic, the annual results seem to suggest the opposite. In principle this could refute the H5. However, when comparing February 2020 with February 2021, it is observed that the Canary Islands have been the region in which prices have fallen the most. This is not the case in the Balearic Islands, where prices rise despite the fact that they generally fell in the whole of Spain. This shows mixed results that do not confirm the H5, but also do not refute it.

Table 6. Variation rate of the CPI in Spain and by Autonomous Communities.

	2019 - 2020	February 2020 - 2021
Spain	-0,53%	-0,02%
Andalusia	-0,32%	0,04%
Aragon	-0,64%	-0,14%
Asturias	-0,58%	-0,06%
Balearic Islands	-0,37%	0,24%
Canary Islands	-0,15%	-0,41%
Cantabria	-0,55%	-0,05%
Castilla La Mancha	-0,70%	-0,10%
Castile and Leon	-0,90%	-0,24%
Catalonia	-0,65%	-0,09%
Valencian Community	-0,48%	0,16%
Extremadura	-0,45%	0,10%
Galicia	-0,37%	0,19%
La Rioja	-0,83%	-0,17%
Madrid	-0,75%	-0,14%
Murcia	-0,42%	-0,03%
Navarre	-0,63%	0,27%
Basque Country	-0,27%	0,26%

Source: INE

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CONCLUSION

Previous studies have analyzed that crises, regardless of their nature, have a clear negative impact on tourism activity (eg Papatheodorou, Rosselló & Xiao, 2010; Perles-Ribes, Ramón-Rodríguez, Rubia-Serrano & Moreno-Izquierdo , 2016; Smeral, 2010). Therefore, it is expected that the crisis caused by the COVID-19 pandemic and the declaration of the state of alarm in Spain have had a negative impact on the country's tourism activity. This study argues that the economic crisis derived from the COVID-19 pandemic must have been more intense in those Spanish regions with greater tourist activity, that is, the Canary Islands and the Balearic Islands. Thus, the study suggests that these regions must have seen employment, GDP, active companies and prices of goods and services reduced to a greater extent.

To carry out the study, 5 hypotheses are proposed with the intention of verifying the veracity of the same and, in turn, the theory raised by the study that defends that tourism regions have been harmed to a greater extent by COVID-19 than other regions. The results show that 2 of the 5 hypotheses raised can be confirmed. Other two of them are partially confirmed. While another of these hypotheses can neither be

confirmed nor refuted due to the disparity of the data found. Specifically, H1 and H3 have been the verified hypotheses, since it is clearly seen that after a year since the declaration of the COVID-19 pandemic, the Canary Islands and the Balearic Islands have been affected to a greater extent than the rest of Spain in what relative to the reduction of the employed population and GDP. H2 and H4 are partially verified since the data show that in the Canary Islands and the Balearic Islands unemployment has increased and the number companies has reduced to a greater extent than the national average. However, these variables showed worse variations in other Autonomous Communities. Finally, H5 could not be verified or refuted. On the one hand, in the Canary Islands and the Balearic Islands, the CPI shows some of the lowest deflation rates at the end of 2020, which would completely reject the H5. On the other hand, one year after the start of the pandemic, the Canary Islands is the region where the prices of goods and services have fallen the most, while in the Balearic Islands they slightly rise. This shows contradictory results of the effect of COVID-19 in tourist regions in relation to its effect on the prices of goods and services.

This study can serve as a basis for analyzing the impact of the COVID-19 pandemic or other crises in other tourism regions of the world. The study may also lead to implications aimed at improving the management of tourist regions by the government, since it points out the need for these regions for additional aid to face this type of crisis as they suffer them to a greater extent than the rest of the country.

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COVİD-19 SALGINININ BÖLGESEL MAKROEKONOMİK GÖSTERGELER ÜZERİNDEKİ ETKİSİ: TRC3 ÖRNEĞİ

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ÖZET

2019 yılının sonunda Çin'de çıkan ve sonrasında dünya ülkelerine hızlı bir biçimde yayılan COVİD-19 salgını, ülkelerin merkezi ve yerel otoritelerinin salgını bertaraf etmek için birçok alanda kısıtlama/sınırlandırma kararı almasına neden olmuştur. Böylece dünya ülkeleri, sağlıkla birlikte eğitim, ekonomi, turizm, ticaret vb birçok konuda büyük oranda olumsuz etkilenmiştir. Bu durumda birçok disiplin açısından araştırma konusu olan salgının etkisi ile ilgili çalışmalar literatürde hızlı bir şekilde yer almış ve hala da yer almaya devam etmektedir. Bu çalışmada da COVİD-19 salgınının bazı bölgesel makroekonomik göstergeler (turizm, işsizlik, ihracat ve ithalat) üzerindeki etkisi TRC3 Düzey 2 Bölgesi (Mardin, Batman, Siirt, Şırnak) özelinde incelenmiştir. Çalışmada kullanılan veriler Ticaret Bakanlığı, Dicle Kalkınma Ajansı (DİKA), Türkiye İstatistik Kurumu (TÜİK) ve Türkiye İhracatçılar Meclisi (TİM)'nden derlenmiştir. Farklı makroekonomik göstergelere ait il/bölge bazındaki salgından sonraki verilerin olmaması çalışmanın sadece bu göstergelerle sınırlı kalmasında etkili olmuştur. Çalışmanın bulgularına göre, COVİD-19 salgını söz konusu bölgenin yüksek olan işsizliğini artırmış ve turizmini olumsuz etkilemiştir. Salgının Türkiye'de baş gösterdiği Mart 2020 tarihinden hemen sonra ihracat rakamları her dört ilde de kısa düşüşlerden sonra tekrar yükselmiş ve 2020 yılında bir önceki yıla göre daha fazla olmuştur. İthalat rakamlarında ise Batman ve Mardin'de yükselmeler olmuş buna karşın Şırnak ve Siirt illerinde ise düşüşler olmuştur.

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Anahtar Kelimeler: COVİD-19, Makroekonomik Göstergeler, TRC3 Bölgesi

THE EFFECT OF COVID-19 EPIDEMIC ON REGIONAL MACROECONOMIC INDICATORS: THE CASE OF TRC3

ABSTRACT

The COVID-19 epidemic, which broke out in China at the end of 2019 and then spread rapidly to the world countries, caused the central and local authorities of the countries to decide to take restrictions in many areas to eliminate the pandemic. Thus, the countries of the world have been negatively affected in many issues such as education, economy, tourism, trade, etc., as well as health. In this case, studies on the effect of the epidemic, which is the subject of research in terms of many disciplines, quickly found place in the literature and still continue to be popular. In this study, the effect of the COVID-19 epidemic on some regional macroeconomic indicators (tourism, unemployment, export and import) was examined in the TRC3 Level 2 Region (Mardin, Batman, Siirt, Şırnak). The data used in this study have been obtained from The Ministry of Trade, Tigris Development Agency (DIKA) Turkish Statistical Institute (TURKSTAT) and Turkey Exporters Assembly (TIM). Because there is no other different macroeconomic indicators based on regions and cities after the breakout of the pandemic, the data has to be limited to these macroeconomic indicators. According to the findings of the study, the COVID-19 epidemic increased the high unemployment rate of the region in question and negatively affected the tourism. Immediately after the outbreak in March, the export figures showed rise after the short fall in all four provinces and export figure became higher than a year earlier in 2020. On the other hand, there was an increase in the import figures in Batman and Mardin, whereas there were decreases in the provinces of Şırnak and Siirt.

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Keywords: COVID-19, Macroeconomic Indicators, TRC3 Region

SERVICES AND STUDENTS DURING THE PANDEMIC

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Summary

This research aims at depicting the current trends on services related to students at university; the focus is on the services provided during the era of pandemic, in order to better understand how to deal with educational services while fighting the pandemic and being challenged by the switch from physical to online services. This review is conceptual as it aims to frame the current debate and observe the key trends to be further investigated in empirical contexts given by universities and suggesting future guidelines to deal with the need to provide services and the constraints deriving from the context.

Keywords: students, pandemic, education

Introduction

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The pandemic changed most of the activities human being performed in daily routines and educational services are not out from this range of changes, not only in their purest, instructional mission but also in the missing of human interaction, useful debate, and opinion exchange which give rise to innovation. Examples emerged at multiple levels; at a supranational level UNESCO (2020) showed the efforts of some Ministries of Education throughout the world to counteract the negative effects of pandemic without affecting the performance of educational services and to preserve the health condition of both university staff and students. Anyway, one of the examples recalled by UNESCO showed the shortcomings of e-learning solutions, as digital divide, the lack of internet service, the limited readiness to adopt learning at distance, the finite capacity of some infrastructures, and the effects to be evaluated on students' achievement depending on a new learning approach. New frontiers in educational services were also addressed at national level and in this case, too, the examples are several; the Ministry of Education, Youth & Information in Jamaica (2020) expanded the interaction between educational institutions and students to the whole context, with families, friends, and acquaintances representing potential enablers in the new ways to provide educational services.

Similar perspectives were also adopted by scholars, as they tried to depict the ongoing changes in keep going on the education programs despite the difficulties to be faced during pandemic (Williamson et al., 2020); the authors suggested that the implementation of new technologies in the education industry should not be intended as just a mean to provide services in out-of-the-ordinary conditions, but also as a test-bed to experiment new models of education, also in line with what OECD (2020) has recently suggested, and in line too with what stated, confidently, by Love (2020) “[...]to have opportunity not to just reimagine schooling or try to reform injustice but to start over. Starting over is hard but not impossible; we now have a skeleton of a playbook. It starts with creativity, teacher-student relationships, and teacher autonomy”. Therefore, “[E]mergency education models are being treated as prototypes for education systems to emulate far beyond the pandemic” (Williamson et al., 2020, p. 4). A forward-looking approach was adopted by Kang (2021), as he questioned how the pandemic will change the society and the expected results of the acceleration most of the countries had to perform in getting innovation in the education services, also by implementing digital solutions. Kang showed the example of Japan Education System and observed that digital education will complement the traditional activities in the education system but will not fully replace them; indeed, the Japanese culture provided the concept of ‘ba’, namely the interactions in a space between people that can favour the cross-contamination of culture, leading towards knowledge creation. Due to this, the physical interaction should still be considered in order to get the advantages of knowledge-based processes, albeit changes are expected to occur due to the need of the current scenario and the opportunities brought by digital tools.

To sum up, several questions are rising about the combination of physical and digital ways to provide services in the education context; therefore, a review of literature would provide both insights and suggestions for future service provisions in the educational context, as well as to stimulate future research on this topic.

Research process

The analysis of recent contributions was performed through Web of Knowledge – Web of Science (hereinafter WoK) as it is one of the databases recognized as offering a wider perspective on a phenomenon; indeed, the provision of services to university students during pandemic deals with multiple fields of science, as education, service management, health issues just to cite some. The query on WoK was structured by combining “student*”, “pandemic”, and “education*” to have a first wide perspective. Indeed, WoK gave a first dataset consisting of 993 contributions; due to the focus on current pandemic, a first filtering was based on time, leading to exclude all contributions emerged before 2020, therefore limiting the initial dataset to 873 scholar contributions.

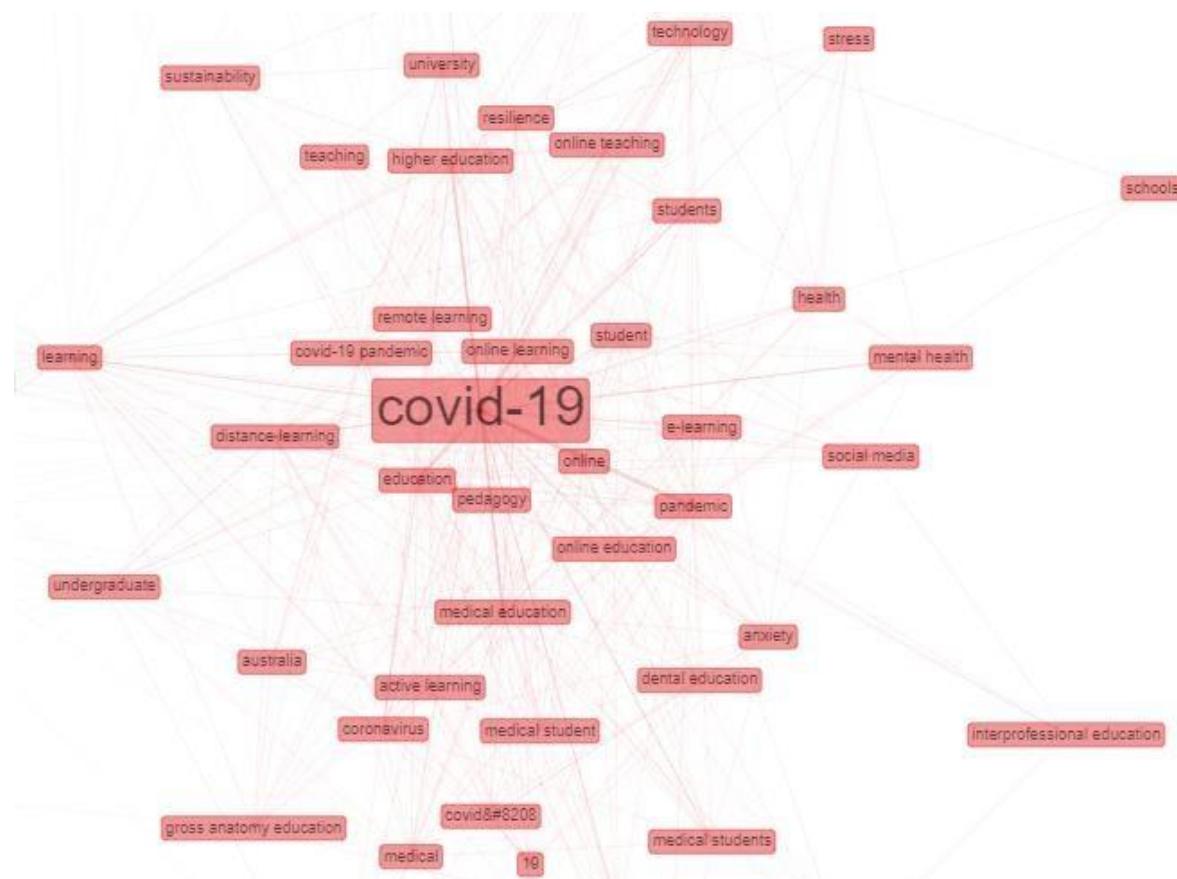
A second criterion led to consider only contributions written in English to achieve homogeneity in the analysis, thus 14 entries from the previous dataset were excluded, leading to a new dataset consisting of 859 contributions. Then, in order to narrow the scope of analysis to the scientific domains addressed in the research focus, the contributions in the following fields of studies, due to their being related to this topic: ‘Education and educational research’, ‘Education scientific disciplines’, ‘Health care science services’, ‘Green sustainable science technology’, ‘Health policy services’, ‘Social work’, ‘Multidisciplinary services’, ‘Economics’, ‘Business’, ‘Management’, and ‘Social Sciences’ were selected, leading to a dataset hosting 457 contributions. Finally, only articles and book chapters were selected in order to focus on contributions reviewed by scholars and to avoid duplication that could have occurred when considering conference proceedings. Therefore, a final dataset with 453 contributions was generated.

The analysis of scholars contributions was performed through a bibliometric analysis as it offers the chance to highlight key topics and the relations among them. In order to adopt such a perspective, the software Bibliometrix and its add-on Biblioshiny were used (Aria and Cuccurullo, 2017). The use of bibliometric analysis is not new in the domain of educational services (Besley, 2009) and is recognized as suitable to run such a study (Vilchez-Román et al., 2020). Finally, the analysis will be run on authors’ keywords in order to focus on the themes authors addressed, and to track the ongoing debate on the issue of this research. This choice led to achieve authenticity in the interpretation and to reduce the subjectivity depending on editors’ keywords, chosen for the purpose of categorization in journals’ archives.

Findings

The analysis of authors’ keywords led to the identifying of three perspectives, namely (a) online learning as a service in emergency periods; (b) self-learning; and (c) engagement and motivations.

The first cluster shows that online learning took place as a process greatly affected by communication abilities and self-organization skills and both of them affect the learning achievement (Klein et al., 2021); consequently, online classes should be proposed through stimulating the positive aspects of distance learning, installing networking services, and combining digital services with on-site ones, especially if limitations should emerge.

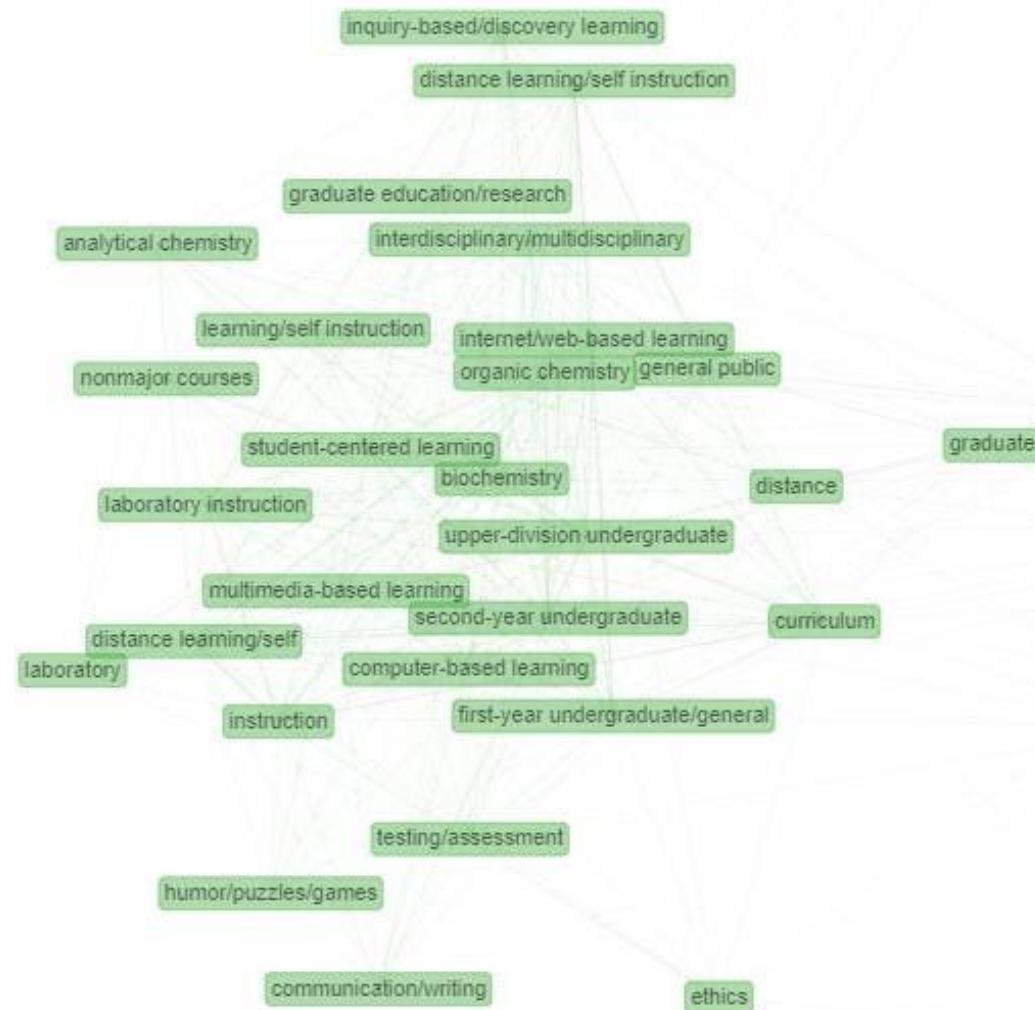


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The second cluster demonstrates that self-learning as a way to arrange provide instructions in learning services is a needed complement to distance learning in order to maintain academic integrity and to address educational services to students in a wide perspective, namely without considering the different needs of students enrolled at different years (Giri and Dutta, 2020); therefore, these considerations may be seen as a solution to quickly respond to the limitation affecting the provision of educational services. Indeed, scholars stressed the difficulties in replicating the physical classes in an online context and suggest to pay attention to address proper suggestions to students to have them self-guided through the learning process. Self-regulation refers to the introduction of technologies more than to the effects on students as in Rivers (2020) that started measuring the effects of the novelties implemented to get study achievement.



Finally, the third cluster describes the motivation of students and the need to actively engage them in online learning processes; indeed, an analysis run in Australia contributed to shape a framework for engagement and some guidelines to set a process as more personalized as possible, in order to set the best conditions for each student (Ewing and Cooper, 2021). The authors also suggested that integration of students into learning process is not an automatic process as the implementation of technology was; therefore, the lack of social interaction and the need to remotely engage students should encourage education institutions in looking for a solution that can address students' concerns. Motivation was recently observed by students' scholars through an analysis run in Australia (Meeter et al., 2020), leading to consider the need to further categorize them and to recall the customization above, as some of them perceived better conditions when dealing with activities at distance, while some others missed. The motivational factors behind these elements are crucial to further define what organizations – as well as governments – should do.



Discussion and implications

The output of this research may lead to two main considerations; first of all a timely response compared to a customized one proved its advantages in an emergency scenario, since time was crucial in providing a solution to services that were stopped, as well as to identify a wide range to which apply the preference for time. Differently from previous studies (Page et al., 2021) the implementation of new services led to consider the opportunity deriving from personalization as a way to offer a more engaging and effective solutions to students.

On the other side, the second key evidence refers to the distinction between students already engaged and students to be engaged; students' engagement activates a virtuous cycle, since the higher the engagement, the higher the satisfaction of the service, and the higher the satisfaction the higher the usefulness of the solution provided in terms of engagement.

As in Chaturvedi et al. (2021) it is needed to consider the perspective of central and local governments in furthering the understanding of customers' needs and the way to identify new solution aligned to the features emerged.

Conclusions

The ongoing debate provides various insights on how to design and provide educational services to students in a context affected by the limitations of pandemic. The perspectives scholars adopted are multiple, since the focus is on the essence of the service itself, the ways through which quickly respond to the new needs, and the need to engage students. These perspectives can not be considered one separated from the other, as they all contribute to shape new services and to adopt proper solution, as in Williamson et al. (2020). What emerges as new is the dynamicity of the service design, since the evidence suggest adopting solution that can favour a quick reaction, but also suggested the need to observe the scenario in order to learn from it, analyse students' needs and provide new solutions through an iterative process and with the aim of personalizing what students can get via online services.

Future research may observe the contextual conditions as affecting the way services are provided, as the analysis showed that local contexts showed different approaches, due to the technology readiness, the digital divide, and the need of education institutions dealing with different number of students. It is significant to take a look on how the Leading Countries of the World in the Digital Transformation of Education, a program promoted by Microsoft to enhance the digital transformation through the debate and the cooperation, is bringing together Education Ministers, high level stakeholders and international organization as UNESCO and OECD, to face the actual status quo and to go on with the improvement of an innovative and ethic use of technologies (2021). Insights are several and seem to depend on what universities want to do as a backup solution to the pandemic (Rupnow et al., 2020); this depends also on previous theorizations as "professors in this study adapted quickly using institutionally offered platforms, modified their courses as minimally as possible, struggled with assessment, and held diverging beliefs about teaching and students". Therefore, once again, the cultural side emerges as a key one to be yet investigated to grasp its role in getting services for customers.

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NATIONAL ECONOMY AND ITS THEORETICAL EVOLUTION LEVELS

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Introduction

National economy of each state is very complex economic, social, organizational, scientific and technological system. It possesses the total economic benefits accumulated in the process of implementation of the potential of national economy. It is advisable to distinguish natural resources, production, labor, scientific-technical and other potential among them.

Development of national economy provokes establishment and improvement of national market, and within the boundaries of these different segments of national market, such as commodity and capital markets, services market, labour market, real estate market, intellectual property market, means of production markets and etc, are shaped and operated. This article is also an effort to percept national economy as institutional issue. *Purpose-study* of theoretical views on the national economy, as the difficult economy, social, organizational, scientific and technological system and the rationale for the peculiar features. *Research limitations*-in terms of scientific and theoretical studies require more extensive research.

German economist Friedrich List (1789-1846) was the first critic of classical political economy. In his «National System of Political Economy», he approaches political economy not as universal and the most advanced system, but as historical science and divides five stages of the nation's economic development. This historical approach was not a coincidence, because in the first place F. List wanted to reflect the characteristics of the development of his own country (Germany). History itself is the biggest nationalization. Therefore, criticizing «cosmopolitan economics» by Adam Smith, F. List primarily performs as a national economist. [F. List «National System of Political Economy» 1841]. In his «The political economy of exchange valuables», he opposes the theory of national economic production forces, which stays in the center the priority of internal market on external, not division of labor. [F. List «The political economy of exchange valuables» 1843]. Understanding that the relative advantages mainly can be used by rich countries, free traders are profitable for advanced nations, he protects complex development of Germany under the guise of protectionist policy. (*the harmonious combination of*

agriculture and manufacturing industry). He considers that raising prices as a result of protectionist policy will be industrial education method of nation.

Methodology-systematic approach and methods of comparative analysis. **Findings**-identification of new scientific and theoretical justification in terms of theory development on the national economy. **Practical implications**-ability to use as a research source in the development of new concepts of national economies.

The economic systems are a set of interrelated economic elements which form a certain integrity, economic structure of society; relations' unity, which are accumulated under the production, distribution, exchange and consumption of economic benefits at the different stages of human society development.

Firstly, scientific provision of strategies due to "institutionalism" mentioned as actions and thought style through traditions of nations and groups

First, "past" institutionalists (for example, C.Kommons "About law aspects of capitalism") attempted to learn problems of modern economist approaches by the help of methods of other sciences, law and policy; non-institutionalists went by opposite way-problems of politology and law problems by methods of neoclassic economist, before all involving modern microeconomic apparatus and game theory.

Second, traditional institutionalist approach deals with inductive method, attempting to go from specific cases to general that as the result general institutionalist theory could not be formed; non-institutionalism by deductive way- went from general principles of neoclassic economic theory to concrete events of social life.

Third, the "old" institutionalism as radical economic thinking focuses on activity of groups(mainly trade unions and government) which protect the interests of individual; non-institutionalism considers independent individual as main and this solve the becoming of a member of appropriate group by will and interests.

Conclusion - The theories of national economy developed as an alternative to the main stream of economic thought. If the main stream is mainly engaged with the theories of universal development of national economies, then the cameralists, German historical school, old institutionalism, post-Cainsionism, left-wing radical economy school and new institutional theory laid to the theoretical foundations of national economy analysis.

Let's consider the typology of main approaches of the economic systems in historical aspect. With a certain degree of conditionality, the existing approaches can be divided into the formation and civilizational ones.

Consideration of the humanity development as a combination of ethnic groups adjoins to the last one. From the development point of view, a number of researchers consider that humanity passes advanced stages; the others consider that development makes a cycle.

Key words : *national economy, institutionalism, economic systems, peripheral economy*

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CRITICAL DISCOURSE ANALYSIS OF DONALD TRUMP'S LETTER TO RECEP TAYYIB ERDOGAN; VAN DIJK'S IDEOLOGICAL SQUARING

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ABSTRACT

This study aims at describing and unmasking the ideological and sociocultural implications of a letter sent by Donald Trump, the USA president, to Recep Tayyib Erdogan, the Turkish counterpart on October 9, 2019; the theme of the letter is warning against launching a military operation in nothern Syria. In this respect, the letter is scrutinized with Van Dijk's socio-cognitive approach (SCA), which focuses on ideological structures and society. The framework is composed of two levels: I) micro-structures, and II) macro-structures; the micro-level investigates syntactic and semantic structures as well as lexicon, whereas the macro-level unveils ideology, power, and dominance. According to the concluding findings, mirco-strutures have been found that Trump has used a very negative groups of lexis and lexicon, whereas the macro-structures meant to imposing Trump's logic and superiority on Erdogan.

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THE CONTEXTUALIZED MODEL FOR CAREER COUNSELING AS A BETTER WAY TO MEET THE CHALLENGES OF THE RECENT WORK WORLD SITUATION

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ABSTRACT

According to the key findings of the report “Future of jobs 2020” by the World economic forum around 40% of workers will require reskilling of six months or less and the majority of business leaders report that they expect employees to pick up new skills on the job, which is sharp uptake from 65% in comparison with 2018. In addition online learning and training is reported to be increasing, but the enrolled courses are drastically different for those in employment and for those who are unemployed. The report shows that the window of opportunity to reskill and upskill workers is estimated to be shorter in the newly constrained labor market -for those workers set to remain in their roles, the share of core skills that will change in the next five years is 40%, and 50% of all employees will need reskilling (up 4%). These findings confirm that the traditional models for career counseling that envisage stability on personal characteristics and jobs and see careers as fixed sequence of stages are insufficient. In this perspective the main characteristics of the contextualized model are described such as its presuppositions, framework, goals of intervention and intervention model. The presuppositions are contextual possibilities, dynamic processes, non-linear progression, multiple perspectives, and personal patterns. The framework is described to be life-long, holistic, contextual, and preventive. The goals of intervention are to increase peoples’ adaptability, narratability, and activity. The intervention model consists of six stages. The first stage is the definition of the client’s problem and expected outcomes of the career consultations. The second stage involves the client’s exploration of his/her current system of subjective identity forms. The third stage aims at opening perspectives through narrating stories when the counsellor and the individual work together and by common discovery and re-authoring, stories can be reorganized, revised, and revitalized. The fourth stage involves placing the problem in a new perspective. The fifth stage is specifying activities that try on and actualize the newly developed identity and the final, sixth stage consists of follow-up.

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Keywords: Career counseling, contextual perspective, career construction.

İŞ SAĞLIĞI VE GÜVENLİĞİ KAPSAMINDA KAYNAK TÜRLERİNİN AVANTAJLARI VE DEZAVANTAJLARI

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ÖZET

Kaynak, aynı ya da farklı metalürjik özellikteki malzemelerin dolgu maddesi kullanarak ya da kullanmadan ısı ve/veya basınç altında sökülemeyecek şekilde birleştirilmesidir. Kaynak türlerinin hemen hemen hepsinde benzer tehlikeler bulunmaktadır. Bu tehlikeler; elektrik tehlikesi, endüstriyel gaz tüplerinin patlama tehlikesi, ışın ve ışık tehlikesi, gaz ve toz tehlikesi şeklindedir. Sanayide kullanılan kaynak türleri çok çeşitli olmakla birlikte yaygın olarak ark kaynağı teknikleri kullanılmaktadır. Kaynak türleri genel olarak; örtülü elektrot ark kaynağı, gaz altı kaynağı, oksi-asetilen kaynağı, toz altı kaynağı şeklinde gruplandırılır. Örtülü elektrot ark kaynağı, diğer kaynak yöntemleri ile ulaşılamayan dar ve küçük ortamlar için daha elverişlidir. Kaynak makinesinin güç kaynağı uçları uzatılabilen için uzak mesafedeki işlemlerde daha rahat kaynak yapılabilir. Örtülü elektrot ark kaynağı sahip olduğu avantajları ve düşük maliyetli olması nedeniyle metallerin birleştirilmesinde en çok kullanılan kaynak yöntemidir. Gaz altı kaynağı örtülü elektrot ark kaynağına göre daha hızlı çalışan bir kaynak yöntemidir. Kaynakçı örtülü elektrot ark kaynak yönteminde olduğu gibi tükenen elektrotu değiştirmek için kaynağı durdurmak zorunda değildir. Oksi-asetilen kaynağı, en eski ve çok yönlü kaynak yöntemlerinden biridir. Ancak son zamanlarda endüstriyel uygulamalardaki popülerliği azalmıştır. Toz altı kaynağının yüksek kaynak hızına sahip olması nedeniyle kaynak dikişleri kaliteli ve yüksek mekanik dayanımlıdır. Toz altı kaynağı ile kaynak işlemlerinde sıçrama olmaz ve ark ışınları görünmez. Bu nedenle kaynak operatörü için alınması gereken iş sağlığı ve güvenliği önlemleri daha azdır.

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Anahtar Kelimeler: Kaynak Türleri, Gaz Altı Kaynağı, Toz Altı Kaynağı

ADVANTAGES AND DISADVANTAGES OF WELDING TYPES IN THE SCOPE OF OCCUPATIONAL HEALTH AND SAFETY

ABSTRACT

Welding is the combination of materials with the same or different metallurgical properties, with or without using filler, in such a way that they cannot be removed under heat and/or pressure. Similar hazards exist in almost all types of welding. These dangers; electrical hazard, explosion hazard of industrial gas cylinders, ray and light hazard, gas and dust hazard. Although there are a wide variety of welding types used in the industry, arc welding techniques are widely used. Types of welding in general; covered electrode arc welding, gas metal arc welding, oxy-acetylene welding, submerged arc welding. Covered electrode arc welding is more suitable for narrow and small places that cannot be reached by other welding methods. The power source ends of the welding machine can be extended, welding can be done more easily in long distance operations. Covered electrode arc welding is the most used welding method for combining metals due to its advantages and low cost. Gas metal arc welding is a faster welding method than covered electrode arc welding. The welder does not have to stop welding to replace the consumed electrode as in the covered electrode arc welding method. Oxy-acetylene welding is one of the oldest and most versatile welding methods. However, its popularity in industrial applications has declined recently. Due to the high welding speed of submerged arc welding, the weld seams are of high quality and high mechanical strength. With submerged arc welding, there is no splashing and no arc rays are visible during welding. Therefore, less occupational health and safety measures are required for the welding operator.

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Keywords: Types Of Welding, Submerged Arc Welding, Gas Metal Arc Welding,

1. GİRİŞ

Metalin, malzeme olarak veya makine olarak yer aldığı tüm sektörlerde kaynak işlemleri yaygın olarak kullanılmaktadır. Kaynak, her tür metalürjik özellikteki malzemenin ekleme yapılarak veya yapılmadan ısı ve/veya basınç altında birbirinden ayrılmayacak şekilde birleştirilmesi işlemidir. Kaynak yönteminde genel olarak çalışma bölümünün kaynak işlemi uygulanacak kısmı eritilir ve söz konusu parça dolgu malzemesi ile ısı yardımıyla (bazen basınç altında) doldurulur. Ortaçağ döneminde, demiri çekiçleme işlemi yapılmasına rağmen kaynak henüz keşfedilmemişti. 1800'lü yılların sonlarına doğru, karbon elektrotlu ark kaynağı ve gaz altı kaynağı geliştirildi. 1900'lü yılların başlarında, örtülü elektrot kaynağının keşfi gerçekleştirilmiş olup Birinci Dünya savaşında kullanılacak olan silahların imalatı sebebiyle kaynak yöntemleri büyük yol kat edilmiştir. Sonraki dönemde, koruyucu gazların kaynak işlemlerinde kullanılmaya başladığı görülmüştür.

19. yüzyılın ortalarında, lazer yöntemi metallerin kesilmesi ve kaynak işlemeye tabi tutulmasında kullanılmıştır. Dördüncü sanayi devrimi ile robotlar yardımıyla kaynak işlemleri imalatta yaygın hale gelmiştir. Kaynak metodlarının geliştirilmesi için bilimsel araştırma ve geliştirmeler (Ar-ge) devam etmektedir.

2. KAYNAK TÜRLERİ

İmalat sürecinde çok sayıda kaynak türü kullanılmasına rağmen ark kaynak teknikleri daha tercih edilmektedir. Kaynak türleri temel olarak şu şekilde gruplandırılabilir: elektrik ark kaynağı, gaz altı kaynağı, TIG kaynağı, oksi asetilen kaynağı, toz altı kaynağı, yeni nesil lazer kaynakları. Söz konusu sayılan kaynak türleri bünyelerinde benzer tehlike unsularını barındırmaktadır. Kaynak türlerinde; Elektrik kaçağı veya yüksek-alçak gerilim tehlikesi, ışın ve ışık tehlikesi, patlama tehlikesi ve toz-gaz tehlikeleri ile karşılaşılmaktadır.

2.1. Örtülü Elektrot Ark Kaynağı

Örtülü elektrot ark kaynağı, örtülü elektrot ile çalışma alanı arasında meydana gelen ark yardımıyla kaynak işlemi için gerekli ısının oluştugu manuel bir ark kaynak yöntemi olup ayrıntılarına Şekil-1'de yer verilmiştir. Söz konusu kaynağın bölümleri, koruyucu gazlar tarafından açık havanın zararlı etkilerinden korunur. Dolgu metali, metal tozlarından ve elektrot teli parçalarından sağlanır. Kaynak işlemi sırasında oluşan cüruf, erimiş kaynak metaline yönelik ekstra koruma sağlamaktadır.



Şekil-1-Örtülü Elektrot Ark Kaynağı-[2]

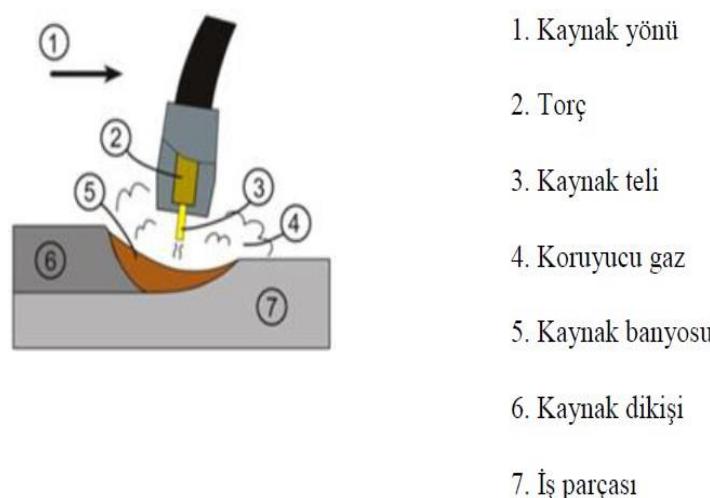
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Örtülü elektrot ark kaynağının olumlu yönleri ve düşük maliyetli olması nedeniyle endüstride en yaygın kullanılan kaynak yöntemidir. Elektrotun ulaşabildiği uzak noktalara kaynak işlemi yapılabilir. Örtülü elektrot ark kaynakları açık ve kapalı alanlarda kullanıma uygundur. Dar bölgelerde yapılacak kaynak çalışmalarına daha uygundur. Kaynak makinesi ekipmanları uzak mesafe işlemleri için kullanışlıdır. Kaynak makinesi ekipmanları hafif olup kolayca taşınabilmektedir. Bunların yanında örtülü elektrot ark kaynağının bir takım dezavantajları bulunmaktadır. Verimliliği ve metal işleme hızı diğer yöntemlere göre düşüktür. Elektrotların belirli süre sonunda tükenmesi nedeniyle sık sık kaynak makinesini

durdurmak gereklidir. Kaynak yapılan bölümdeki işlem bittikten sonra çalışma alanı üzerinde oluşan cürufun temizlenmesi gereklidir.

2.2. Gaz Altı Kaynağı

Gaz altı kaynağı, kaynak işlemi için ihtiyaç duyulan ısının elektrot ile metal parçası arasında olduğu ve ark sayesinde meydana geldiği bir ark kaynak yöntemi olup bölümleri Şekil-2'de yer almaktadır. Kaynak bölgesine devamlı olarak beslenen som halindeki tel elektrot, eriyerek tükendikçe kaynak metali oluşur. Kaynak sistemi, kaynak torcundan gelen koruyucu gazlar ile hava akımına karşı güvende tutulur.



Şekil-2-Gaz Altı Ark Kaynağı-[2]

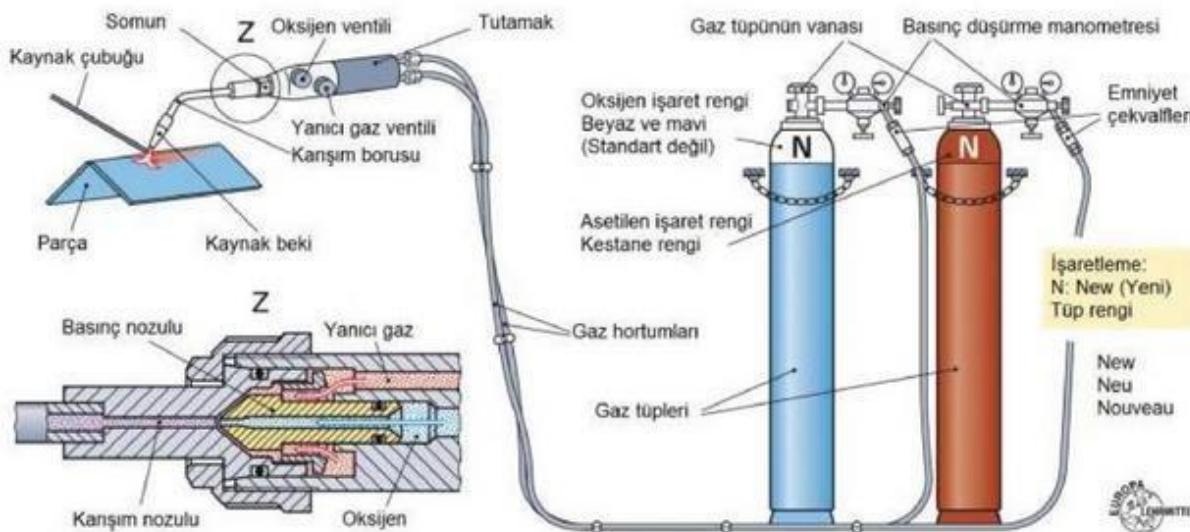
Gaz altı kaynak yöntemlerinde, helyum ve argon gibi soy gazlar ile karbondioksit koruyucu gaz olarak kullanılmaktadır. Bu kapsamda, helyum ve argon gazlarının kullanıldığı MIG (Metal Inert Gas) kaynak tekniği ile karbondioksitin kullanıldığı MAG (Metal Active Gas) tekniği yaygın olarak kaynak işlemlerinde görülmektedir. Yaygın olarak kullanılan bu yöntemlerde, kaynak çalışma bölgesi aralıksız beslendiği için tükenen elektrotu değiştirmek gibi bir işlem gerçekleştirilmelidir. Bu nedenle, MIG ve MAG kaynak yöntemleri elektrot ark kaynaklarına göre daha hızlı kaynak sistemleridir. Kaynak sırasında cüruf oluşmaması sebebiyle temizlik ile zaman kaybı yaşanmaz. Sanayide akıllı sistemlerin kullanımının artması ile paralel olarak, otomatik kaynak sistemleri ile uyumludur. Aynı zamanda gaz altı kaynağı kullanmanın olumsuz yönleri bulunmaktadır. Gaz altı kaynak yöntemlerinin ekipmanları, örtülü elektrot ark kaynağı ekipmanlarına göre daha pahalıdır. Koruyucu gazların hava akımı nedeniyle çalışma alanından uzaklaşması tehlike oluşturmaktadır. Bu duruma ek önlemler alınmalıdır. Dolayısıyla, açık havada yapılan kaynak işlemlerine uygun değildir. Gaz altı kaynak torcunun çalışma alanına yakın olması gereği için ulaşılması zor alanlar için kullanışlı değildir. TIG kaynak yöntemi, tungsten elektrot ile çalışma alanı arasında meydana gelen ark yardımıyla kaynak işlemi için gerekli ısınınoluştuğu bir

ark kaynak yöntemidir. Devamlı ve aralıklı kaynak işlemi yapmak için kullanılabilir olup manuel ve otomatik kaynak sistemleri ile uygulanabilir. Isı işlemi kaynak bölgesine odaklandığı için iş bölmelerinde bozulma görülmez. TIG kaynağının metal doldurma hızı bu çalışmada ele alınan yöntemlere göre yavaştır.

2.3. Oksi-Asetilen Kaynağı

İki farklı tüp içerisinde yer alan yanıcı ve yakıcı gazları kullanılarak gerekli ısının elde edildiği bir kaynak yöntemi olup sistematigi Şekil-3'te yer almaktadır. Yanma tepkimelerinden bilindiği üzere, yakıcı gaz olarak oksijen(O₂) kullanılmaktadır. Oksijenin karşısında yanıcı gaz olarak yaygın olarak asetilen kullanılmaktadır. Kaynak ısısı, oksijen ile asetilenin yanma tepkimesine girmesiyle açığa çıkar. Söz konusu ısıyı oluşturan alev, elektrik arkı kadar güçlü olmaması sebebiyle kaynak daha yavaş soğur. Eskiden yaygın olarak kullanılmasına karşın son zamanlarda sanayi uygulamalarında popülerliği azalmıştır. Ekipmanı basit ve maliyetsizdir. Bu yöntemde, gerilme oluşumunun daha az görülmesi nedeniyle yüksek alaşım çeliklerinin kaynağında daha kullanışlıdır. Ayrıca, metallerin kesilmesinde kullanılan bir yöntemdir. Sanayide, oksijen-hidrojen kaynağı, hava-asetilen kaynağı ve basınçlı gaz kaynağı yöntemleri kullanılmakta olup benzer sisteme sahip metotlardır. (Sadece kullanılan gaz çeşidi değişir.)

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Şekil-3-Oksi-Asetilen Kaynağı-[1]

2.4. Toz Altı Kaynağı

Toz altı kaynağı işleminde çalışma alanı kaynak metali ve tozuyla korunmakta olup kaynaklama için gerekli ısı, elektrot ile malzeme arasında meydana gelen ark sayesinde oluşur. Kaynak tozu, kaynak karışımı ile tepkimeye girerek ergimiş metalden oksijeni uzaklaştırır. Metal doldurma hızı oldukça yüksektir. Pürüzsüz ve yüksek kalitede kaynak sonuçları elde edilir. Örtülü elekktrot ark kaynağında olduğu gibi sıçrama olmaz. Farklı boyuttaki boruların kaynak işlemlerinde ve sert dolgu kaynaklarında kullanılabilir. Dolayısıyla, kaynak operatörü ile çalışanlara yönelik alınması gereken iş sağlığı ve güvenliği tedbirleri daha azdır. Söz konusu avantajlarına rağmen, toz altı kaynak sisteminde, tozlar havadan nem almaya eğilimli olup gözenek oluşumu gerçekleşebilir. Üst kalitede kaynak sonuçları oluşması için ana metalin düz olması ve kirli olmaması gerekmektedir. Kaynak işlemi sonunda cürf kalıntısı olmaması için çalışma alanının sürekli temizlenmesi gerekmektedir. Toz altı kaynağı yanma yapabileceği için çok ince malzemelerin kaynak işleminde uygun değildir. Tüm metal ve alaşım çeşitleri için kullanılabilecek bir yöntem değildir.

3. SONUÇ

Örtülü elekktrot ark kaynağı diğer yöntemlere göre daha az maliyetli olduğu için sanayide daha yaygın olarak kullanılmaktadır. Gaz altı kaynağı yöntemi, örtülü elekktrot ark kaynağına göre daha hızlı bir kaynak sistemi olmasına karşın daha maliyetlidir. Toz altı kaynağı yöntemi, kaynakçı açısından diğer yöntemlere göre daha güvenli olması nedeniyle İş sağlığı ve güvenliği yönünden tercih sebebidir. Dördüncü sanayi devrimi ile lazer ve ultrasonik lazer yöntemleri gündeme gelmiştir. Ancak, söz konusu yöntemlerin pahalı olması nedeniyle sadece büyük işletmelerin bu yöntemlere bütçe ayırabildiği görülmektedir. Tarafımız görüşünce, insan sağlığının her zaman öncelikli olarak göz önünde bulundurulması ve dördüncü sanayi devrimiyle üretim sistemlerine entegre olan akıllı robot sistemlerinin kaynak yöntemlerinde kullanılması gereği savunulmaktadır. Bu şekilde, kaynakçılar uzaktan kumanda kullanarak robotlar aracılığıyla kaynak işlemini gerçekleştirecekler. İş sağlığı ve güvenliği yönünden kaynakçılar için risk unsurları minimum sevilere inecektir.

4. KAYNAKÇA

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EV İŞÇİLİĞİ MESLEKİ SORUNLARININ İŞ SAĞLIĞI VE GÜVENLİĞİ YÖNÜNDEN İNCELENMESİ: ANKARA İLİ ÖRNEĞİ

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ÖZET

İnsanların tarımla geçimlerini sağladıkları zamanlardan sanayi kaynaklı geçim dönemlerine ve dahi idrak ettiğimiz zaman dilimlerinde bireylerin ev içindeki ve dışındaki hizmet üretimine rastlanmaktadır. Geniş aile ile birlikte yaşayan bireyler ev içi sorumluluklarını, konu ile alakalı güven duydukları aile fertleriyle rahatlıkla paylaşabilmektedir. Çekirdek ailelere mahkum olmuş, toplumlar üzerinde oluşturulan korku ve kaygılar bazı durumlarda ise keyfekederlik insanların ev içi sorumluluklarının bir kısmını para karşılığında ev hizmeti üreten kişilerle paylaşmak zorunda bırakmıştır. Çalışmamız; meskenlerin, bazı durumlarda ciğerpare evlatların ve yaşılarının emanet edildiği ev işçilerinin; çalışma koşullarını, enformal bir iş kolunda çalışma sebeplerini, eğitim durumlarını, sağlık algılarını ve mevcut sağlık yakınlamlarını, işe alakalı eğitim durumlarını ölçebilmeyi hedeflemektedir. Ev işçilerinin formal bir iş haline getirilebilmesi, ev işçiliğinin üzerindeki sosyal ve ekonomik baskılardan hafifletilebilmesi, çalışanın ve işverenin karşılıklı güven müessesesini oluşturabilmesi için konu ile ilgili degersayımların değiştirilmesi zoruridir. İş tanımının belirsizliği, sigortasız çalışabilme, mahrem alan olan iş yerlerinin denetlenmemesi, ev işçilerinin ihtiyaç duyduğu mesleki eğitimlere ulaşamaması hususlarına insan hakları ihmal edilmeden kanun yapıcılar tarafından müdahaleler yapılmalıdır. Çalışma hayatında bilinçlenme sadece işçi tarafında değil işveren tarafında da gerçekleştirilebilmelidir. Ev işçileri tipki bazı çok tehlikeli sınıfa giren işleri icra eden çalışanlar gibi belli aralıklarla sağlık kontrollerden geçirilmelidir. Çalışanın ve işverenin bu periyotları aksatmaması kanun yapıcılar tarafından kontrol edilmelidir. Ev işçilerinin mesleki sorunlarının çözülebilmesi ve çözüm kümesinin genişletilebilmesi için sanattan istifade edilmelidir. Kanunların, örfi kaidelerin tam manasıyla gerçeklestiremediği hedefleri bazı durumlarda sahne, müziği, sayfalar başarılmışlardır. Türkiye'nin ILO 189 nolu Ev İşçileri İçin İnsana Yakışır İş Sözleşmesi 'nin imzalanmasını daha titizlikle irdelemesi gereklidir.

Anahtar Kelimeler: Ev işçi, Ev hizmetleri, İş Sağlığı Ve Güvenliği, 189 nolu ILO sözleşmesi, İnsana yakışır iş.

IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY PROBLEMS OF HOUSEHOLD WORKING INVESTIGATION : CASE OF ANKARA

ABSTRACT

From the times when people earn their living from agriculture, to their livelihoods originating from industry, and even the service production of individuals inside and outside the home in periods of time we understand. Individuals living with the extended family can easily share their domestic responsibilities with family members they trust. Being confined to nuclear families, fears and anxieties created on societies and sometimes arbitrariness have forced people to share some of their domestic responsibilities with people who produce household services in return for money. Our work; domestic workers to whom dwellings are entrusted, in some cases liverwort children and the elderly; It aims to measure working conditions, reasons for working in an informal line of business, educational status, perceptions of health and current health complaints, and work-related educational status. creating a solution set for situations that do not comply with occupational health and safety criteria is among the goals. It is essential to change the relevant paradigm in order to turn domestic workers into a formal job, to alleviate social and economic pressures on domestic work, and to create mutual trust between the employee and the employer. Lawmakers should intervene in the matters of uncertainty of job description, being able to work without insurance, not being able to inspect workplaces that are private areas, not being able to access vocational training that domestic workers need, without neglecting human rights. Awareness in working life should be achieved not only by the employee but also by the employer. Domestic workers should undergo health checks at regular intervals, just like employees who perform some very dangerous jobs Art should be utilized in order to solve the occupational problems of domestic workers and to expand the solution set. In some cases, stage, music, pages have achieved the goals that laws and customary rules have not fully achieved. Turkey's Home No. 189 ILO Convention on Decent Work for Workers' s more aggressively's explorations are required to be signed.

Keywords: Domestic workers, home services ,occupational health and safety ,189 ILO contract, decent work

KAPALI ALANLARDA YAPILAN KAYNAK İŞLERİİNDE SAĞLIK GÖZETİMİ

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ÖZET

Kaynak ve kesme işlemleri esnasında kaynacının sağlığını etkileyebilecek dumanlar, tozlar ve gazlar oluşur. Kapalı alanlarda kaynak yaparken bu zararlı maddelerden korunmak için öncelikle kaynak malzemeleri güvenlik bilgileri incelenerek zararlı bileşenler, malzeme kullanıldığından oluşabilecek zararlar, ilkyardım kuralları, çalışma alanı için gereken sınır değer, ve atıkların nasıl bertaraf edileceği hususu bilinmeli ve bu bilgilere dayanarak emniyet tedbirleri alınmalıdır. Çalışma alanları kaynak yöntemine, malzemelere ve uygulama koşullarına göre zararlı maddelerden arındırılmış, temiz hava teneffüs etmemeyi sağlayacak şekilde planlanmış ve donatılmış olması gereklidir. Kaynak yapılan kapalı alanın doğal veya suni yöntemlerle havalandırılması sağlanmalıdır. Ortamda oksijen miktarı %17'nin altında ise koruyucu solunum cihazları kullanılmalıdır. Kaynak işlerinde tecrübeli işçilerin görev alması sağlanmalı, kaynak yaparken kurşun, kadmiyum, çinko, krom içeren metallere özellikle dikkat edilmelidir. Kapalı alanlarda sürekliliği olan çalışmalardan kaçınılmalı, mümkün olduğunda az eleman ile çalışılmalıdır. İş Sağlığı ve Güvenliği yetkilileri tarafından risk değerlendirmesi ve ölçümler yapılmalı, kişisel koruyucu donanımlar verilmeli, elektrikli el aletleri kullanımından kaçınılmalıdır. Maddelerin patlama limitleri bilinmeli, sınır değeri aşan durumlarda iş derhal durdurulmalıdır. Patlamalar dört gruba ayrılır bunlar; katı madde patlamaları, kimyasal patlamalar, gaz patlamaları, toz patlamalarıdır. Patlamanın meydana gelebilmesi için ateşleme kaynağı, patlayıcı gaz, buhar veya toz ile minimum oksijen konsantrasyonun bir araya gelmesi yeterlidir. Bu nedenle patlamalara karşı da önlem almak gerekir. İşveren Patlayıcı Ortamların Tehlikelerinden Çalışanların Korunması Hakkında Yönetmeliğe göre patlamadan korunma dokümanı hazırlamak zorundadır. Alınacak önlemlerde tehlikeli bölgelerin ortam koşullarına göre Bölge-0, Bölge-1, Bölge-2, Bölge-20, Bölge-21, Bölge-22 olarak sınıflandırılmaktadır.

Bu çalışmada kapalı alanlarda kaynak işlerinde zararlı gazlara ve oluşacak patlamalara karşı alınması gereken önlemler hakkında bilgi verilmektedir. Kişisel koruyucu donanımlar kullanan eğitimli çalışanlar ile iyileştirilmiş çalışma ortamının birleştirilmesi ile iş kazaları ve meslek hastalıklarının nasıl en aza indirileceği üzerinde durulmaktadır.

Anahtar Kelimeler : Kaynak, Kapalı Alan, Patlama

HEALTH SURVEILLANCE IN WELDING WORKS IN CLOSED AREAS

ABSTRACT

During welding and cutting operations, fumes, dusts and gases are formed that can affect welder's health. In order to be protected from these harmful substances when welding in closed areas, firstly, the safety information of welding materials should be examined, harmful components, damages that may occur when using materials, first aid rules, limit values required for the work area, and how to dispose of wastes should be known and safety measures should be taken based on this information. Working areas must be free from harmful substances, planned and equipped to allow fresh air to breathe, according to the welding method, materials and application conditions. It should be ensured that the welded area is ventilated by natural or artificial methods. If the oxygen amount in the environment is below 17%, protective respiratory devices should be used. It should be ensured that experienced workers take part in welding works, and special attention should be paid to metals containing lead, cadmium, zinc and chromium while welding. Continuous work in closed areas should be avoided, and work with as few personnel as possible. Risk assessment and measurements should be made by the Occupational Health and Safety authorities, personal protective equipment should be given, and the use of power tools should be avoided. Explosion limits of the substances should be known, and work should be stopped immediately in cases exceeding the limit value. Explosions are divided into four groups; solid substance explosions, chemical explosions, gas explosions, dust explosions. For an explosion to occur, it is sufficient to combine the ignition source, explosive gas, vapor or dust with a minimum oxygen concentration. Therefore, it is necessary to take precautions against explosions. The employer has to prepare an explosion protection document in accordance with the Regulation on the Protection of Employees from the Dangers of Explosive Atmospheres. In the measures to be taken, the dangerous zones are classified as Zone-0, Zone-1, Zone-2, Zone-20, Zone-21, Zone-22 according to the environmental conditions. In this study, information is given about the precautions to be taken against harmful gases and explosions that will occur in welding works in closed areas.

The focus is on how to minimize occupational accidents and diseases by combining an improved working environment with trained employees using personal protective equipment.

Keywords: Welding, Closed Area, Explosion

1. GİRİŞ

Kaynak işleri, demir, çelik, krom, nikel ve manganez gibi metaller üzerinde uygulanan yüksek basınç veya yüksek sıcaklık ile iki metalin birbirine yapıştırılması işlemidir. Gelişen teknoloji ile birlikte kaynak işleri ve çalışan sayısı gün geçtikçe artmaktadır bu da iş kazaları riskini beraberinde getirmektedir. Kaynak işlemi esnasında yüzeyde oluşan 2000-3000 C derecelik ısı çalışma ortamına çeşitli gazların yayılmasına sebep olmaktadır. Kaynakçılık işlerinde hava yolu ile alınan bu zararlı gazlar akciğer hastalıkları gibi sağlık problemlerine neden olmaktadır. Zararlı toz, gaz, ve dumanlara maruziyetin sürekli arz etmesi durumunda kalıcı meslek hastalıkları da ortaya çıkmaktadır. Bu çalışmada kapalı alanlarda yapılan kaynak işlerinde kaynakçının maruz kaldığı riskler, alınması gereken önlemler ve sağlık gözetimi incelenmiştir.

2. ARAŞTIRMA VE BULGULAR

Kaynak işlerinde ortaya çıkan tehlikelerden en önemlileri; zararlı tozlar, kaynak gazı ve dumanı, zararlı ışınlar, gürültü, elektrik kaynaklı ve ergonomik kaynaklı risklerdir. Öncelikle riskleri oluşturan unsurların kaynağında yok edilmesi veya toplu korunma yöntemleri ile bertaraf edilmesi hedeflenmeli, risk yine de önlenebilirse Kişisel Koruyucu Donanım (KKD) ile çalışan sağlığı gözetilmelidir. Kaynak tehlikelerinden korunmak için kaynak malzemelerinin üzerinde bulunan "Malzeme Güvenlik Bilgileri" incelenmeli ve kaynak işleme başlamadan önce bu bilgiler göz önünde bulundurularak emniyet tedbirleri alınmalıdır.

2.1. Türkiye'de Kullanılan Başlıca Kaynak Teknikleri ve Tehlikeleri

- ❖ Elektrik Ark Kaynakları
- ❖ Lazer Kaynağı
- ❖ Oksijen-Gaz Kaynakları

Kaynak dumanında krom, nikel, manganez, silisyum, berilyum, vanadyum, kadmiyum, azot ve bileşikleri, asbest, fosgen, akrolein flor, karbon monoksit, kobalt, bakır, ozon, selenyum, çinko gibi çeşitli zehirleyici gazlar bulunmaktadır. Bu gazlar kaplanmış veya işlem görmüş metallerin ısıtılmasıyla oluşmaktadır. Kaynak tehlikelerini kaynak yöntemi, kaynak çubuğuun içeriği, kaynak malzemelerinin üzerindeki boyalı ve kaplamalar, havalandırma ve kapalı alanlar oluşturmaktadır.

2.2. Kaynak İşlerinde Sağlık Problemlerine Neden Olan Faktörler

Toz, Gaz ve Dumanlar, Radyasyon, Gürültü, Elektrik Tehlikeleri, Yangın, Yanıcı ve Patlayıcı Gazlar, Mekanik Etkenler, Ergonomik Etkenler kaynak işlerinde sağlık problemlerine neden olan başlıca faktörlerdir. Tozla Mücadele Yönetmeliği esaslarına göre kaynak yapılan ortamda 0,1-5,0 mikron büyüğünde solunabilen tozlar olduğu takdirde çalışanın sağlığına ciddi zararlar verebilmektedir. Kaynak yaparken oluşan metal dumanı yüksek oranda elektrottan kaynaklanmaktadır, bu yüzden az duman çıkan elektrotların kullanılması gereklidir. Ortamda bulunan toz, gaz ve duman çalışanlarda akciğer hastalıkları, cilt rahatsızlıklarları, alerjik rahatsızlıklar, sistemik toksik etkiler ve kansere sebep olabilirler. Kronik rahatsızlıklarları olanlar ve sigara kullananlar tozların etkisine karşı daha hassastırlar. Kapalı alanda olması gereken temiz hava, atmosfer havası ile aynı bileşime sahip olmalıdır. Kaynak esnasında yayılan kıızılıtesi ve mor ötesi ışınlar insan vücuduna zararlı radyasyon yayar, bu ışınlar gözlerde ve deride tahribata sebep olur. Ani veya sürekli gürültü maruziyet düzeyi 85 desibelin üzerinde olan kaynak işlerinde KKD kullanılmadığı takdirde çalışanlarda işitme kaybı oluşabilir. Elektrik çarpması yüksek gerilim değerinden dolayı en çok makinenin boşta çalışması sırasında oluşmaktadır. Kaynak yaparken etrafa parçacıklar ve kırılcımlar sıçrayabilmekte ve koruyucu elbise giyilmediğinde çalışan yaralanmasına veya yanına sebep olabilmektedir. Kaynakçılıkta kullanılan gazlar yanıcı, yakıcı ve koruyucu gazlar olmak üzere üç grup altında toplanmaktadır. Bu gazların taşınması, kullanımı ve depolanması özel önlemler alınarak yapılmalıdır. Tüpler ve tanklar özel taşıma araçlarıyla taşınmalı, darbeye maruz kalmamalıdır. Gaz tüpleri standardın belirlediği renklere göre uygun mesafe ve ortamlarda depolanır. Kaynakçılarda en çok rastlanan bel, boyun, omurga ağrıları uygunsuz çalışma ve ağır kaldırma sonucu zorlanmalarla meydana gelmektedir.

Tablo 1. Kaynak İşlerinde Ortamda Oluşan Hava Kirlilikleri

Kaynak tipi	Ana Metal	Kirlilik
Örtülü metal ark	Hafif çelik	Toz, FeO ₂ , Mn
Örtülü metal ark	Paslanmaz çelik	Cr, Ni, Mn, F
Gaz altı metal ark	Paslanmaz çelik	Cr, Ni, Mn, NOx, O ₃
Thungsten inert	Alüminyum	O ₃ , AlO ₂
Oksijen-Gaz	Değişik	NOx, CdO ₂ , metal dumanı

Tablo 2. Kaynak İşlerinde potansiyel sağlık problemleri

Hava Kirleticiler	Fiziksel Zararlar	Faktörler		Fiziksel Zararlar
Metaller	FeO ₂	Benign pnömokonyoz	Radyasyon	UV Fotokeratit, ciltte eritem
	Mn	Nörotoksisite, pnömoni		IR Yanıklar, katarakt
	CdO ₂	Akut akciğer hasarı	Elektrik	
	ZnO ₂	Metal dumani ateşi		Elektrik şoku, ölüm
	Cr	Akciğer kanseri, alerji		
	Ni	Akciğer kanseri, alerji		
Gazlar	F	Cilt iritasyonu, kemikte depolanma	Gürültü	İşitme kaybı
	O ₃	Solunum iritanı, astım	Ergonomik stres	
	NO _x	Akut akciğer hasarı		Kas zorlamları
	CO	Sistemik zehirlenme		

2.3. Kapalı Alanlarda Kaynak Yaparken Oluşan Tehlikelerden Korunmak İçin Alınması Gereken Önlemler

Kaynak Ortamın Havalandırılması

Çalışma ortamındaki solunacak havada Müsaade Edilen Azami Konsantrasyon (MAK) değerleri göz önüne alınarak doğal veya suni havalandırmadan uygun olanı veya ikisi birlikte kullanılmalıdır.



Resim 1. Lokal havalandırma ve uygun KKD

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Fibrojenik, Toksik, Kanserojen, Radyoaktif, Alerjik ve İnert tozlar olmak üzere 6 çeşit toz bulunmaktadır. Kaynak imalat atölyelerinde ortam havasında asılı kalan veya tabana çöken toz çeşitleri insan vücuduna nüfuz ettiğinde başta solunum ve akciğer rahatsızlıklarını olmak üzere çeşitli hastalıklara neden olmaktadır. Kapalı alanlarda kaynak yaparken tozların zararlı etkilerini en aza indirmek için genel ve lokal havalandırma yöntemleri kullanılmalıdır. Toz ve gazların olumsuz etkilerine karşı yetkili kişiler tarafından düzenli aralıklarla ortam havası ölçülmelidir.

Solunum Cihazlarının Kullanımı

Kapalı alanlarda yetersiz havalandırma olması durumunda kaynakçıya uygun koruyucu solunum cihazı kullanılmalıdır.



Resim 2. Temiz hava beslemeli koyucu ekipman

Kişisel Koruyucu Donanım Kullanımı

KKD çalışansı oluşturabilecek zararlara karşı korumak amacıyla tasarlanmış malzeme olarak tanımlanabilir. Kaynak işlemlerinde toplu korunma ya da kaynakta yok etme yöntemi tam olarak uygulanamadığı durumlarda KKD kullanılarak tedbirler alınmalı, işveren veya İş Güvenliği Uzmanı tarafından KKD kullanılmasına yönelik gerekli kontroller sağlanmalıdır. Çalışma ortamında çalışanın koruyucu tedbirler alması ile ilgili uyarı levhaları asılmalıdır.



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Şekil-1 KKD Uyarı Levhaları

Patlamalar ve Patlamalara Karşı Alınacak İSG Önlemleri

Patlama, yanıcı madde, ısı ve oksijenin bir araya gelmesiyle oluşan tepkimedir. Patlamalar, Katı Madde, Kimyasal, Gaz ve Toz Patlamaları olmak üzere 4'de ayrılır. Patlama riski olan ortamlarda görünecek şekilde uyarı levhaları asılır. Tehlikeli yerler patlama riskleri göz önüne alınarak Bölge-0, Bölge-1, Bölge-2, Bölge-20, Bölge-21, Bölge-22 olarak adlandırılmaktadır.



Şekil-2 Uyarı Levhaları

3. SONUÇ VE ÖNERİLER

Kapalı alanlarda çalışmalar, riski yüksek bir çalışma olduğu için sürekliliği olan işlerin yapılmasından kaçınılmalı ve mümkün olduğunda az personel ile çalışmalar yürütülmelidir. Zararlı toz ve gazların varlığı işe başlamadan önce ve düzenli aralıklarla araştırılmalı, sınır değeri aşan durumlarda, iş derhal durdurulmalı ve risk faktörü sona ermeden işe başlanılmamalıdır. İşveren tarafından çalışanlara KKD kullanımını ile ilgili gerekli eğitimler verilmelidir. Tek başına yapılan çalışmalarda ve sınırlı alana sahip kapalı alanlarda giriş-çıkışlar kayıt altına alınmalı ve ani durumlarda kullanılmak üzere uygun iletişim kanalları kullanılmalıdır. Doğal havalandırmanın yanı sıra suni havalandırma ile de zararlı gazların dışarı atılması sağlanmalı ve ortamdaki gaz eşik değerinin aşıldığını uyaran alarm sistemi kurulmalıdır. Kapalı çalışma ortamlarında elektrikli el aletleri kullanılmamalı ve seyyar lambalar darbelere karşı sağlam yapıda olmalıdır. Oksi-asetilen veya LPG ile kaynak işlemleri tank, boru gibi yerlerde yapılmamalıdır. Kapalı alanlarda kaynak işlerinde oluşabilecek tüm risklere karşı çalışanlara hatırlatıcı eğitimlerin verilmesi hem iş yeri güvenliğinin sağlanması hem de çalışan sağlığının korunması açısından önem arz etmektedir.

KAYNAKÇA

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CONTEMPORARY REQUIREMENTS FOR THE PROFESSIONAL TRAINING OF POLICE OFFICERS

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ABSTRACT

Contemporary requirements in the professional training of police officers are well outlined from the selection stage. This is natural, because the way in which this activity is carried out depends on the subsequent results and the final product. At the basis of the selection of police personnel, whatever the level at which they are hired, are two categories of requirements regarding competence and personal experience. These, in turn, must be adapted to the objectives of the police in order to be useful. The process of selecting candidates for police posts should only be based on objective criteria. The European-type police officer must receive, first of all, general training, followed by specialized training. This system will make it possible to have staff familiar with the fundamental values of the rule of law and able to perform multiple tasks. In the EU Member States the training program focuses on disciplinary education and training, the use of specific training procedures, combining theory with practice in order to assimilate and fix knowledge on law, law enforcement, criminal investigations, traffic surveillance, ethics police, the use of weapons, the prevention of anti-social acts, the preparation of documents prior to the criminal investigation. Initial training should be followed by regular periods of continuing education. Improving the training of police personnel will be carried out on the basis of programs that take into account the following principles:

- achieving efficient programs for collecting and coordinating information, taking into account the whole range of problems specific to police work;
- ensuring a balance in terms of training at national level with training at local and regional level, so as to ensure equal opportunities for affirmation and promotion of all categories of police officers;
- achieving a judicious balance between theoretical standards and practical performance, through thorough and continuous supervision and evaluation of the training process.

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Keywords: professional training, police officers, selection, requirements.

OTEL İŞLETMELERİNDE PANDEMİYE KARŞI ALINAN ÖNLEMLER

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ÖZET

Araştırmmanın amacı, otel işletmelerinin Covid-19 pandemisine yönelik önlemlerini ortaya koymak ve bu doğrultuda çeşitli öneriler getirmektir. Bu kapsamında araştırmada literatür taraması yapılmış ve çeşitli sonuçlara ulaşılmıştır. Buna göre, Türkiye'de Covid-19 pandemisi ortaya çıktığından itibaren turizm işletmelerinin faaliyetleri Kültür ve Turizm Bakanlığı tarafından yayınlanan 'Konaklama Tesislerinde Kontrollü Normalleşme Süreci' konulu genelge aracılığıyla düzenlenmiştir. Söz konusu genelgede konaklama işletmelerinin pandemi süresince hizmet sunumunda sağlık ve hijyen koşullarına göre uyması gereken tüm kriterler detaylı bir biçimde belirlenmiştir. Ayrıca konaklama işletmelerine uluslararası sertifikasyon kuruluşları tarafından üst düzey sağlık ve hijyen koşullarının yerine getirildiğini belgeleyen güvenli turizm sertifikasının alınması zorunlu kılmıştır. Konaklama işletmelerinin bu doğrultuda faaliyetlerini sürdürmelerine olanak tanınmıştır.

Anahtar Kelimeler: Covid-19, Otel İşletmeleri, Pandemi Önlemleri

MEASURES TAKEN AGAINST THE PANDEMIC IN HOTEL BUSINESSES

ABSTRACT

The aim of the research is to reveal the measures of hotel businesses against the Covid-19 pandemic and to make various recommendations in this direction. In this context, the literature was searched and various results were obtained. Accordingly, Covid-19 from the pandemic that emerged in Turkey, the tourism business activities are organized by the Ministry of Culture and Tourism. It is regulated through the circular on "Controlled Normalization Process in Accommodation Facilities". In the circular, all criteria were determined within the scope of health and hygiene conditions that accommodation should comply with in the pandemic. In addition, it is obligatory for accommodation to obtain a safe tourism certificate, which certifies that high-level health and hygiene conditions are met by international certification institutions. Hotel businesses have been given the opportunity to continue their activities in this direction.

Keywords: Covid-19, Hotel Businesses, Pandemic Measures

1. GİRİŞ

Tüm dünya ülkelerini olumsuz etkileyerek, ekonomilerin ve toplumsal yaşamın çökmesine neden olan ve her geçen gün etkisini arttırarak devam eden Covid-19 salgınının tarihte iz bırakacağı ortadadır. Nitekim Covid-19 pandemisinin ülke ekonomileri ve sosyal yaşam üzerindeki etkisinin tartışılmaz bir boyutta olduğu bilinen bir gerçekdir. Bu çerçevede Covid-19 salgını küresel ölçekte çok sayıda endüstrinin zayıflamasına hatta çökmesine neden olurken bir hizmet sektörü olan turizmi de ciddi oranda etkilemiştir. Dolayısıyla turizm, döviz kazandırıcı özelliği ile ekonomi üzerindeki katkısı, bağlantılı birçok sektörde olan olumlu etkisi ve bu sektörlerde istihdam imkâni sağlama olanağı sunması bakımından önemli bir sektördür. Bununla beraber hem sosyo-kültürel hem de ticari ilişkilerin gelişmesine katkıda bulunarak dünya barışı üzerindeki etkisinin de küçümsenmeyecek boyutta önemli bir role sahip olduğu bilinen bir gerçekdir. Buradan hareketle turizmin temelini oluşturan, seyahat, konaklama, yeme ve içme gibi işletmeleri kısıtlamalarla birlikte ülkelerin sınırlarının da kapanmasıyla derinden etkilemiştir. Çünkü turizmde hem arz hem de talep yönlü düşüşler meydana gelmiştir. Nitekim bu durum sektörde yer alan işletmelerin faaliyetlerini sürdürmelerinde güçlük çekmesine ya da tamamen sektörden silinmesine neden olmuştur. Dolayısıyla dünya genelinde oluşan ve tüm insanları derinden etkileyen pandemi, kriz yönetiminin önemini ortaya koymaktadır. Bu kapsamda sektörde yer alan otel işletmelerinin pandemi kriz dönemi en az hasarla atlatabilmesi, işletmelerin sürekliliği ve temel amaç ile hedeflerine ulaşmasında alınacak önlemler önem arz etmektedir. Bu bağlamda gerçekleştirilen araştırmada turizm sektöründe yer alan otel işletmelerinde Covid-19 pandemisine yönelik önlemleri tespit etmek amacıyla literatür taraması yapılarak, çalışanın kuramsal çerçevesi oluşturulmuştur. Bu kapsamda öncelikle otel işletmeleri ve Covid-19 ile ilgili genel bilgiler verilmiş, otel işletmelerinin Covid-19 çerçevesindeki önlemleri değerlendirilerek, çalışma sonuçlandırılmıştır.

2. ARAŞTIRMA VE BULGULARI

2.1. Otel İşletmeleri

Turizm sektörünün önemli yapı taşlarından biri olan otel işletmelerinin kendine has özelliklerinden hızlı bir değişim gösterdiği bilinmektedir. Bu çerçevede otel işletmelerinin sağladığı hizmetlerden kaynaklı olarak bir milletin veya toplumun maddi refahını oluşturan toplamirlere katkıda bulunan oteller için farklı tanımlamalar söz konusudur. Oluşan bu farklı tanımlamalar çerçevesinde otelin özellikleri, çalışma koşullarını ve biçimlerini, uyguladığı yöntemleri belirleyecek fikir ve anlayış birligine varmalarının gücü olduğu bilinen bir gerçekdir (Aktaş, 2002: 25). Bu sebeple çalışmada farklı tanımlamalara yer verilmiştir. Buna göre; otel, işletme tarafından özel bir sözleşmeye ihtiyaç duyulmaksızın, kendisine sunulacak

hizmetlere karşı, belirlenen bir fiyat ödeme istekli olan kişilere konaklama ile yiyecek-içeceklerin sağlandığı yerlerdir (Şener, 2007: 5). Otel işletmeleri, müşterilerine yiyecek ve içecek, toplantı, konferans, eğlence vb. faaliyetlere ilişkin hizmetler sunan, sundukları bu hizmetlerin karşılığında belirli bir ücret alan ve çıktıları fiziksel ürün niteliği taşımayan işletmelerdir (Akbalık, 2020: 3). Başka bir ifadeyle 06.07.2000 tarih ve 24101 sayılı Resmî Gazete 'de yayınlanan "Turizm Tesisleri Nitelikleri Yönetmeliği'nin" 19. maddesinde: "*Oteller, asıl fonksiyonları müşterinin geceleme ihtiyaçlarını sağlamak olan, bu hizmetin yanında yeme-içme, eğlence ihtiyaçları için yardımcı ve tamamlayıcı birimleri de bünyelerinde bulundurabilen en az 10 odalı tesisler*" olarak tanımlanmaktadır (Maviş, 2006: 2). Tanımlamalardan yola çıkılarak turizm sektörü içerisinde yer otel işletmelerinin kendine has çeşitli özellikleri söz konusudur. Bu özellikler aşağıda özetlenmiştir (Karademir, 2019: 12-14):

- Turizm sektöründe yer alan otel işletmeleri zamana karşı hassas bir yapıya sahiptir. Başka bir ifadeyle üretim ve tüketim eş zamanlıdır. Otel işletmelerinde ürünlere karşı talep olmadığı sürece ürün ortaya çıkmaz. Talep edilmeyen ürünlerin, özellikle yiyeceklerin daha önceden stoklanarak, talep olduğunda ortaya çıkarılması ve satışının yapılması mümkün olamaz.
- Otel işletmeleri emek –yoğun yapıya sahiptir. Oluşturulan ve sunulan hizmetler, büyük oranda iş görenin gücüne dayanmaktadır. Bu bağlamda otel işletmelerinin esası insana dayanmaktadır. Dolayısıyla teknoloji kullanımı diğer sektörler ile karşılaşıldığında daha azdır. Bu sebepten işgücü faktörü otel işletmelerinde önem kazanmaktadır.
- Otel İşletmeleri dinamik bir yapıya sahiptir. Bu özelliğinden dolayı çağdaş hayat görüşünü kabullenmiş, teknolojisiyle ve otelcilik bakış açısıyla yeniliğe ve hareketliliğe açık bir sektörde yer alan işletmelerdir.
- Otel işletmeleri günün 24 saatini yılın 365 gününü faaliyet gösteren işletmelerdir. Bu özelliğinden kaynaklı olarak otel işletmelerinin, konuğun evindeki rahatlığı kaldığı işletmede bulabilmesi ve mutlu bir şekilde ayrılabilmesi için hizmetleri eksiksiz sağlaması temel bir gerekliliktir.
- Otel işletmeleri işbirliği ve uyumun yoğun bir biçimde olmasını gerekli kılar. Otel İşletmeleri, bölgeler arası iletişimini yoğun olduğu ve birden fazla departmandan oluştugundan dolayı hem ticari ve hem de sosyal niteliğe sahiptir. Bu bağlamda, işletme bünyesinde çalışan iş görenler arasında güçlü bir anlaşmanın ve yardımlaşmanın olması temel bir gerekliliktir.
- Otel işletmeleri sermaye yoğun bir özelliğe sahiptir. İşletmelerin işleyişini devam ettirebilmeleri için büyük miktarlarda sermayeye gereksinim söz konusudur. İşletme faaliyete geçmeden önce sermayesinin önemli bir kısmının sabit değerlere bağlanması öngörmektedir.

Otel işletmelerinde sermayenin önemli bir bölümünün sabit değerlere bağlanması kurumda yıpranma payı masraflarını artırır ve likidite olanaklarının azalmasına sebep olabilir. Bu durumda, şirketlerin ödemelerinde aksamaların yaşanmasına sebep olabilmektedir.

- Son olarak otel işletmelerinde satışlar genel itibarıyle nakit ve yaygın olarak kredi kartı ile gerçekleşmektedir. Otel işletmesinin bu özelliği ile konukların büyük miktarlarda para taşımalarının önüne geçilmektedir.

İfade edilen tanım ve özellikler dikkate alındığında otel işletmelerinin kendine ait çeşitli özelliklerinin olması diğer sektörlerle kıyaslandığında farklı bir yapıya sahip olduğunu göstermektedir. Farklı yapıya sahip otel işletmelerinin diğer sektörlerde yer alan işletmelere oranla risk durumunun da yüksek olduğu ifade edilebilir. Dolayısıyla yüksek riske sahip olan otel işletmelerinin içsel ya da dışsal etkenlere bağlı çeşitli krizlerle karşılaşması olasıdır. Karşılaşmış olduğu krizlerden en az hasarla çıkabilmesinde otel uygulamaları, politikaları ve aldığı önlemler önem arz etmektedir.

2.2. Covid – 19 Pandemisi

Aralık 2019'da ilk olarak Çin'in Wuhan Eyaleti'nde Covid-19 ateş, öksürük ve nefes darlığı gibi solunum yolu belirtileri ile ortaya çıkmış ve yapılan araştırmalar neticesinde 13 Ocak 2020'de pandemi olarak dünyaya duyurulmuştur. Tüm dünyaya insandan insana hızlı bir biçimde yayılan Covid-19 ilk olarak, deniz ürünleri ve hayvan pazarında bulunan insanlarda tespit edilmiştir. Bu virüs, Çin dışında ilk kez 13 Ocak'ta Tayland'da görülmüştür. Devamında 16 Ocak'ta Japonya'da, 19 Ocak'ta Guangdong'da, 20 Ocak'ta Güney Kore'de tespit edilmiştir. Ardından 21 Ocak'ta Amerika Birleşik Devletleri'nde, 29 Ocak'ta Orta Doğu Bölgesindeki Birleşik Arap Emirlikleri'nde, 30 Ocak'ta Filipinler ve Hindistan'da, 31 Ocak'ta Rusya, İsviçre, Roma ve İspanya'da görülmüştür. 21 Şubat'ta İsrail'de, 25 Şubat'ta Cezayir, İsviçre, Hırvatistan, Avusturya'da ve diğer dünya ülkelerinde ortaya çıkmıştır. Türkiye'de ise 11 Mart'ta ilk koronavirüs vakası görülmüştür. 15 Mart'ta ise salgının Afrika kıtasındaki 26 ülkeye de yayıldığı bildirilmiştir (T.C. Sağlık Bakanlığı Covid-19 Bilgilendirme Platformu, 2021). Dünya ülkelerinin neredeyse tamamına yayılan ve çok kısa sürede saptanan koronavirüs ile ilgili Çin hükümeti Wuhan'da 23 Ocak'ta karantina kararı almıştır (Bağçi, Uzun ve Bostan, 2020: 332-334). Devamında 30'dan fazla eyalette de karantina kararı verilmiştir. 30 Ocak'ta Dünya Sağlık Örgütü'nün "Uluslararası Kamu Sağlığı Acil Durum" ilan etmesiyle dünya ülkeleri peş peşe sınır kontrolü uygulamalarına geçmiştir (WHO, 2021). Dünya ülkeleri virüsten en az hasarla çıkabilmek adına çeşitli önlemler almış, kısıtlamalar oluşturmuş ve uygulamaya başlamıştır (Bağçi, Uzun ve Bostan, 2020: 332-334). Pandemi kapsamında alınan önlemler, uygulanan kısıtlamalar dünya ülkelerinin ekonomilerini derinden etkileyerek büyük

kayıplara sebep olmuştur. Tüm sektörleri derinden etkileyen bu pandeminin, birçok işletmenin ticari yaşamına son vermesine sebep olduğu bilinmektedir. Bununla birlikte toplumsal yaşamı da olumsuz etkilediği ve etkilemeye devam ettiği görülmektedir. Dolayısıyla pandeminin birçok sektör gibi turizm sektöründe yer alan işletmeler üzerindeki olumsuz etkinin de küçümsenmeyecek boyutta olduğu ayrıca belirtilmelidir.

2.3. Covid-19 Pandemisine Karşı Otel İşletmelerinin Aldığı Önlemler

Covid-19 pandemisi küresel düzeyde birçok sorunu beraberinde getirmiştir. Dünya ülkelerinin ekonomilerinde daralmalar olmuş, pandeminin hızını azaltmak amacıyla sanayi, hizmet sektörü başta olmak üzere ve bu sektörlerin alt dallarında faaliyet gösteren birçok işletme çalışmalarına ara vermek ya da kısmi çalışma programları çerçevesinde faaliyetlerini sürdürmek zorunda kalmıştır (Bağçι, Uzun ve Bostan, 2020: 333-334).

Virüs insan sağlığını ciddi şekilde tehdit ederek küresel boyutta tüm toplumları etkileyerek hayatı durma noktasına getirmiştir (Çakır ve Barakazı, 2020: 320). Öncelikle ekonomik ve sosyal döngünün devam etme gerekliliği sebebiyle devletler, yerel kuruluşlar, kamu ve özel sektör temsilcilikleri önlemler almıştır (Whaibeh, Mahmoud ve Naal, 2020: 201). Çünkü pandeminin bitiş tarihinin belirsiz olması ve bulaşıcılık oranın gün geçtikçe artması sosyo-ekonomik göstergeleri olumsuz bir biçimde etkilemiştir (Dowd vd., 2020). Buradan hareketle salgın sürecinde insan sağlığını önceliğe alarak sürdürülebilir politikalarla toplumun sosyal, ekonomik ve ruhsal devamlılığı adına çeşitli önlemler alınmış, uygulamaya geçirilmiştir (Çakır ve Barakazı, 2020: 320). Ekonomik, toplumsal yönden kazanımları bakımından dünya ülkelerinde önem arz eden turizm sektörü pandemiden büyük bir darbe almıştır. Bu durumda milyonlarca kişinin istihdam edildiği ve ülkelere önemli oranda döviz girdisi sağlayan turizm sektöründeki işletmelerin pandemi koşullarında faaliyetlerini sürdürmesi birtakım önlemlere bağlıdır. Dolayısıyla otel işletmelerinin yerli ve yabancı konuklara hizmet sunumunu pandemi koşullarına göre düzenlemesi ve otel işletmelerine devlet tarafından çeşitli teşviklerin sunulması önem arz etmektedir. Bu kapsamında Türkiye'deki otel işletmelerinin faaliyetlerini sürdürbilmesi ve pandemiden kaynaklanan etkilerinin minimize edilmesi amacıyla çeşitli önlemler alınmış ve uygulamaya konulmuştur.

Turizm sektörünün Türkiye ekonomisi açısından önemli olduğu bilinen bir gerçekdir. Bu doğrultuda pandeminin ardından yerli ve yabancı turistlerin seyahat ve tatil planlarının aksamaması ve işletmelerin faaliyetlerinin durmaması adına ülkenin kamu ve özel kurumları birtakım girişimlerde bulunmuştur.

Öncelikle T.C. Kültür ve Turizm Bakanlığı'nın öncülüğünde çok sayıda bakanlık ve sektör paydaşlarının katkısıyla “*Güvenli Turizm Sertifikasyon Programı*” oluşturulmuştur (Dündar, Silik ve Ilgaz, 2020: 3780). Bu program kapsamında turizm işletmelerinin faaliyetlerini sürdürmesi için alması gereken önlemler detaylı bir biçimde belirtilmiştir. Bunlar arasında, konaklama işletmelerinin faaliyet sürecince yerine getirmesi gereken zorunlu uygulamaları ve süreç yönetimi yer almaktadır. Bu süreçte işletmeler sertifikaya sahip olabilmek için misafirin otele girişi, personel çalışma koşulları, genel misafir alanları, yiyecek içecek üniteleri, mutfak, acil durum ve izolasyon, Covid-19 testi ve numune alma işlemlerine ilişkin belirlenen kriterleri sağlamak durumundadır (Türkiye Turizm Tanıtım ve Geliştirme Ajansı, 2021).

T.C. Kültür ve Turizm Bakanlığı tarafından 12.05.2020 tarihinde, 2020/6 sıra sayılı ve “*Konaklama Tesislerinde Kontrollü Normalleşme Süreci*” konulu genelge yayınlanmıştır. Bu genelge pandeminin seyri doğrultusunda belirli tarihlerde güncellenerek yeniden yayınlanmıştır. Genelge salgınının yayılmasının önlenmesine yönelik tedbirler kapsamında düzenlenmiştir. Faaliyette olan ve faaliyete gelecek olan turizm işletmelerinin kontrollü normalleşme sürecine güvenli bir şekilde dahil olabilmesi için alması gereken önlemleri içermektedir. Bu kapsamında genelge, konaklama işletmelerine konukların kabul edilmesi, konuklar tarafından kullanılacak genel alanların pandemi koşullarına göre düzenlenmesi, işletme personeli ve çalışma koşulları, genel ve kişisel temizlik bakım ve kuralları ile ilgili tedbirleri kapsamaktadır. Bu tedbirler (Türkiye Turizm Tanıtım ve Geliştirme Ajansı, 2021);

- Misafirlerin sosyal mesafe kuralları korunarak ve belirlenmiş kapasitede kabulü,
- İşletmeye girişte termal kamera veya temassız ateş ölçümü uygulamaları,
- Dezenfeksiyon halıları (paspasları) ve el dezenfeksiyon sistemi kurulması,
- Maske ve eldiven gibi kişisel koruyucu ekipman temini,
- Asansörlerin sosyal mesafe kurallarına uygun olarak düzenlenmesi,
- Yemek salonları, toplantı salonu animasyon alanları, bar, diskotek, satış üniteleri, açık alanlarda yer alan oturma/bekleme alanlarının sosyal mesafe kuralına göre düzenlenmesi,
- İşletme içerisinde çocuklara ayrılmış oyun alanlarının kapalı tutulması,
- Genel kullanım alanlarında ve genel müşteri tuvaletlerinin girişlerinde el dezenfektanı veya antiseptiği bulundurulması,
- Genel kullanım alanlarındaki tuvaletlerde otomatik kapı düzeneğinin kurulması,
- Spor salonu gibi aktivite birimlerinin rezervasyon sistemi ile sınırlı sayıda kişiye hizmet verecek şekilde düzenlenmesi, bu birimlerde tek kullanımılık malzemelerin sunulması,

- Sağlıklı turizm sertifikası bulunmayan tesislerde hamam, sauna, masaj birimlerinin kapalı tutulması,
- Yiyecek içecek hizmetlerinin verildiği salonlarda masalar arası mesafenin 1,5 metre, sandalyeler arası 60 cm olacak düzenlenmesi,
- Açık büfe yemek servisinin misafirle büfe arasına pleksiglas veya benzeri bariyer çekilerek yapılması ve yemek servisinin belirli bir mesafeden mutfak personeli tarafından sunulması,
- Personelin belirli periyodlarda sağlık kontrolünden geçirilmesi, ateş ölçümünün yapılması ve personelin pandemi ve pandemiye yönelik hijyen uygulamaları konusunda bilgilendirilmesi,
- Personelin kullanım alanlarının sosyal mesafe kuralına göre düzenlenmesi,
- İşletmede yüzeylerin özelliği doğrultusunda dezenfeksiyon malzemeleri kullanılarak tüm alanların belirli periyodlarda sterilize edilmesi ve uygulamanın kaydının tutulması,
- Misafirler otelden ayrıldıktan sonra odaların yüksek dezenfekte özelliği olan ürünlerle temizlenmesidir.

02.06.2020 tarihinde yayınlanan genelgede konaklama tesisleri bünyesinde yer alan çocuk kulüplerinin, oyun alanlarının, sauna, masaj birimlerinin pandemi ve hijyen koşulları dikkate alınarak açılmasına ilişkin değişikliğe yer verilmiştir. 01.07.2020'de yayınlanan genelgede ise, bakanlık ve belediye belgeli olan 50 oda ve üzeri kapasitede faaliyet gösteren tüm konaklama işletmelerinin uluslararası sertifikasyon kuruluşları tarafından üst düzey sağlık ve hijyen koşullarının yerine getirildiğini belgeleyen güvenli turizm sertifikasının alınması zorunlu kılmıştır. Bu sertifika uygulaması 08.10.2020 tarihli yayınlanan genelgede oda sayısı 30 ve üzeri olan tüm konaklama işletmeleri için zorunlu hale getirilmiştir.

Turizm Bakanlığı tarafından işletmelerin faaliyetlerinin sürdürülebilmesi için getirilen uygulama ve kısıtlamaların işletmelere ek maliyet getirmesi, pandemiden kaynaklı doluluk oranlarının çok fazla düşmesi, rezervasyon iptallerinin gerçekleşmesi işletmelerin finansal sorunlar yaşammasına neden olmuştur (Şenol ve Zeren, 2020: 6). Dolayısıyla turizm işletmelerinin ayakta kalabilmesi için finansal desteği ihtiyaç duydukları ortadadır. Konaklama işletmelerinin devamlılığının sağlanması finansal destek ile mümkün olabilecektir. Bu doğrultuda pandemi sürecinde işletmelere fon tahsis edilmesi, vergi desteği ve düşük faizli kredi imkânı sağlanması önem arz etmektedir. Söz konusu dönemde işletmeler için sabit maliyetlerin büyük bir bölümünü oluşturan işgücü maliyetleri önemli bir sorun olarak görülmektedir. Bu süreçte işgücü maliyetlerinin kısmen karşılanması ve kısa zamanlı çalışma ödenekleri gibi uygulamalarla istihdam desteklemeye çalışılmaktadır. Ancak az sayıda personel ile faaliyetlerin sürdürülmesi bu süreçte işgücü devir hızının yükselmesi gibi unsurlar turizm işletmelerinde sunulan hizmetin kalitesinde düşüşe neden olmaktadır (Çakır ve Barakazı, 2020: 321-322).

3. SONUÇ

Dünya turizm hareketlerinin pandemiden ciddi oranda etkilendiği ve potansiyel turistlerin çoğunuğunun seyahat planlarını erteledikleri turizm istatistikleri aracılığıyla görülmektedir. Turizm potansiyeli olan ülkeler pandemi döneminde turistik faaliyetlerin sürdürülmesi, turizm işletmelerinin devamlılığının sağlanabilmesi için birtakım önlemler almak durumunda kalmıştır. Türkiye'de de pandemi döneminde turizm faaliyetlerinin uygulanması aşamasında Turizm Bakanlığı tarafından önemli tedbirler getirilmiş, genelgeler yayınlanmış ve uygulama açısından gerekli kriterler detaylı bir şekilde belirtilmiştir. Pandemi nedeniyle oluşan krizin etkilerini azaltabilmek için turizm işletmelerine devlet tarafından kredi desteği sağlanmış, ücretli ve ücretsiz izin kapsamında çalışanlara çeşitli ücret uygulamaları gerçekleştirılmıştır. Otel işletmelerinin konuklarını sahaklı bir ortamda ağırlayabilmesi ve faaliyetlerini südürebilmesi, söz konusu dönemde belirtilen tedbirleri yerine getirmesi ile mümkün olabilecektir. Bu kapsamda otel işletmeleri, konukların otele girişinden çıkışana kadar olan süreçte, tüm kullanım alanlarında (mutfak, restoran, genel alanlar, salonlar, odalar, yüzme havuzu vb.) gerekli hijyen koşullarının sağlanmasıından sorumludur. Bununla birlikte güvenlik, atık yönetimi, acil durum ve izolasyon konularında da gerekli tedbirleri almalıdır. İfade edilen gerekli önlemlerin alınması otel işletmelerinin zararının asgari düzeyde tutulması açısından önemlidir. Nitekim sosyal mesafe kuralı ve hijyen uygulamalarını üst düzeyde tutan otel işletmelerinin daha fazla tercih edileceği düşünülmektedir. Bu doğrultuda turizm işletmelerine ve paydaşlarına birtakım önerilerde getirilebilir:

- Pandemi koşullarında gerekli kriterleri sağlayamayan işletmelerin faaliyetlerini sürdürmelerine izin verilmemeli ve bakanlık tarafından denetimler sıklaştırılmalıdır.
- Otel işletmeleri sunulan hizmetin her aşamasında hijyen kurallarını üst düzeyde uygulamalıdır.
- İşletme çalışanları, kendilerini ve konuklarını hastalık riskiyle karşı karşıya bırakmamak için bilinçlendirilmeli ve eğitilmelidir.
- İşletme çalışanları kendilerinde Covid-19 semptomlarını hissettiği takdirde durumu yöneticisine bildirmelidir. Çalışmaya devam ettiği takdirde işletmede çok sayıda insanın hasta olmasına ve işletmenin tamamen karantinaya alınmasına neden olabileceğiının farkında olmalıdır.
- İşletme içerisinde acil durumlarda izolasyon alanları belirlenmelidir.

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MAGISTRAL (KURUM İÇİ, KÜÇÜK ÖLÇEKLİ) RADYOFARMASÖTİK ÜRETİM EKİPMANLARININ NİTELİĞİ

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ÖZET

Ev tipi jeneratörlerin ticarileşmesinden bu yana, bilim ve nükleer tıp topluluklarının 18 F, 68 Ga, 177 Lu vb. işaretli radyofarmasöтикlere ilgisi önemli ölçüde artmıştır. Bu radyonüklitlerle işaretlenebilecek birçok yeni molekül hakkında sürekli olarak yayınlanan makaleler bulunmaktadır. Ayrıca klinik uygulamalarda radyofarmasöтикlerin (RP) kalite kontrolünün önemi radyosentez kadar ilgi çekmektedir. Radyosentezden hasta enjeksiyonuna kadar her adımda RP'deki safsızlığın incelenmesi klinik tıp ve Ar-Ge için önemlidir.

Qualification of production equipment

RP'nin hazırlanmasında kullanılan ekipmanlar, (i) otomatik veya yarı otomatik radyo sentez ünitesi (ii) sıcak oda veya radyo sentezinin gerçekleştirildiği hücreler (iii) doz kalibratörleri olarak belirtilebilir.

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Quality control qualification

TLC, 99m Tc işaretli kitler için gerekli ana kalite kontrol (QC) testi olarak kullanılırken, tüm radyofarmasöтикler HPLC, TLC, ITLC, GC, gama spektrometresi gibi bir dizi kalite kontrol testine tabi tutulur. QC ekipmanı, analitik kimyada kullanılanlara benzer; TLC, ITLC ile birlikte kullanılan pH ölçerler, analitik teraziler, GC, HPLC (UV veya RAD dedektörleri) ve gama spektrometreleri gibi radyoaktif numunelerin analizi için özel olarak tasarlanmış cihazlardır. Radyosentezi tamamlanmış RP'lerin mikrobiyolojik kontaminasyonunu kontrol etmek için endotoksin seviyelerini (LAL testi) belirlemek için kullanılan cihazlar da bu sınıfa dahildir. Bu araştırmayı sunum amacımız, Avrupa radyofarmasi tarafından belirlenen kriterleri dikkate alarak, majistral radyofarmasöтикlerde radyosentez ve kalite kontrol için kullanılan ekipmanın niteliği konusunda rehberlik sağlamaktır.

Anahtar Kelimeler : Radyofarmasöтик, Üretim ekipmanları, Kalite kontrol ekipmanları

QUALIFICATION OF MAGISTRAL (OR IN-HOUSE OR SMALL SCALE) RADIOPHARMACEUTICAL PRODUCTION EQUIPMENT

ABSTRACT

Since the commercialization of in-house generators, interest of the science and nuclear medicine communities in radiopharmaceuticals labeled ^{18}F , ^{68}Ga , ^{177}Lu etc. have increased significantly. There are constantly published articles on many new molecules that can be marked with these radionuclides. In addition, the importance of quality control of radiopharmaceuticals in clinical applications attracts as much attention as radiosynthesis. Examining the impurity in RP at every step from radiosynthesis to patient injection is important for clinical medicine and R&D.

Qualification of production equipment

Equipment used in the preparation of RP can be specified as (i)automatic or semi-automatic radio synthesis unit (ii)warm room or cells in which the radio synthesis is performed (iii)döse calibrators.

Quality control qualification

While TLC is used as the main quality control (QC) test required for Tc-99m labeled kits, all radiopharmaceuticals are subjected to a series of quality control tests such as HPLC, TLC, ITLC, GC, gamma spectrometry. QC equipment are similar to those used in analytical chemistry; They are instruments specially designed for the analysis of radioactive samples, such as pH meters, analytical balances, GC, HPLC (UV or RAD detectors) and gamma spectrometers used in conjunction with TLC, ITLC. Devices used to determine the endotoxin levels (LAL test) to control microbiological contamination of RPs with completed radiosynthesis are also included in this class.

Our purpose of presenting this research is to provide guidance on the quality of equipment used for radiocentesis and quality control in magistral radiopharmaceuticals, taking into account the criteria set by European radiopharmacy.

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Keywords: Radiopharmaceutical, Production equipment, Quality control equipment

RÜZGAR ENERJİ SANTRALLERİNDE KESTİRİMÇİ BAKIM

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ÖZET

Dünya çapında sayısı artmakta olan rüzgar enerji santrallerinin (RES) işletme ve bakım maliyetleri, enerji fiyatlarını belirleyen önemli bir kalemdir. Kestirimci bakım yöntemleriyle rüzgar türbinlerinin güvenli çalışma süreleri uzatılabilir ve işletme ve bakım maliyetleri düşürülebilir. Çalışmamızda, rüzgar turbini ve bileşenlerine dair bir kestirimci bakım yöntemi sunulmuştur. Kalan faydalı ömür (RUL) yaklaşımıyla, arızaların ne kadar süre sonra gerçekleşeceği ve arızaların hangi alt sistemde meydana geleceği LSTM (Long Short-Term Memory) gibi sıralı derin öğrenme yöntemleriyle tahmin edilebilmektedir. Önerilen çözümde, faaliyetteki bir rüzgar çiftliği bünyesindeki türbinler değerlendirilmiştir.

Anahtar Kelimeler: Kestirimci Bakım, Rüzgar Enerji Santrali (RES), Kalan Kullarınlı Ömür (Remaining Useful Life; RUL), LSTM

PREDICTIVE MAINTENANCE IN WIND POWER PLANTS

ABSTRACT

The operation and maintenance cost of wind power plants (WPP) whose numbers are increasing worldwide, is an important item that determines the energy prices. Safe operating periods of wind turbines can be extended, operation and maintenance costs can be reduced with predictive maintenance methods. In our study, a predictive maintenance method considering the wind turbine and its components is presented. With the remaining useful life (RUL) approach, the time before the next failure for a particular subsystem can be predicted using sequential deep learning methods such as LSTM (Long Short-Term Memory). In the proposed solution, turbines within an operational wind farm are considered.

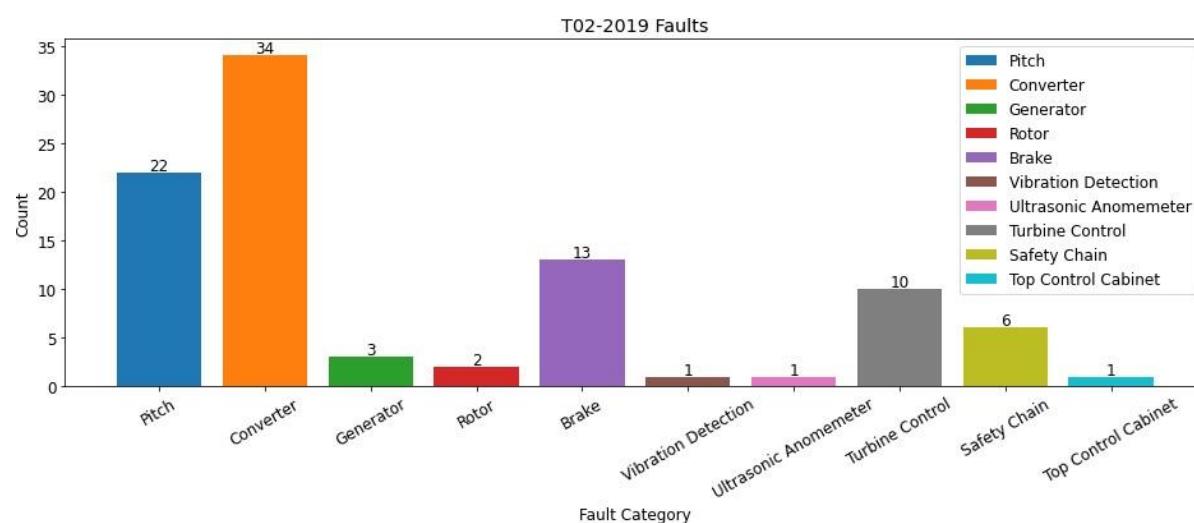
Keywords: Predictive Maintenance, Wind Power Plant (WPP), Remaining Useful Life (RUL), LSTM

1. GİRİŞ

Dünya çapında, yenilenebilir enerjiye ilgi artmaktadır. Yenilenebilir enerji türlerinden olan rüzgar gücünü, enerjiye dönüştürmek için rüzgar çiftlikleri kurulmaktadır (Tavner, Xiang ve Spinato, 2007). Rüzgar çiftlikleri; kara ve deniz olmak üzere ikiye ayrılmaktadır. Rüzgar çiftliklerinde işletme ve bakım (O&M) maliyetleri yüksektir. İşletme ve bakım maliyetleri, kara rüzgar çiftlikleri için toplam enerji

üretim maliyetinin yaklaşık %10-15'ini ve deniz rüzgar çiftlikleri için %20-25'ini oluşturmaktadır (Lu, Li, Wu ve Yang, 2009). Şirketler, bu maliyetleri düşürmek için çeşitli yollar aramaktadır. Rüzgar türbini (RT) arıza süreleri, işletme ve bakım maliyetlerini artırır ve süre uzadıkça büyük enerji kayıpları olabilir. Bir rüzgar türbini temel olarak şu bileşenlerden oluşur: pitch/blade system, generator, gearbox, yaw system, converter ve diğer sistemler. Rüzgar türbini bileşenlerinin arıza sürelerinin dağılımı incelendiğinde, toplam arıza süresinin %85'inden fazlasını pitch/blades, generator ve gearbox oluşturmaktadır (Tavner, Xiang ve Spinato, 2007). Bir diğer çalışmaya göre gearbox arızaları, toplam arızaların sadece %10'unu oluşturken, rüzgar türbinlerinin toplam arıza süresinin yaklaşık %20'sine etki etmektedir (Ribrant ve Bertling, 2007). Üzerinde çalışılan türbinlere ait veri setlerinden bir tanesinde oluşan arızalar: bulunduğu/ilgili bölgelere göre kategorize edilmiş ve sonrasında veri setiyle eşleştirilerek, arıza sayılarına ulaşılmıştır.

Şekil 1'deki grafikte kategorilere göre arıza sayıları yer almaktadır.



Şekil 1. Arıza Kategorileri

Rüzgar santralinin kontrol ve takibi için SCADA kullanılır. Bu sistemler üzerinden, türbine ait detaylı operasyonel veri sağlamak mümkündür. Operasyonel verilerle, geçmiş arıza verilerinin birlikte analizi sayesinde, olusabilecek arızayı daha öncesinde tahmin ederek, arıza sayı ve sürelerini azaltmak, dolayısıyla, işletme ve bakım maliyetlerini azaltmak mümkündür. Bu yaklaşımla yürütülecek bir kestirimci bakım (predictive maintenance) çalışması, mevcut bakım stratejilerinden daha anlamlı ve faydalı tahminler üretebilecektir (Yang ve Jiang, 2011).

Bu çalışmada, rüzgar türbini arızalarının tahmini için bir RUL yaklaşımı sunulmaktadır. Kullanılan yaklaşım, faaliyetteki bir rüzgar enerji santrali bünyesindeki türbinlerden iki senelik bir süreyle toplanılan veri seti ve arızalar üzerinden gerçekleştirildi.

Çalışma sonucundaki hedef, türbinde bir arıza meydana gelmeden önce tahminde bulunabilmek ve bakım faaliyetlerinin yeterli sürede tamamlanmasıdır.

2. BENZER ÇALIŞMALAR

Pérez ve arkadaşları literatür taramasında öne çıkan çalışmaları incelemişler ve karşılaştırarak ana tasarımları kategorize etmişlerdir. Rüzgar turbini çeşitleri, bileşenleri, bileşen optimizasyonu, hataların dağılımını ayrıntılı olarak incelemişlerdir (Tavner, Xiang ve Spinato, 2007). Zhao ve arkadaşları, rüzgar turbini jeneratörlerinin kestirimci bakımı için bir çözüm sunmaktadır. Veriler için, temel olarak dört adımı içeren bir veri ön işleme prosedürü öneriliyor: veri temizleme, özellik seçimi, özellik azaltma ve veri seti dengeleme. Temel bileşenler analizi (PCA), jeneratör arıza değişikliklerini yakalayabilen uygun özellikleri tanımlamak için kullanılıyor. Sentetik azınlık aşırı örneklemeye teknigi (SMOTE), veri setinin dengesizlik özelliklerini daha doğru bir şekilde ele almak için kullanılıyor. Tahmin (Prediction) modeli ve teşhis (Diagnosis) modeli içeren bir çözüm geliştiriliyor. Tahmin (Prediction) modelinde, rüzgar turbini jeneratörlerinin kalan faydalı ömrü (RUL), denetimsiz bir kümeleme yaklaşımı kullanılarak tahmin ediliyor (Zhao, Li, Dong vd, 2017). Cheng ve arkadaşları, uyarlanabilir nöro-bulanık çıkarım sistemi (ANFIS) ve Parçacık Filtreleme (PF) yaklaşımlarına dayanan dişli kutuları için yeni bir arıza tahmini ve RUL tahmin yaklaşımı önermektedir. Önerilen yaklaşımda arıza özelliği, dişli kutusuna bağlı jeneratörün, ölçülen tek fazlı stator akımından çıkarılır. ANFIS, çıkarılan arıza özelliğinin durum geçiş işlevini öğrenir. PF algoritması daha sonra öğrenilen durum geçiş fonksiyonuna ve arıza özelliğinin yeni bilgisine dayalı olarak dişli kutusunun RUL'unu tahmin eder (Cheng, Qu, ve Qiao, 2018). Nie ve arkadaşı, dişli kutusu arızalarına odaklanmışlardır. Dişli kutusu bileşenlerinin, aşınma (wear), çukurlaşma (pitting), sürtünme (scuffing), çatlama (crack), kırılma (breakage) ve uفالanma (chipping) gibi aşınmalara maruz kaldığı tespit edilmiştir. Dişli hasarı, yatak hasarı, kırık şaft, yağ sızıntısı ve yüksek yağ sıcaklığı, mikro çukurlaşma (micro-pitting) ve sürtünmeye bağlı rulman arızalarının, dişli kutusu arızalarının çoğunu başlattığı bulunmuştur (Nie ve Wang, 2013). Verma ve arkadaşları, SCADA hata mesajları üzerinde anomali tahmini, blade angle asymmetry tahmini modeli, bearing sıcaklıklarından anomali tespiti, titreşim verisi üzerinden gearbox arıza tespiti, power curve üzerinden performans analizi hesaplamasını ele almışlardır (Kusiak ve Verma, 2012).

3. VERİ HAKKINDA

Çalışmamızda, bir kara RES türbinlerine ait iki yıllık veri temel alınmıştır. Her türbin için iki ayrı veri seti elde edilmektedir: Operasyonel çalışma bilgileri içeren SCADA verileri ile başlangıç, bitiş, arıza kategorisi gibi alanları içeren arıza verileri. RES kontrol sistemleri 10 dakikalık döngülerle izlenir. Her döngüde, 30'un üzerinde öznitelik bulunmaktadır. Tablo 1'de türbinlere ait bazı bilgiler yer almaktadır.

Tablo 1. Türbin Bilgileri

Türbin Bilgileri	
Açıklama	Değer
Cut-in	3.0 m/s (7 mph)
Cut-out	24 m/s (53 mph)
Max Power	2.7 MW
Rated Power	2.5 MW
Generator Overspeed	1833 rpm

Her türbine ait veri seti içerisinde bulunan öznitelikler, kategorilere ayrılmış bir şekilde temsil edilebilir. Üzerinde çalıştığımız veri seti dört ana kategori olan: general operation data, gearbox data, main bearing data ve pitch system data ile ayrılır. Aşağıda kategoriler ve öznitelikler ile ilgili bilgi verilmiştir.

- General Operation Data: Power, Rotor Speed, Nacelle Position, Generator Speed, Torque Actual ve Set Value, Tower Acceleration Normal ve Lateral, Tower Base ve Ambient Temperature, Wind Speed özniteliklerini içerir.
- Gearbox Data: Gearbox Bearing Temperature, Hollow Shaft Temperature ve çeşitli yağ sıcaklıklarını içerir.
- Mean Bearing Data: Shaft 1-2 Temperature, Proximity Sensor verilerini içerir.
- Pitch System Data: Blade açılarıyla ilgili verileri içerir.

Bir turbine ait çalışma verilerinin haricinde, turbinin çalışma süresince yaşanan arızalarla ilgi verilerde tutulmaktadır. Bu veriler arıza başlangıç ve bitiş tarihi, arızalı geçen süre gibi bilgilerin yanında, turbinin hangi bölümünde arıza yaşandı ve bu süre boyunca yaşanan enerji kaybı miktarı gibi bilgileri de içerebilir. Kaydı tutulan arıza verileri, bizlere bir sonraki arızanın ne zaman oluşabileceği, arızanın hangi bölümde gerçekleşeceği gibi bir yakınsama imkânı verir. Bu sebeple arıza verilerinin doğru ve net tutulması önemlidir. Tablo 2'de arıza verileri ile ilgili bir örnek yer almaktadır.

Tablo 2. Arıza Verileri

RT No	Baslangic Zamanı		Bitis Zamanı	Arıza Verileri	Süre	Kategori
1	DD/MM/YYYY HH:MM:SS	DD/MM/YYYY HH:MM:SS	HH:MM:SS			Safety Chain
2						Gearbox
3						Yaw System

Arızanın yaşadığı süre boyunca kaydedilen verileri hatalı veri olarak nitelendirirsek, kalan veriler normal olarak nitelendirilmektedir. Bu durumu ayırt etmek için bir sınıflandırıcı oluşturulur. Normal veriler, hatalı verilere göre daha yoğun olduğu için çoğunluk sınıfı, hatalı verilere azınlık sınıfı diyebiliriz. Üzerinde çalışılacak veri kümesinde çoğunluk sınıfı ve azınlık sınıfına ait veri sayıları birbirine yakın yani dengeli olmalıdır. Birbirinden çok uzak olduğu durumlarda dengesiz bir veri seti ortaya çıkar. Arızaların en az yaşadığı ekipmanlarla ilgili yani dengesiz bir veri seti ile ileriye dönük bir tahmin yapmak zordur.

4. ÖN İŞLEME (PRE-PROCESSING)

Veri temizleme adımları, veri setinde var olan ve oluşturulacak model performansını olumsuz yönde etkileyebilecek verilerin kaldırılmasını amaçlayan bir veri ön işleme adımıdır. SCADA sistemi tarafından kaydedilen veriler, genellikle arızalar sebebiyle hatalı verilerle kirlenebilir. Modelleme aşamasından önce veri seti içerisindeki hatalı kaydedilen verileri temizlemek gerekmektedir.

4.1. Tekrar Eden Kayıtlar (Duplicates)

Veri seti içerisinde, veri toplama sisteminde oluşan arızalardan kaynaklı tekrarlı kayıtlar yer alabilir. Zaman serilerinde, verilerin sıralı olması önemlidir. Veri tekrarı olduğu durumlarda, oluşturacağımız modelin performansı etkilenecektir. Bu istenmeyen bir durum olacağının tekrarlı kayıtların temizlenmesi gerekmektedir. Veri tekrarının tespit edilebilmesi için çeşitli yaklaşımlar bulunmaktadır. Bu çalışmada izlenen yaklaşım, zaman serilerinde tarih özniteliği önemli olduğundan ve birbirinden benzersiz ve sıralı veriler olması gereğinden, tarih özniteliği baz alınarak tekrarlı kayıtlara bakıldı ve temizleme işlemi uygulandı.

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4.2. Yeniden Örnekleme (Resample)

Tekrarlı kayıtların tespiti ve temizlenmesinden sonra veri atlamaları incelenmiştir. Zaman serilerinde, verilerin sırası önemli olduğundan veriler yeniden örneklenmelidir. Bazı veriler arasında uzun süreli atlamalar olduğu varsayılsa, bu durum hem veri kaybına hem de modelin yanlış sonuçlar vermesine yol açabilir. RES'lerdeki veri üretim döngüsü 10 dakika olduğu için, eksik veriler de aynı döngü periyodunda üretilir. Veri içerisinde atlamalar mevcut ise yeniden örnekleme işleminden sonra tarih özniteliğine bağlı olarak boş veriler oluşacaktır. Buradaki boş veriler, seçilen yaklaşımı göre doldurulmalıdır.

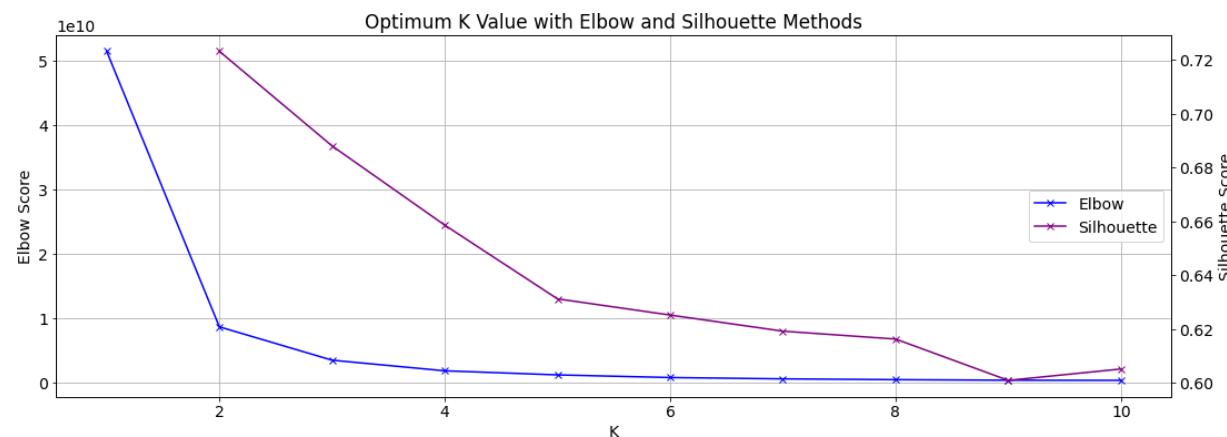
4.3. Veri Örnekleme (Data Sampling)

Veri atlamalarının yeniden örneklenmesi işleminden sonra oluşan boş verilerin nasıl doldurulacağı önemlidir. Boş verileri doldurmak için kullanılabilecek birden fazla yaklaşım mevcuttur. Boş veriden/verilerden geriye doğru verilere bakılarak veya ileriye doğru verilere bakılarak aynı değerlerle veya seçilen metoda göre doldurulabilir. Bu çalışmada kullanılan yaklaşım birden fazla adım içermektedir. Windspeed özniteliği içerisinde yer alan boş değerler interpolasyon algoritmasına göre

doldurulmuştur. Veri seti içerisinde yer alan her bir öznitelik, interpolasyon algoritması ile doldurulan windspeed özniteligi'ne göre gruplandırılmıştır ve her bir gruba ait verilerin ortalaması alınarak bir tablo elde edilmiştir. Boş kayıtların rüzgar hızına bakılarak, oluşturulan tablo üzerinden eşleştirilmesi yapılr ve doldurulur.

4.4. Aykırı Değer Tespiti (Anomaly Detection)

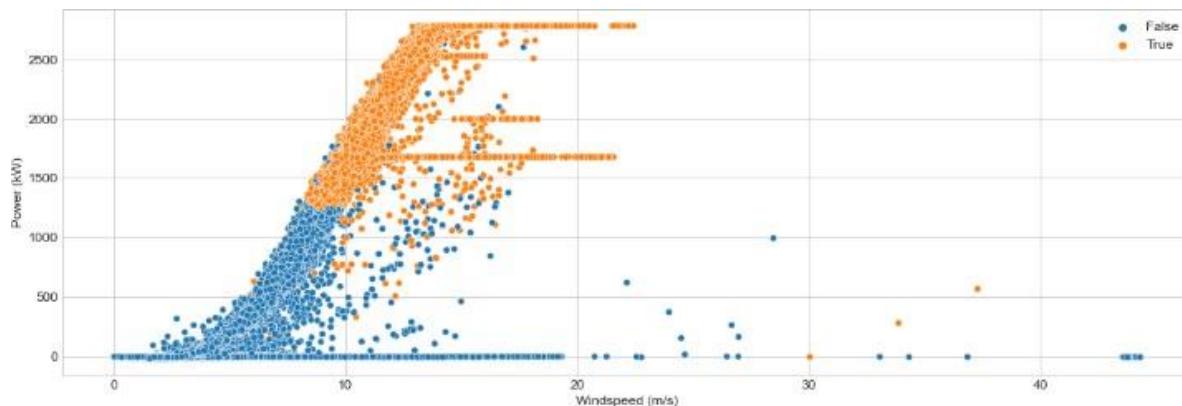
Veri toplama sisteminden kaynaklı beklenen değerlerin dışında kaydedilen aykırı verilerin tespiti için Power-Blade, Power-Windspeed-Blade, Power-Generator ilişkileri göz önünde bulundurularak çeşitli algoritmalar denenmiştir. Her bir algoritma kendine ait tekniklerle verilen veri seti içerisinde aykırı olabilecek değerleri tespit etmeye çalışmaktadır. Kümeleme yönteminde, içerisinde parametre olarak baz alınacak küme sayısı verilmektedir. Burada optimum küme sayısını bulabilmek için Elbow ve Silhouette yöntemleri kullanılmıştır.



Şekil 2. Elbow ve Silhouette Yöntemleri

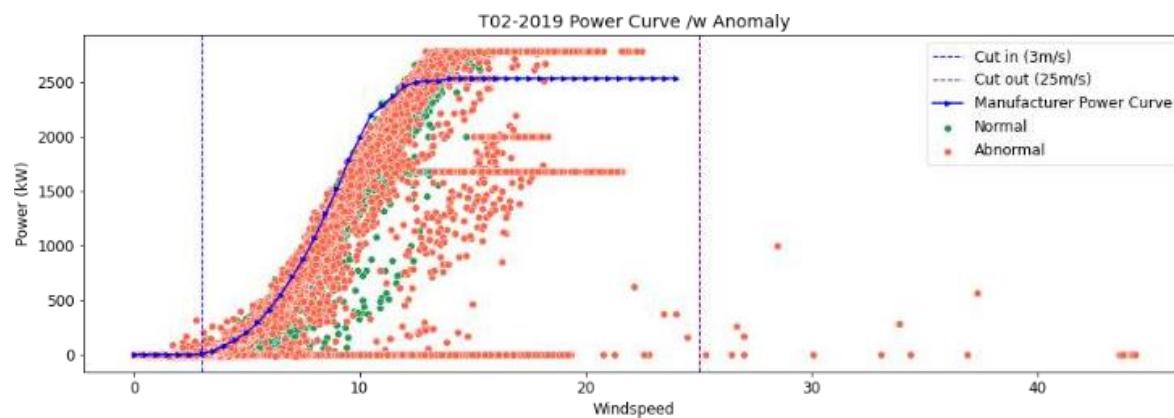
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Elbow ve Silhouette yöntemleri optimum küme sayısını iki olarak vermektedir (Şekil 2). Her iki yöntemi dikkate alarak küme sayısını iki olarak belirlenmiş, aykırı değerler hesaplanmıştır (Şekil 3).



Şekil 3. Kümeleme Algoritması ile Aykırı Değer Tespiti

Aykırı değer tespitini iyileştirmek için ağaç tabanlı bir algoritma denenmiş, burada güç ve rüzgar hızının yanında nacelle pozisyonu da dikkate alınmıştır (Şekil 4).



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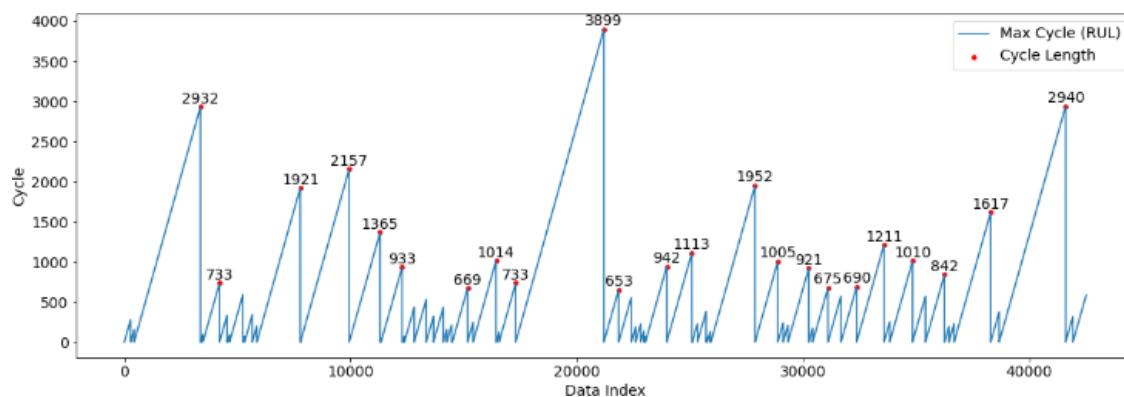
Şekil 4. Ağaç Tabanlı Algoritma ile Aykırı Değer Tespiti

4.5. Kalan Faydalı Ömrün (RUL) Hesaplanması

Modelleme aşamasına geçmeden önce RUL yaklaşımı için bazı ön işlemler yapılmalıdır. Burada üç temel adım uygulanmıştır:

Her arızaya kadar kaydedilen verilere bir ID (tekil kimlik numarası) verilir,

- ID'ler ile ayırt edilen veri kümelerine döngü sayısı atanır,
- ID'lerin RUL döngüleri hesaplanır.
- RES işletme verileri alt sistem arızalarını detaylarıyla loglar. Belirli bir arızaya kadar geçen sürede (Şekil 5) etiketli verilere benzersiz bir ID atanır yıl, türbin no, arıza türü).



Şekil 5. RUL Çevrim Süreleri

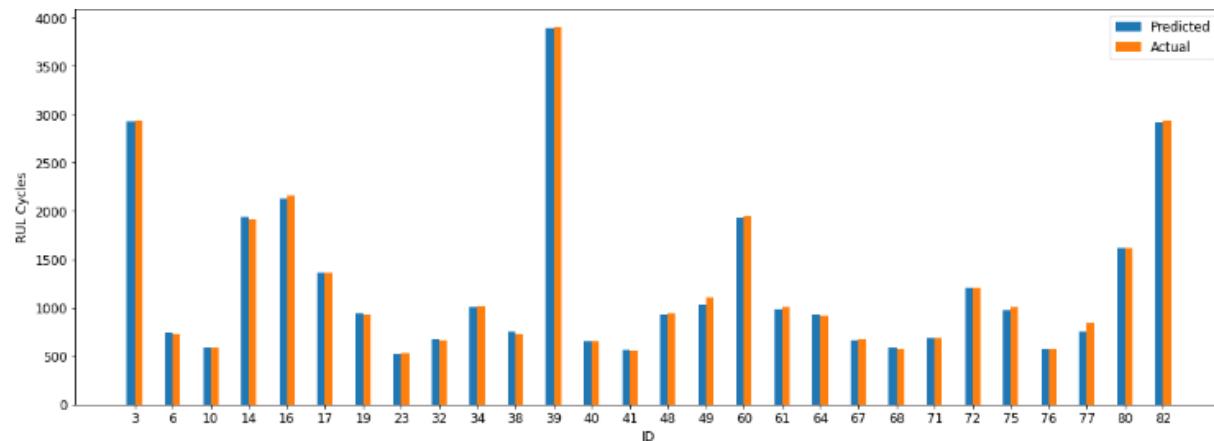
5. MODELLEME

Ölçeklendirilmiş veriler üzerinde gerekli ön işlemler yapıldıktan sonra LSTM modeli oluşturulmuş ve uygulanmıştır. İlgili modelin katmanları, birimleri ve aktivasyon fonksiyonları Tablo 3'te yer almaktadır.

Tablo 3. LSTM Model Parametreleri

Katman Numarası	LSTM Model Parametreleri			
	Katman Tipi	Birim Sayısı	Aktivasyon Fonk.	Recurrent Initializer
1	LSTM /w Dropout	32	Tanh	Orthogonal
2	LSTM	64	Tanh	Orthogonal
3	Fully Connected (TD)	1	ReLU	-

Ön işleme sonucu ortaya çıkan 85 ID, kısa gerçekleşen RUL çevrimlerini hariç tutarak 28 ID'ye indirgenmiş, model bu verilerle eğitilmiştir (Şekil 6).



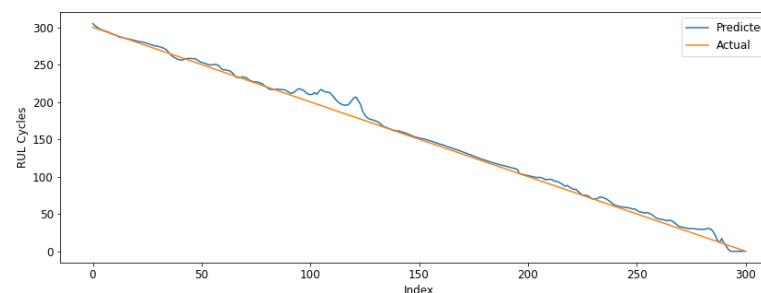
Şekil 6. RUL Tahmin Grafiği

39 numaralı arızanın sadece 2 saat farkla önceden tahminlenebildiği, en kötü tahminlenen 49 numaralı arızanın ise %8 farkla tahmin edildiği görülmektedir (Tablo 4). Buradan, örnek olarak, tahminlenen sürenin ~%8 öncesine bakım ve parça siparişi takvimlenirse, arıza üzerine yaşanacak plansız bakım, planlı kestirimci bakıma dönmiş olacaktır.

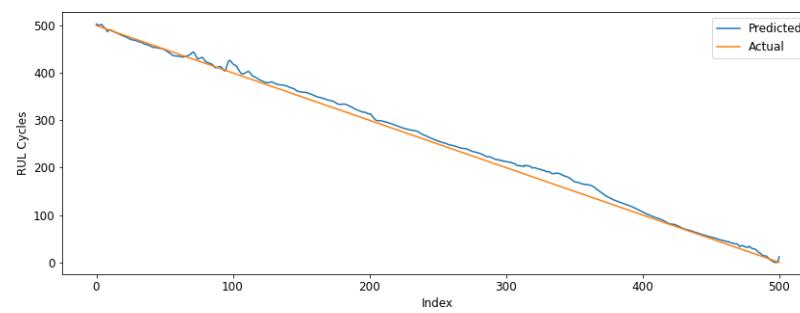
Tablo 4. RUL Tahmin Sonuçları

RUL ID	Sonuçlar		
	Gerçekleşen Döngü	Tahmin Edilen Döngü	Hata Oranı
10	590 (~98 saat)	589,3 (~98 saat)	%0,12
16	2157 (~359 saat)	2122,2 (~353 saat)	%1,59
23	529 (~88 saat)	513,9 (~85 saat)	%2,94
39	3899 (~649 saat)	3884,6 (~647 saat)	%0,34
49	1113 (~185 saat)	1029,6 (~171 saat)	%8,00
68	572 (~95 saat)	588,6 (~98 saat)	%-2,82
75	1010 (~168 saat)	976,2 (~163 saat)	%3,36
82	2940 (~490 saat)	2914,6 (~486 saat)	%0,84

Bir arıza gerçekleşene kadar, ilerleyen verilerin gerçek ve tahmin edilen RUL döngüsü incelenmiştir. Şekil 7'de ID 6 için ve Şekil 8'da ID 19 için sonuçlar yer almaktadır.



Şekil 7. ID 6 için Gerçek ve Tahmin Edilen RUL



Şekil 8. ID 19 için Gerçek ve Tahmin Edilen RUL

6. SONUÇ

Rüzgar enerji santralleri ve bu yapıları oluşturan alt sistemlerin sürekliliği, enerji üretim yatırımlarının geri dönüşü için elzemdir. Bu sistemlerin ne zaman arıza yapacağıının (RUL) doğru tahminlenmesinin, hem plansız hem de planlı çalışmaların süresini azaltma, bunun yanında bakım ve parça giderlerini de azaltma noktasında yararı büyuktur.

Çalışmalarımızda, farklı rüzgar türbinleri üzerinden toplanan sensör verileri ve arıza kayıtları kullanılarak eğitilen LSTM modeli, alt sistemlere bağlı olmadan rüzgar türbininde gerçekleşecek arızanın önceden tespiti konusunda ortaya çıkan başarılı sonuçlar, her bir alt sistem için gerçekleşebilecek arızaların birbirinden ayrik şekilde tahminlenebileceğini ve sonuçlara bağlı olarak gerekli aksiyonların alınabileceğini ortaya koymuştur.

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NESNE TAKİP SİSTEMİNDE GÜVENLİ BÖLGE OLUŞTURULMASININ NESNELERİN İNTERNETİ TABANLI GERÇEKLEŞTİRİLMESİ

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ÖZET

Takip sistemlerinin farklı platformlar üzerinde geliştirilebilir olmasına olanak sağlayan inovatif teknoloji gelişimi, nesne takip sistemlerinde de daha fazla kullanılabilir alan olmasına temel oluşturmaktadır. İnternete her yerde ve her zaman erişmenin mümkün olduğu günümüz teknoloji altyapısı sayesinde Nesnelerin İnterneti ile nesne takip sistemlerinin geliştirilmesi mümkün hale gelmekte ve Nesnelerin İnterneti ekosisteminde bulunan akıllı cihazlar arası etkileşimle gerekli veri iletişimi sağlanmaktadır. Bu çalışmada, GPS ve akıllı cihaz kullanılarak bir nesne takip sisteminin yapılması amaçlanmaktadır. Android tabanlı akıllı cihazın içerisinde gömülü bulunan GPS modülü sayesinde takibi yapılacak nesneye ait konum verileri elde edilmiştir. Alınan konum bilgileri bir Google API yardımı ile web sunucuya aktarılmıştır. Hareket halindeki nesneyi gerçek zamanlı olarak takip edecek şekilde geliştirilen nesne takip sisteminin web ara yüzündeki yönetim paneline eklenen Google haritalar üzerinde takibi yapılacak nesne için bir güvenli bölge çizilerek sisteme tanımlanmıştır. Gerçek zamanlı hareket halindeki nesnenin, sınırı çizilen bu güvenli bölgenin dışına çıkması halinde gerekli bilgilendirme protokollerinin devreye alınması sağlanmıştır. Bu durumda nesne takip sisteminin otomatik olarak gerekli bilgilendirmeyi, sistemde kayıtlı bulunan kullanıcılara ait iletişim kanallarına SMS veya e-posta aracılığıyla göndermesi gerçekleştirilmiştir.

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Anahtar Kelimeler: Nesnelerin İnterneti, Güvenli Alan, Nesne Takip Sistemi

REALIZATION OF SAFE ZONE CREATION IN OBJECT TRACKING SYSTEM BASED ON INTERNET OF THINGS

ABSTRACT

Innovative technology development, which enables tracking systems to be developed on different platforms, provides the basis for more usable space in object tracking systems. Thanks to today's technology infrastructure, where it is possible to access the Internet anywhere and anytime, it becomes possible to develop object tracking systems with the Internet of Things, and the necessary data communication is provided with the interaction between smart devices in the Internet of Things ecosystem. In this study, it is aimed to make an object tracking system using GPS and smart device. Thanks to the GPS module embedded in the Android based smart device, the location data of the object to be tracked was obtained. The location information received was transferred to the web server with the help of a Google API. A safe zone for the object to be tracked was drawn and defined in the system on Google maps added to the management panel on the web interface of the object tracking system, which was developed to track the moving object in real time. In case the real-time moving object goes outside this safe zone, the necessary notification protocols are put into use. In this case, the object tracking system automatically sends the necessary information to the communication channels of users registered in the system via SMS or e-mail.

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Keywords: Internet of Things, Safe Area, Object Tracking System

YER FISTIĞI KABUĞUNDAN ELDE EDİLEN BİYO-KARBON İLE METİLEN MAVİSİ ADSORPSİYONU

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ÖZET

Gelişen sanayi beraberinde arıtılması gereken atıklarını da oluşturmaktadır. Özellikle tekstil endüstrisinde kullanılan boyar maddeler bu endüstrinin önemli bir atığıdır ve çevre üzerinde olumsuz etkiler oluşturmaktadır. Bu boyar maddelerden biri metilen blue dur. Bu kimyasal maddenin sulu çözeltilerden giderilmesi gerekmektedir. Arıtma işlemlerinde, adsorpsiyon sıkılıkla tercih edilmektedir. Adsorbent olarak, organik atıkların direkt kullanımı, biyo-karbon haline getirilerek yada aktif karbon haline getirilerek kullanımı oldukça yaygındır. Bu çalışmada Akdeniz bölgesinde yetişirilen yer fistığı kabuğu kullanılarak sulu çözeltilerinden metilen mavisi giderimi çalışılmıştır. Su ile yıkanarak topraklarından arındırılan yer fistığı kabuğu 110 de kurutulduktan sonra mekanik öğütücüde öğütülmüştür. Daha sonra tane boyutuna göre (-125 mesh, +125-150 mesh, +150-200 mesh ve +200-250 mesh) sınıflandırılmıştır. Fıstık kabuğu (g), Üre (g) ve distile su (ml), 50: 25: 400 oranında karıştırılmış ve paslanmaz çelikten yapılmış bir otoklav içerisinde 180 , 9 bar basınçta 180 dakika karbonizasyon işleminden sonra oda sıcaklığına kadar soğutulmuştur. Reaktör içeriği filtre kâğıdı ile süzülerek ayrılmış ve 110 de kurutulmuştur. Elde edilen biyo-karbonların (-125 mesh (BC1), +125-150 mesh (BC2), +150-200 mesh (BC3) ve +200-250 mesh (BC4)) BET yüzey alanları Micromeritics 3Flex cihazı ile belirlenmiş ve sırasıyla 7,48, 2,61, 1,42 ve 0,92 m²/g olarak bulunmuştur. Adsorpsiyon işlemleri 25 de ve 105 dakika olarak uygulanmıştır. Isıl işlem görmemiş fıstık kabuğu (-125 mesh, PS1) ve dört farklı tane boyutuna sahip fıstık kabuğundan elde edilen biyo-karbonlar, BC1, BC2, BC3 ve BC4 için % giderim sırasıyla 8,15, 59,9, 55,2, 50,7 ve 45,5 olarak bulunmuştur. 1g adsorbent (PS1, BC1, BC2, BC3 ve BC4) için adsorbe edilen metilen blue miktarları sırasıyla, 1,6, 12,0, 11,0, 10,1 ve 9,1 mg olarak bulunmuştur.

Anahtar Kelimeler: Biyo-karbon, adsorpsiyon, methylene blue, yer fistığı kabuğu.

METHYLENE BLUE ADSORPTION WITH BIO-CARBON FROM PEANUT SHELL

ABSTRACT

The developing industry also creates the wastes that need to be treated. Dyestuffs especially used in the textile industry are an important waste of this industry and have negative effects on the environment. One of these dyestuffs is methylene blue. This chemical must be removed from aqueous solutions. Adsorption is often preferred in purification processes. Bio wastes are often used directly as adsorbent or converted to bio-carbon or activated carbon. In this study, methylene blue removal from its aqueous solutions was studied using peanut shells grown in the Mediterranean region in Turkey. The peanut shell, which was cleaned of soil by washing with water, was dried at 110 and then ground in a mechanical grinder. It was then classified according to grain size (-125 mesh, + 125-150 mesh, + 150-200 mesh and + 200-250 mesh). Peanut shell (g), Urea (g) and distilled water (ml) were mixed in a ratio of 50: 25:400 and cooled to room temperature after carbonization at 180 , 9 bar pressure for 180 minutes in a stainless-steel autoclave. The contents of the reactor were separated by filter paper and dried at 110 ° C. The BET surface areas of the bio-carbons (-125 mesh (BC1), + 125-150 mesh (BC2), + 150-200 mesh (BC3) and + 200-250 mesh (BC4)) were determined with the Micromeritics 3Flex device, and it was found to be 7.48, 2.61, 1.42 and 0.92 m² / g. Adsorption processes were applied at 25 ° C for 105 minutes. Bio-carbons obtained from unheated peanut shell (-125 mesh, PS1) and the removal percent (%) of peanut shell with four different grain sizes, BC1, BC2, BC3 and BC4 were 8.15, 59.9, 55.2, 50.7, and 45.5, respectively. In addition, the amounts of adsorbed methylene blue by 1g of adsorbent (PS1, BC1, BC2, BC3, and BC4) were found to be 1.6, 12.0, 11.0, 10.1, and 9.1 mg, respectively.

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Keywords: Bio-carbon, adsorption, methylene blue, peanut shell.

GİYILEBİLİR TEKNOLOJİLERDE AKILLI BİLEKLİĞİN KULLANIMINA YÖNELİK BİR ARAŞTIRMA

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ÖZET

Bu çalışma Şanlıurfa ilinde yaşayan insanların günlük aktivite hareket verilerini giyilebilir teknoloji (aklıllı bileklik) kullanılarak; kalp atım hızı (nabız), adım, mesafe, kalori vb. aktiviteleri takip etmek ve ölçmek için yapılmıştır. Çalışmada, akıllı bileklik takılan kişilerden 24 saat süre zarfında bu bilekliği elinden çıkarmaması istenmiştir. Bu işlem sonucunda akıllı bileklikten web bluetooth aracılığıyla yazılımla veri çekme işlemi gerçekleştirilmiştir. Bu uygulama için MySQL veri tabanı kullanılmıştır. Akıllı bileklik takılan kişilerden elde edilen veriler SPSS 20 istatistik paket programı aracılığıyla analiz edilmiştir. Akıllı bileklikten alınan nabız, adım, mesafe, kalori, aktiviteleri ile ilgili veriler katılımcıların demografik özellikleri açısından karşılaştırılmıştır. Karşılaştırma işleminde Independent Sample T testi ve One-Way Anova testi kullanılmıştır. Yapılan analizlerde katılımcıların nabız, adım, mesafe, kalori gibi aktivitelerinin bazı demografik özellikleri açısından anlamlı farklılıklar gösterdiği tespit edilmiştir.

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Anahtar Kelimeler: Giyilebilir Teknolojiler, Akıllı Bileklik, Şanlıurfa

A RESEARCH ON THE USE OF SMART WRISTBANDS IN WEARABLE TECHNOLOGIES

ABSTRACT

This study uses wearable technology (smart wristband) to analyze the daily activity data of people living in Şanlıurfa province using metrics such as heart rate (pulse), step, distance, calories, etc. It was made to track and measure activities. In the study, people who wore smart wristbands were asked not to dispose of this wristband within 24 hours. As a result of this process, data extraction from the smart wristband via web bluetooth was performed. MySQL database is used for this application. The data obtained from the people wearing smart wristbands were analyzed through SPSS 20 statistical package program. Data regarding heart rate, step, distance, calories, and activities obtained from the smart bracelet were compared in terms of demographic characteristics of the participants. Independent Sample T test and

One-Way Anova test were used in the comparison process. In the analysis, it was determined that the activities of the participants such as heart rate, step, distance, and calories showed significant differences in terms of some demographic characteristics.

Keywords: Wearable Technologies, Smart Bracelet, Şanlıurfa

1. GİRİŞ

Dünyada bulunan bütün ağları ve bilgisayar sistemlerini birbirine bağlayan bir iletişim ağı olarak tanımlanmakta olan internetin (Değirmencioğlu, 2016: 595), yarattığı hizmetlerin birini kullanmadan hızlı bir biçimde bir başka hizmet piyasaya duyurulmaktadır. İnsanlar için olduğu gibi işletmeler için de internet vazgeçilemez bir hal almıştır. Artık internetsiz yaşamın mümkün olmadığı bir döneme girilmiştir (Aytekin ve Yücel 2017: 96-97; Keskinkılıç vd., 2015: 543-544; Tüysüz ve Trestian, 2017: 1155). İnternet ağlarının modern toplumda gelişmesi ile birlikte Nesnelerin İnterneti (IoT) teknolojisi ortaya çıkmıştır (Conyette, 2015: 110; Ergen vd., 2020).

İnternete bağlı küçük cihazların oluşturduğu yeni internet türüne Nesnelerin İnterneti adı verilmektedir (Görmüş vd., 2018: 1249). Nesnelerin interneti Radyo Frekansı ile Tanımlama (RFID) sensörleri gibi “nesnelerin” birbirleri arasında veri alıp gönderdiği, kaydettiği, verilerin analiz edildiği, kısaca etkileşikleri Endüstri 4.0 kapsamındaki bir çevreden oluşmaktadır (Baştuğ ve Arabelen, 2019: 18). Nesnelerin internetini, birbirleriyle veya daha büyük sistemler ile bağlantılı olan fiziksel nesnelerin iletişim protokolü olarak tanımlanmaktadır (Bıçakçı, 2019: 30; Durukal, 2019: 68). Witkowski (2017: 766) nesnelerin internetini; sadece nesnelerin değil, aynı zamanda süreçler, veriler, insanlar, hayvanlar ve atmosferik fenomenleri kapsayan her şeyin interneti olarak ele almıştır. Başka bir tanımla Nesnelerin İnterneti; çeşitli cihazların (telefon, bilgisayar, ev sistemleri, robot, kişiler, çeşitli giyilebilir cihazlar vb.) belli bir sistem içerisinde birbirleriyle ya da daha büyük sistemlerle bağlantılı olmasını ifade eden iletişim ağına verilen isimdir (Çavdar ve Öztürk, 2018: 40; Kumar ve Mallick, 2018: 110; Sezgin, 2016: 406).

Nesnelerin interneti uygulamaları akıllı ev, akıllı otomobil, akıllı posta, akıllı gözlük, akıllı telefon, akıllı taşımacılık vb. olabilmektedir (Arslan ve Kırbaş, 2016: 38). Bunlardan insanların vücutlarında taşıyabildikleri giyilebilir teknolojiler olarak değerlendirilmekte (Beyaz, 2019: 255; Sezgin, 2016: 406; Erkiliç ve Yalçın, 2020: 311; Loncar-Trukalo vd., 2019: 2) ve günlük yaşamdaki rolü git gide artmaktadır (Bergsland, 2017: 5; Deniz ve Samet, 2019: 35). Giyilebilir teknolojiler; insanlar tarafından giyilebilen teknolojik ve mekanik ürünlerin genel adıdır (Karamehmet, 2019: 528). Giyilebilir teknoloji, “giyilebilir cihaz” veya yaygın olarak kullanılan “giyilebilir cihazlar” gibi “giyilebilir” kelimesinin yanında kullanılan farklı terminolojiye rağmen, tüm bu ifadeler, giyim eşyalarına ve aksesuarlara dahil edilen

bilgisayarlara atıfta bulunmak için kullanılmaktadır (Barbosa, 2019: 4). Giyilebilir teknolojiler; belirli bilgileri elde etmek için vücuda rahatça takılabilen giysi ve aksesuarlara dahil edilen elektronik teknolojiler veya bilgisayarlar olarak tanımlanmaktadır (Attallah ve Ilagure, 2018: 433). Başka bir deyişle giyilebilir teknolojiler; giysinin bir parçası veya aksesuarı olmanın yanı sıra giyilebilen ve insanla bütünleşen elektronik cihazları kapsamaktadır (Değerli, 2019: 53; Dunne, 2004: 5). Koo ve Fallon (2018: 3) giyilebilir teknolojileri; öz farkındalığı ve öz yönetimi genişletebilen, geliştirebilen ve sıradan duyuların yakalayamadığı bilgileri yakalayan altıncı his olarak tanımlamaktadırlar.

Giyilebilir teknolojiler; alıcılar ya da diğer teknolojileri barındıran takılar, gözlükler, kıyafetler gibi giyilebilen, takılabilen veya bireylerin herhangi bir şekilde yanlarında taşıyabildiği çeşitli araçları içermektedir (Aydan ve Aydan, 2016: 326; Godfrey vd., 2018: 40). Bu araçlar, teknolojinin gelişimine paralel olarak çeşitlilik göstermekle birlikte, temel özelliği kullanıcıların aksesuarlarına, giysilerine veya vücuduna giyilebilecek, yerleştirilebilecek veya gömülebilecek bir BİT ile bağlantılı cihazları tanımlamaktadır (Belge ve Mutlu, 2020: 15). Bulundukları ortama ait önemli verileri eş zamanlı olarak elde etme, uzağa iletme ve görüntüleme gibi işleri yerine getiren teknolojilere giyilebilir teknolojiler adı verilmektedir (Eşme ve Karlık, 2019: 1188). Geleneksel nesnelerin aksine akıllı giyilebilir cihazlar hem bilgi toplayabilir hem de fiziksel nesnelerin birbirine bağlanması ve bilgi işlem verileriyle etki alanına özgü zekanın yaratıldığı nesnelerin internetinin taşıyıcısı olarak çalışmaktadır (Xue, 2019: 287). Giyilebilir teknolojiler, cep telefonları ve tablet bilgisayarlarla aynı bilgi işlem yeteneklerine sahiptir. Bununla birlikte, bazı durumlarda giyilebilir teknolojiler, taşınabilir olmaları, hesaplama, gezinme, uzaktan erişim gibi görevler için elde taşınan cihazlara göre daha uygundur (Mewara vd., 2016: 59; Tüysüz vd., 2019: 107). Giyilebilir teknolojilerin birçok özellikleri bulunmakla birlikte genel olarak aşağıdaki özellikleri taşıdıklarını söyleyebilir (Ching ve Singh, 2016: 20);

- Eller serbest (kısıtlayıcı değil), böylece kullanıcılar giyilebilir cihazları kullanırken başka şeyle de yapabilir.
- Her zaman açık (kontrol edilebilir), her zaman AÇIK durumda olduğu için duyarlı bir sistemdir, böylece kullanıcılar istediği zaman kontrolünü ele geçirebilir.
- Çevreye duyarlı (özenli), giyilebilir cihazlar çevreye duyarlıdır, çok modludur ve çok sensörlüdür.
- Dikkat çekici (gözlemlenebilir), kullanıcılar istedikleri zaman uyarırlar, mesajlar veya hatırlatıcılar almak gibi kullanıcıların sürekli dikkatini çekebilir.
- Bağlı (iletisimsel), giyilebilir cihazlar kablosuz bir ağa bağlanır, böylece gerçek zamanlı durumda bilgi alışverişi gerçekleştirilebilir.
- Tekelleşmeyen, yani kullanıcıları dış dünyadan koparmaz.

Giyilebilir teknolojilerin ergonomik kullanıma sahip olmaları, kolay taşınabilmeleri, hızlı etkileşim kurabilmeleri, kolay kullanılabilmeleri ve özellikle hareket serbestisi sağlayabilmeleri gibi özellikleri nedeniyle diğer cihazlara göre daha fazla kullanım avantajlarına sahip oldukları bilinmektedir (Bozkurt, 2018: 89). Ancak mevcut alt yapı eksikliği (internet bant genişliği, yaygınlık), etik unsurlar, sosyal kaygılar, teknik beceri ve uyum, yüksek fiyatlar gibi durumların giyilebilir teknolojiler konusunda yaşanabilecek problemler arasında olduğu ileri sürülmektedir. Bu olumsuzluklara rağmen giyilebilir teknolojilerin, insanın fiziksel sınırlarını zorlamamakla birlikte kişilerin duyusal, bilişsel ve iletişimsel kapasitesini artırabilme kapasitesine sahip oldukları belirtilmektedir. Giyilebilir teknolojilerin en önemli özellikleri arasında sayılan kolay taşınabiliyor olmaları, kullanıcılarla hareket serbestisi sağlayabilmeleri ve öğrenme etkinliklerinde zengin deneyimler sağlayabiliyor olmaları daha fazla gelişim göstereceklerine işaret etmektedir (Sezgin, 2016: 413).

Giyilebilir teknolojilerin iletişiminde yoğunlukla sensör, ivme ölçer, konumlandırma çipleri, kamera, mikrafon, konuşma tanıma teknolojisi, ekran, Bluetooth, 3G/4G (3. veya 4.nesil kablosuz telefon teknolojisi), NFC, GPS ve Wi-Fi gibi kablosuz iletişim teknolojileri kullanılmaktadır (Açıköz, 2019: 77; Fazla ve Gezgin, 2019: 33; Gökrem ve Bozuklu, 2016: 48; Tuysuz ve Aydin, 2020: 7115). Dolayısıyla bu araştırmada birkaç akıllı bileklikten web bluetooth aracılığıyla Şanlıurfa ilinde yaşayan kişilerin verileri çekilmiştir. Yapılan uygulamada akıllı bileklikten veri çekme işlemi için github.com'dan faydalanyılmıştır (<https://github.com>, 2020). Tasarlanan uygulama ile web aracılığıyla Windows ve Android işletim sistemlerinde Google Chrome, Edge web tarayıcıları kullanılarak, bluetooth özelliği olan tüm cihazlar veriler elde edilebilmektedir. Uygulama geliştirildikten sonra Şanlıurfa'da yaşayan kişilerden toplanan veriler analiz edilmiştir. Bu çalışmanın, giyilebilir teknolojiler literatürüne zenginlik kazandıracığı düşünülmektedir.

2. YÖNTEM

2.1. Araştırmanın Amacı ve Önemi

İnsanlar günlük faaliyetlerini takip etmek amacıyla giyilebilir teknoloji ürünleri oldukça yaygın bir şekilde kullanılmaktadır. Giyilebilir teknolojiler eğlence, eğitim, tekstil, turizm vb. pek çok alanda kullanım alanı bulabilmisti. Özellikle diyet ve spor programlarını düzenlenmede; atılan adımların, yakılan kalorinin, egzersiz yoğunluğu gibi fiziksel faaliyetlerin takip edilmesinde giyilebilir teknolojik ürünlerden yararlanıldığı görülmektedir (Özgüler-Kılıç, 2017: 106). Bu nedenle çalışmada kablosuz ağlarla ilişkili bir biçimde kullanılan giyilebilir teknolojilerden akıllı bileklerin kaydetmiş oldukları verilerden nasıl çekileceğini geliştirmek ve bu verilerin katılımcıların kişisel özelliklerine göre anlamlı bir farklılık gösterip göstermediğinin ortaya konulması amaçlanmıştır.

2.2. Araştırmmanın Evreni ve Örneklemi

Araştırmmanın evrenini Şanlıurfa ilinde yaşayan kişiler oluşturmaktadır. Araştırmının yapıldığı dönemde 2020 yılında Şanlıurfa'nın nüfusunun 2.115.256 olduğu tespit edilmiştir (<https://www.nufusu.com>, 2021). Bu çalışmada hedef kitleden cevap alma oranı, maliyet, zaman ve araştırmada kullanılacak veri toplama aracı dikkate alınarak evrenden bir örneklem belirleme sürecine başvurulmuştur. (Altunişik, vd., 2005: 128). Bu çerçevede evren sınırı dikkate alınarak araştırmada tesadüfi olmayan örneklem tekniklerinden, kolayda örneklem tercih edilmiştir. Kolayda örneklem, birimlerin seçiminin büyük ölçüde görüşmecilere bırakıldığı örneklem türüdür (Nakip, 2013: 204). Örneklem büyülüğünün hesaplanması için Krejcie ve Morgan (1970: 608) gibi yazarların önermiş oldukları tablodan hareketle incelenen olayın görülme $p=0,5$ ve görülmeme sıklığının $q=0,5$ ve %95 güven aralığı dikkate alınarak araştırmaya dahil edilecek kişi sayısının en az 384 olması gereği belirlenmiş olup araştırma kapsamında 526 kişinin verileri değerlendirmeye alınmıştır.

2.3. Veri Toplama Araçları

Alan çalışmasında insan kaynağından doğru bilgi alma araçlarından sayılan akıllı bileklik kullanılmıştır. Kalp atım hızı (nabız), adım, mesafe, kalori vb. aktiviteleri takip etmek, ölçmek için yapılan bu çalışmada akıllı bileklik takılan kişilerden 24 saat süre zarfında bu bilekliği elinden çıkarmaması istenmiştir. Akıllı bilekliği eline takılan kişilerden normal günlük faaliyetleri ne ise aynı doğrultuda devam ettirilmesi istenmiştir.

2.4. Araştırma Verilerini Analizi

Akıllı bileklikten web bluetooth aracılığıyla elde edilen veriler istatistik paket programı (SPSS 20) aracılığıyla analiz edilmiştir. Analizlerin ilk aşamasında araştırmaya katılan kişilerin boy, kilo, spor yapma durumları, sigara kullanım durumları ve özel veya toplu taşıma aracı kullanıp kullanmadıkları gibi bazı demografik özellikleri ve günlük aktiviteleri belirlenmiştir. İkinci aşamada akıllı bileklikten çekilen günlük aktiviteleriyle ilgili değerlerinin demografik özelliklerine göre anlamlı farklılık gösterip göstermediği analiz edilmiştir. Bu kapsamında farklılık testleri olan Bağımsız örneklem t-testi ve Tek yönlü ANOVA testlerinden yararlanılmıştır. T testi; aralarında bağımsız olan iki grup arasında (Arslantürk, 2001: 140); ANOVA ise birkaç grup arasındaki anlamlı farklılığı test etmek için kullanılan analiz teknikleridir (Yazıcıoğlu ve Erdoğan, 2004: 172).

3. BULGULAR

Araştırmmanın bu kısmında araştırmaya katılan kişilerin demografik özellikleri ve günlük aktivitelerine ilişkin bilgilerin analiz sonuçları değerlendirilmiştir.

3.1. Araştırmaya Katılan Kişilerin Demografik Özellikleri

Şanlıurfa ilinde yaşamakta olup araştırmaya katılan kişilerin demografik özelliklerine ilişkin bulgular Tablo 1'de sunulmuştur.

Tablo 1: Akıllı Bileklikten Veri Çekilen Kişilerin Demografik Özellikleri

Boy	n	%	Kilo	n	%
160 cm ve Altı	94	17,9	50 kg ve Altı	31	5,9
161-170 cm	216	41,6	51-60 kg	66	12,5
171-180 cm	167	31,7	61-70 kg	130	24,7
181 cm ve Üstü	46	8,7	71-80 kg	137	26,0
Spor Yapma Durumu	n	%	81 kg ve Üstü	162	30,8
Evet	219	41,6	Sigara Kullanma Durumu	n	%
Hayır	307	58,4	Evet	107	20,3
Araç Kullanma Durumu	n	%	Hayır	419	79,7
Evet	228	43,3	Genel Toplam	526	100
Hayır	298	56,7			

Araştırmaya katılan 526 kişiden 94'ünün (%17,9) boy oranı 160 cm ve altı, 216'sının (%41,6) 161-170 cm, 167'sinin (%31,7) 171-180 cm, 46'sının (%8,7) 181 cm ve üstü olduğu belirlenmiştir. Kilo oranlarına göre; 31'i (%5,9) 50 kg ve altı olup bunların büyük bir bölümü 18 yaşın altındadır. 66'sı (%12,5) 51-60 kg, 130'u (%24,47) 61-70 kg, 137'si (%26) 71-80 kg, 162'si (%30,8) 81 ve üstü kilodadır. Çalışmada spor yapıyorum diyenlerin oranı 219 (%41,6) ve spor yapmıyorum diyenlerin oranı 307 (%58,4)'dır. Sigara kullanım durumlarına bakıldığından; katılımcıların büyük bir kısmının sigara içmediği (%79,7) ortaya çıkmıştır. Özel veya toplu araç kullanan (%43,3) ve kullanmayanların (%56,7) oranlarının nispeten birbirine yakın olduğu görülmektedir.

3.2. Katılımcıların Günlük Aktiviteleri İle İlgili Bulgular

Katılımcıların günlük ortalama nabızları, attıkları adım sayısı, kat etmiş oldukları mesafe ve yakmış oldukları kalori miktarı Tablo 2'de gösterilmiştir.

Tablo 2: Akıllı Bileklikten Veri Çekilen Kişilerin Günlük Aktivite Oranları

Günlük Aktivite	n	Min.	Max.	X	SS
Nabız	526	58,00	98,00	76,2757	6,22484
Atılan Adım	526	422,00	38115,00	8393,2700	5039,43112
Kat Edilen Mesafe (m)	526	271,00	29590,00	5787,5399	3704,63649
Yakılan Kalori	526	13,00	2158,00	207,8878	166,06122

24 saatlik akıllı bileklik kayıtlarına göre 526 kişinin ortalama nabız düzeyi 76,27 olarak hesaplanmıştır. Katılımcıların ortalama günlük attıkları adım sayısının 8393 ve kat ettikleri mesafenin 5787,5 m olduğu tespit edilmiştir. Günlük ortalama yakılan kalori miktarının ise 207,88 olduğu belirlenmiştir.

3.3. Katılımcıların Nabız Düzeylerinin Demografik Özelliklerine Göre Dağılımı

Araştırmmanın bu kısmında, Şanlıurfa'da ikamet eden kişilerin nabız düzeylerinin demografik özelliklerine göre anlamlı bir farklılık gösterip göstermediğine bakılmıştır. Bu kapsamda katılımcıların nabız düzeyinin boy ve kilolarına göre dağılımını tespit etmek için yapılan One-Way ANOVA testi sonuçları Tablo 3'te gösterilmiştir.

Tablo 3: Akıllı Bileklikten Veri Çekilen Kişilerin Boy ve Kilo Oranlarına Göre Nabız Düzeylerinin Karşılaştırılması

Nabız Düzeyi		N	\bar{X}	SS	F	p	Tukey
Boy	1. 160 cm ve altı	94	77,79	6,67	4,179	0,006*	1>3
	2. 161-170 cm	219	76,63	6,61			
	3. 171-180 cm	167	75,21	5,62			
	4. 181 cm ve üstü	46	75,30	4,51			
Kilo	1. 50 Kg ve Altı	31	78,29	6,92	1,039	0,387	-
	2. 51-60 Kg	66	76,09	5,49			
	3. 61-70 Kg	130	76,51	6,57			
	4. 71-80 Kg	137	75,89	6,36			
	5. 81 Kg ve Üstü	162	76,09	5,94			
TOPLAM		526					

p<0,05

Boy oranlarına göre katılımcıların nabız düzeylerinin anlamlı farklılık gösterdiği tespit edilmiştir ($F=4,179$, $p<0,05$). Tukey testi sonuçları; boyu 160 cm ve altında olan kişilerin nabız düzeyinin, boyu 171-180 cm arasında olan kişilerden daha yüksek olduğuna işaret etmektedir. Kilo oranlarına göre katılımcıların nabız düzeylerinin anlamlı farklılık göstermediği belirlenmiştir ($F=1,039$, $p>0,05$). Dolayısıyla tüm grplarda nabız düzeyinin birbirine yakın olduğu söylenebilir.

Şanlıurfa'da yaşamakta olup akıllı bileklikten verileri çekilen kişilerin nabız düzeyinin sigara kullanımı, spor yapma durumu ve araç kullanma durumlarına göre dağılımını tespit etmek için Independent Sample T testi yapılmıştır. Analiz sonuçları Tablo 4'te gösterilmiştir.

Tablo 4: Akıllı Bileklikten Veri Çekilen Kişilerin Sigara, Araç Kullanımı ve Spor Yapma Durumlarına Göre Nabız Düzeylerinin Karşılaştırılması

Nabız Düzeyi		N	\bar{X}	SS	t	p
Araç Kullanımı	1. Evet	228	75,92	5,83	-1,115	0,265
	2. Hayır	298	76,54	6,50		
Sigara Kullanımı	1. Evet	107	76,26	6,20	-0,026	0,979
	2. Hayır	419	76,27	6,23		
Spor Yapma Durumu	1. Evet	219	75,29	5,59	-3,085	0,002*
	2. Hayır	307	76,97	6,55		
TOPLAM		526				

p<0,05

Araştırmaya katılan kişilerin özel veya toplu araç kullanıp kullanmama durumlarına nabız düzeylerinin birbirine yakın olduğu görülmektedir ($t=-1,115$, $p>0,05$). Sonuçlar; sigara içen ve içmeyen kişilerin nabız düzeylerinin birbirine yakın olduğunu göstermektedir ($t=-0,026$, $p>0,05$). Analizler sonucunda spor yapıyorum ve spor yapmıyorum diyenlerin nabız düzeyleri arasında anlamlı bir farklılık olduğu tespit edilmiştir ($t=-3,085$, $p<0,05$). Aritmetik ortalamalardan hareketle; spor yapmıyorum diyenlerin ortalama nabız düzeyinin spor yapıyorum diyenlerden daha yüksek çıktığı görülmektedir.

3.4. Katılımcıların Günlük Attıkları Adım Sayısının Demografik Özelliklerine Göre Dağılımı

Araştırmaya katılan kişilerin günlük olarak atmış oldukları adım sayısının demografik özelliklerine göre anlamlı bir farklılık gösterip göstermediği analiz edilmiştir. Bu çerçevede katılımcıların günlük attıkları adım sayısının boy ve kilolarına göre dağılımını tespit etmek için yapılan One-Way ANOVA testi sonuçları Tablo 5'te gösterilmiştir.

Tablo 5: Akıllı Bileklikten Veri Çekilen Kişilerin Boy ve Kilo Oranlarına Göre Günlük Attıkları Adım Sayısının Karşılaştırılması

Günlük Atılan Adım		N	\bar{X}	SS	F	p	Tukey
Boy	1. 160 cm ve altı	94	8418,07	5546,44	1,765	0,153	-
	2. 161-170 cm	219	7978,48	5166,76			
	3. 171-180 cm	167	9085,95	4766,56			
	4. 181 cm ve üstü	46	7802,58	4073,76			
Kilo	1. 50 Kg ve Altı	31	9425,61	6892,36	0,580	0,677	-
	2. 51-60 Kg	66	8843,93	5700,77			
	3. 61-70 Kg	130	8247,72	4949,40			
	4. 71-80 Kg	137	8372,11	5409,36			
	5. 81 Kg ve Üstü	162	8146,80	4015,94			
TOPLAM		526					

p<0,05

Boy oranlarına göre katılımcıların günlük adım sayıları arasında anlamlı bir farklılık olmadığı ortaya çıkmıştır ($F=1,765$, $p>0,05$). Dolayısıyla tüm boy gruplarındaki günlük adım sayılarının birbirine yakın olduğu söylenebilir. Ayrıca kilo oranlarına göre katılımcıların günlük ortalama adım sayılarının anlamlı farklılık göstermediği belirlenmiştir ($F=0,580$, $p>0,05$). Dolayısıyla tüm grplarda ortalama adım sayılarının birbirine yakın olduğu söylenebilir.

Akıllı bileklikten verileri çekilen kişilerin günlük attıkları adım sayısının sigara kullanımı, spor yapma durumu ve araç kullanma durumlarına göre dağılımını tespit etmek için Independent Sample T testi yapılmıştır. Analiz sonuçları Tablo 6'da gösterilmiştir.

Tablo 6: Akıllı Bileklikten Veri Çekilen Kişilerin Sigara, Araç Kullanımı ve Spor Yapma Durumlarına Göre
Günlük Attıkları Adım Sayısının Karşılaştırılması

Günlük Atılan Adım		N	\bar{X}	SS	t	p
Araç Kullanımı	1. Evet	228	7975,35	3905,02	-1,666	0,096
	2. Hayır	298	8713,01	5744,55		
Sigara Kullanımı	1. Evet	107	8693,55	5618,61	0,690	0,490
	2. Hayır	419	8316,58	4884,90		
Spor Yapma Durumu	1. Evet	219	10568,02	5764,53	8,970	0,000*
	2. Hayır	307	6841,89	3754,76		
TOPLAM		526				

p<0,05

Sonuçlar; araştırmaya katılan kişilerin özel veya toplu araç kullanıp kullanmama durumlarına ve sigara kullanma durumlarına göre günlük attıkları adım sayılarının anlamlı bir farklılık göstermediğine işaret etmektedir ($p>0,05$). Ancak spor yapıyorum ve spor yapmıyorum diyenlerin günlük ortalama attıkları adım sayıları arasında anlamlı bir farklılık olduğu tespit edilmiştir ($t=8,970$, $p<0,05$). Aritmetik ortalamalardan hareketle; spor yapanların ortalama olarak atmış oldukları adım sayısının daha fazla olduğu ortaya çıkmıştır.

3.5. Katılımcıların Günlük Kat Etmis Oldukları Mesafenin Demografik Özelliklerine Göre Dağılımı

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Şanlıurfa'da ikamet eden kişilerin günlük olarak kat etmiş oldukları mesafenin demografik özelliklerine göre anlamlı bir farklılık gösterip göstermediği analiz edilmiştir. Katılımcıların günlük kat ettikleri mesafenin boy ve kilolarına göre dağılımını tespit etmek için yapılan One-Way ANOVA testi sonuçları Tablo 7'de gösterilmiştir.

Tablo 7: Akıllı Bileklikten Veri Çekilen Kişilerin Boy ve Kilo Oranlarına Göre Günlük Kat Ettikleri Mesafenin Karşılaştırılması

Günlük Kat Edilen Mesafe		N	\bar{X}	SS	F	p	Tukey
Boy	1. 160 cm ve altı	94	5759,19	4056,45	1,536	0,204	-
	2. 161-170 cm	219	5505,79	3854,93			
	3. 171-180 cm	167	6273,53	3421,70			
	4. 181 cm ve üstü	46	5422,43	3086,90			
Kilo	1. 50 Kg ve Altı	31	6566,58	5255,69	0,580	0,677	-
	2. 51-60 Kg	66	6080,03	4138,80			
	3. 61-70 Kg	130	5665,06	3594,97			
	4. 71-80 Kg	137	5804,28	4043,14			
	5. 81 Kg ve Üstü	162	5603,41	2885,88			
TOPLAM		526					

p<0,05

Boy ve kilo oranlarına göre katılımcıların günlük olarak kat etmiş oldukları mesafe arasında anlamlı bir farklılık olmadığı ortaya çıkmıştır ($p>0,05$). Dolayısıyla tüm boy ve kilo gruplarındaki günlük mesafenin birbirine yakın olduğu söylenebilir.

Akıllı bileklikten verileri çekilen kişilerin günlük kat ettikleri mesafenin sigara kullanımı, spor yapma durumu ve araç kullanma durumlarına göre dağılımını tespit etmek için Independent Sample T testi yapılmıştır. Analiz sonuçları Tablo 8'de gösterilmiştir.

Tablo 8: Akıllı Bileklikten Veri Çekilen Kişilerin Sigara, Araç Kullanımı ve Spor Yapma Durumlarına Göre Günlük Kat Ettikleri Mesafenin Karşılaştırılması

Günlük Kat Edilen Mesafe		N	\bar{X}	SS	t	p
Araç Kullanımı	1. Evet	228	5452,33	2807,68	-1,819	0,069
	2. Hayır	298	6044,00	4252,38		
Sigara Kullanımı	1. Evet	107	6084,47	4275,62	0,929	0,353
	2. Hayır	419	5711,71	3545,88		
Spor Yapma Durumu	1. Evet	219	7360,98	4289,99	8,807	0,000*
	2. Hayır	307	4665,11	2720,19		
TOPLAM		526				

p<0,05

Araç ve sigara kullanımı açısından günlük ortalama kat edilen mesafenin değişiklik göstermediği belirlenmiştir ($p>0,05$). Dolayısıyla hem sigara içenlerin hem de sigara içmeyenlerin ve araç kullananların/kullanmayanların günlük ortalama kat ettikleri mesafenin birbirine yakın çıktıgı söylenebilir. Yapılan analizlerde spor yapıyorum ve spor yapmıyorum diyenlerin günlük ortalama kat ettikleri mesafe arasında anlamlı bir farklılık olduğu ortaya çıkmıştır ($t=8,807$, $p<0,05$). Aritmetik ortalamalara göre; spor yapanların ortalama olarak kat etmiş oldukları mesafenin spor yapmayanlardan daha fazla olduğu görülmektedir.

3.6. Katılımcıların Günlük Yaktıkları Kalori Miktarının Demografik Özelliklerine Göre Dağılımı

Şanlıurfa'da ikamet eden kişilerin günlük olarak yakmış oldukları kalori miktarının demografik özelliklerine göre anlamlı bir farklılık gösterip göstermediğine bakılmıştır. Kalori miktarının katılımcıların boy ve kilolarına göre dağılımını tespit etmek için One-Way ANOVA testi yapılmış ve sonuçlar Tablo 9'da gösterilmiştir.

Tablo 9: Akıllı Bileklikten Veri Çekilen Kişilerin Boy ve Kilo Oranlarına Göre Günlük Yaktıkları Kalori Miktarının Karşılaştırılması

Günlük Yakılan Kalori		N	\bar{X}	SS	F	p	Tukey
Boy	1. 160 cm ve altı	94	226,05	265,64	1,507	0,212	-
	2. 161-170 cm	219	195,51	144,12			
	3. 171-180 cm	167	221,02	128,13			
	4. 181 cm ve üstü	46	181,97	109,19			
Kilo	1. 50 Kg ve Altı	31	242,87	236,39	0,857	0,490	-
	2. 51-60 Kg	66	216,03	165,54			
	3. 61-70 Kg	130	217,30	216,57			
	4. 71-80 Kg	137	205,74	154,77			
	5. 81 Kg ve Üstü	162	192,13	100,19			
TOPLAM		526					

p<0,05

Boy ve kilo oranlarına göre katılımcıların günlük olarak yakmış oldukları kalori miktarı arasında anlamlı bir farklılık olmadığı ortaya çıkmıştır ($F=1,507$, $p>0,05$). Dolayısıyla tüm boy ve kilo gruplarındaki günlük yakılan kalori miktarının birbirine yakın olduğu söylenebilir.

Akıllı bileklikten verileri çekilen kişilerin günlük yaktıkları kalori miktarının sigara kullanımı, spor yapma durumu ve araç kullanma durumlarına göre dağılımını tespit etmek için Independent Sample T testi yapılmıştır. Analiz sonuçları Tablo 10'da sunulmuştur.

Tablo 10: Akıllı Bileklikten Veri Çekilen Kişilerin Sigara, Araç Kullanımı ve Spor Yapma Durumlarına Göre Günlük Yaktıkları Kalori Miktarının Karşılaştırılması

Günlük Yakılan Kalori		N	\bar{X}	SS	t	p
Araç Kullanımı	1. Evet	228	192,44	108,26	-2,011	0,045*
	2. Hayır	298	219,70	198,65		
Sigara Kullanımı	1. Evet	107	216,54	165,65	0,604	0,546
	2. Hayır	419	205,67	166,28		
Spor Yapma Durumu	1. Evet	219	259,20	169,75	6,195	0,000*
	2. Hayır	307	171,28	153,47		
TOPLAM		526				

p<0,05

Araştırma sonuçları; günlük ortalama yakılan kalori miktarının, özel veya toplu araç kullanan kişiler ile kullanmayan kişiler açısından farklılık gösterdiğine işaret etmektedir ($t=-2,011$, $p<0,05$). Aritmetik ortalamalara bakıldığında; özel veya toplu taşıma aracı kullanıyorum diyen kişilerin daha fazla kalori yaktıkları görülmektedir. Sigara kullanımı açısından günlük ortalama yakılan kalori miktarı anlamlı bir farklılık bulunmamıştır ($t=0,604$, $p>0,05$). Spor yapıyorum ve spor yapmıyorum diyenlerin günlük ortalama harcadıkları kalori arasında farklılık olduğu belirlenmiştir ($t=6,195$, $p<0,05$).

Aritmetik ortalamalardan hareketle; spor yapanların ortalama olarak yaktıkları kalori miktarının spor yapmayanlardan daha fazla olduğu söylenebilir.

SONUÇ ve ÖNERİLER

Giyilebilir teknolojiler mobil telefonlar ve benzeri akıllı cihazlarla senkronize bir şekilde çalışmakta ve kullanıcıların uzun vadeli veri takibini sağlamak amacıyla, tasarlanmışlardır. Günümüzde özellikle diyet ve spor programları için; atılan adımların, yakılan kalorinin, egzersiz yoğunluğu, uyku vb. fiziksel faaliyetlerin takip edilmesinde giyilebilir teknolojik ürünlerden yararlanılmaktadır. Bu amaçla akıllı saatlerin, gözlüklerin, bilekliklerin, saç bantlarının, yüzükler ve kolyelerin kullanıldığı görülmektedir. Bu noktada söz konusu giyilebilir cihazların kaydetmiş oldukları verilerin nasıl bilgisayar ortamına aktarılacağı sorusu karşımıza çıkmaktadır. Bu çerçevede 526 kişiye takılan akıllı bileklikten günlük aktiviteleri ile ilgili veriler web bluetooth aracılığıyla çekilmiş ve elde edilen veriler istatistiksel olarak analiz edilmiştir.

Katılımcıların, kullanmış oldukları akıllı bileklikten nabız düzeyleri, günlük attıkları adım sayısı, kat ettikleri mesafe, yaktıkları kalori miktarı hesaplanmıştır. Buna göre 24 saatlik akıllı bileklik kayıtlarına göre 526 kişinin ortalama nabız düzeyi 76,27 olarak hesaplanmıştır. Katılımcıların ortalama günlük attıkları adım sayısının 8393 ve kat ettikleri mesafenin 5787,5 m ve günlük ortalama yaktıkları kalori miktarının ise 207,88 olduğu belirlenmiştir. Elde edilen bu bilgilerin katılımcıların bazı demografik özellikler açısından anlamlı bir farklılık gösterip göstermediği istatistiksel olarak analiz edilmiştir. Yapılan analizlerde boyu 160 cm ve altında olan kişilerin nabız düzeyinin, boyu 171-180 cm arasında olan kişilerden daha yüksek olduğu tespit edilmiştir. Ancak kilo oranlarına göre katılımcıların nabız düzeylerinin anlamlı farklılık göstermediği belirlenmiştir. Araştırmada özel veya toplu araç kullanıp kullanmama durumları ve sigara içen ve içmeyen kişilerin nabız düzeylerinin birbirine yakın olduğu ortaya çıkmıştır. Yapılan analizlerde spor yapmayanların ortalama nabız düzeyinin spor yapanlardan daha yüksek olduğu görülmüştür.

Günlük atılan adım sayısının boy ve kilo oranlarına göre anlamlı bir farklılık göstermemiştir. Ayrıca sonuçlar; araştırmaya katılan kişilerin özel veya toplu araç kullanıp kullanmama durumlarına ve sigara kullanma durumlarına göre günlük attıkları adım sayılarının anlamlı bir farklılık göstermediğini göstermiştir. Ancak spor yapanların ortalama olarak atmış oldukları adım sayısının daha fazla olduğu ortaya çıkmıştır.

Boy ve kilo oranlarına göre katılımcıların günlük olarak kat etmiş oldukları mesafe arasında anlamlı bir farklılık olmadığı ortaya çıkmıştır. Dolayısıyla tüm boy ve kilo gruplarındaki günlük mesafenin birbirine

yakın olduğu söylenebilir. Araç ve sigara kullanımı açısından günlük ortalama kat edilen mesafenin değişiklik göstermediği belirlenmiştir. Yapılan analizlerde spor yapanların ortalama olarak kat etmiş oldukları mesafenin spor yapmayanlardan daha fazla olduğu görülmüştür.

Çalışmada günlük yakılan kalori miktarı katılımcıların boy ve kilo oranları ile sigara kullanma durumlarına göre anlamı bir farklılık göstermemiştir. Ancak özel veya toplu taşıma aracı kullanmıyorum diyen kişilerin daha fazla kalori yaktıkları tespit edilmiştir. Ayrıca spor yapanların ortalama olarak yaktıkları kalori miktarının spor yapmayanlardan daha fazla olduğu belirlenmiştir.

Günümüzde giyilebilir teknolojilerin artarak devam ettiği ve gittikçe gündelik hayatın bir parçası haline geldiği görülmekte ve bu gelişme başta sağlık olmak üzere birçok sektörde baş döndürücü bir nitelik taşımaktadır. Bu çalışma sonuçları bireylerin uzun vadeli ve sağlıklı bir hayat bekлentilerini karşılamak üzere giyilebilir teknolojilerin ne kadar önemli olduğunu ortaya koymuştur. Zira geliştirilen uygulama ile bireylerin günlük aktivitelerini sürekli takip etmek ve bunların insan yararına kullanabilmenin yanı sıra insanların huzurlu ve güvende hissetmelerine de etki edebileceği düşünülmektedir. Bununla birlikte geliştirilen uygulamanın sağlık ve eğitim alanına uyarlanmasıyla öğrencilerin, hastaların vb. bilgilerinin takip edileceği ve bunların sonraki zamanlarda kullanılabileceği düşünülmektedir. Bu çerçevede bundan sonra yapılacak çalışmalarda, başta ülkemizde olmak üzere yaşam kalitesinin artırılmasına odaklanan toplumlarda bireylerin günlük aktivitelerinin takip edilmesi ve toplumlar arası karşılaşmalar yapılması için geliştirilen uygulamanın kullanılarak verilerin analiz edileceği önerilmektedir.

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CLEANER PRODUCTION: A TOOL FOR SUSTAINABLE DEVELOPMENT IN BANGLADESH

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ABSTRACT

Sustainable Development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. It is to meet the needs of the present without compromising the ability of future generations to meet their own needs. On the other hand, Cleaner Production is defined as the continuous application of an integrated preventative environmental strategy to processes, products and services to reduce risks to people and the environment. Cleaner production is the preventive approach to pollution control and recognized as a tool to reach sustainable development. The feature, focus, progress, and techniques of cleaner production will be presented at first. The benefits to the industries and barriers to the implementation will also be discussed. Cleaner production cycle and analytical approaches for cleaner production will be explained. Overseas case studies on the successful implementation of cleaner production will be demonstrated. Cleaner production will be linked to the sustainable development. The cleaner production initiatives required for the industrial sector of Bangladesh will finally be proposed.

Keywords: Cleaner Production; Sustainable Development; Industrial Growth; Green Technology; Waste Reduction.

A META-ANALYSIS ON EDUCATIONAL TECHNOLOGY IN ENGLISH LANGUAGE TEACHING

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ABSTRACT

As more various types of Computer Assisted Language Learning (CALL) programs have been incorporated into language classrooms over the recent decades, it has become more important to uncover whether, to what extent, and under which moderator variables CALL can yield more effective outcomes than traditional language instruction. The issue of education is one of the most important material addressed by technology. On the other hand, meta-analysis is a statistical and quantitative method that leads us to a general conclusion by integrating the results of different researches. In this thesis, researchers worked on the impact of educational technology on English language teaching by studying 67 articles and theses. All articles and theses are included from 2009 to 2020 and 7 articles were excluded from our study due to lack of sufficient information. All 67 articles and theses used in this study were related to this study, i.e. the impact of educational technology and English language teaching which were selected from Google scholar, Iran doc, Ganjineh and other related Iranian sites that their topic were closely related to this thesis. Furthermore, two instruments, SPSS and Kruskal-Wallis Test were used to calculate and evaluate data in this research. In addition, all the researches were done in various cities of Iran. The total effect size calculated for studies under both fixed and random models is statistically significant and also the study of effects by year of publication, instruments used in research and research methods showed that their effect size are significant as well. Examination of research hypotheses also showed that there was no significant difference between the size of the effects of studies in terms of the year of research, sampling method, sample gender, research method and instruments used.

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Key Words: Educational Technology, English language teaching, Meta-analysis

FOTOVOLTAİK SİSTEMLERDE KULLANILAN BİR FAZLI ŞEBEKE BAĞLANTILI EVİRİCİLERDE AKTİF GÜÇ KONTROLÜ

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ÖZET

Güneş ışınlarından elektrik enerjisi elde etme amacıyla geliştirilen fotovoltaik sistemlerin çatı üstü uygulamaları gün geçtikçe yaygınlaşmaktadır. Güneş enerjisi, dünya üzerinde en yaygın kullanılan yenilenebilir enerji kaynaklarından biri olup kullanımını incelediğimizde özellikle fotovoltaik panellerin ve sistemlerin fiyat olarak uygun hale gelmesi çatı üstü uygulamaları için küçük güçlü şebeke bağlantılı evirici uygulamalarını ön plana çıkarmıştır.

Bu çalışmada, şebeke bağlantılı çatı üstü evirici uygulaması modellenmiş olup D-Q yöntemiyle aktif güç kontrolü gerçekleştirılmıştır. PV sistemden üretilen enerji akım kontrollü tek fazlı evirici vasıtıyla şebekeye aktarılmakta ve bu güç evirici çıkış akımı kontrol edilerek ayarlanabilmektedir. Şebekeye verilen akımın temel frekans bileşeninin Toplam Harmonik Bozulma (THD) değeri çeşitli standartlarda belirtilen değerin altında olabilmesi için LCL tipi çıkış滤resi tasarımları yapılmıştır. Filtre tasarımında çıkış gücü, evirici anahtarlama frekansı, bara gerilimi göz önüne alınmıştır. Değişken güneş ışının değerlerinde PV sisteminin optimum çalışma koşullarında olması için Değiştir ve Gözle (D&G) algoritmasını kullanan Maksimum Güç Noktası İzleyici (MPPT) yöntemi evirici kontrol sisteminde gerçekleştirilmiştir. Evirici kontrol sisteminde panel akımı, panel gerilimi ve evirici çıkış akımı geri besleme sinyallerini kullanılarak ve MPPT algoritmasının belirlediği güç değeri göz önüne alınarak evirici çıkış akımının referans değeri belirlenmektedir. Evirici çıkışında güç faktörü değerinin bir olması için (sıfır reaktif güç) D-Q dönüşümü sonrasında referans akımın Q bileşeni sıfır alınmıştır. Aktif gücün kontrol edilmesi için referans akımın D bileşeni kullanılmaktadır. Evirici çıkış akımının referans akımını takip etmesi PI kontrolü yardımıyla gerçekleştirilmektedir.

3kW gücünde bir fotovoltaik sistemin farklı çalışma durumlarındaki performansı Matlab/Simulink ortamında gerçekleştirilenmiştir. Evirici güneşten gelen ışının değişimine göre PV sistemin ürettiği maksimum gücü şebekeye aktarmaktadır. Eğer şebeke tarafından daha az güç şebekeye verilmesi talep edilmesi durumunda evirici kontrol sistemi bu yeni güç değerine uygun referans akımın değerini oluşturarak şebekeye istenen gücün verilmesi sağlanmaktadır.

Standartlara uygun THD değerini elde edilmek için LCL filtre yapısı kullanılarak daha düşük endüktans ve kapasitans değerleri belirlenerek istenen THD değeri sağlanmaktadır.

Anahtar Kelimeler: Güneş Enerjisi, Fotovoltaik Evirici, Aktif Güç Kontrolü, Maksimum Güç Noktası İzleme

ACTIVE POWER CONTROL IN SINGLE PHASE GRID CONNECTED INVERTERS USED IN PHOTOVOLTAIC SYSTEMS

ABSTRACT

Solar energy has become one of the most widely used renewable energy sources in recent years throughout the world with the decreasing cost of modules. The use of rooftop installations of solar energy especially in large metropolitan cities are becoming increasingly popular because of utilization of unused roof areas which are already occupying a certain land area.

In this study, the application of a grid-connected rooftop inverter is modeled and active power control is achieved by the D-Q method. The energy generated from the PV system is transferred to the grid through a current-controlled voltage source single-phase inverter and this power can be adjusted by controlling the inverter output current. LCL type output filter has been designed so that the Total Harmonic Distortion (THD) value of the fundamental frequency component of the current supplied to grid is below the value specified in various standards.

In this filter design, output power, inverter switching frequency, bus voltage and other parameters are taken into consideration., The Maximum Power Point Tracking (MPPT) method using Perturb & Observe (P&O) algorithm employed in the inverter control system ensure that the PV system is always operating at optimum conditions under varying solar irradiation values. In the inverter control system, the reference value of the inverter output current is determined using the panel current, panel voltage, inverter output current feedback signals and the power value determined by the MPPT algorithm. In order to deliver unity power factor to the grid at the inverter output (zero reactive power), the Q component of the reference current is set to zero. Using D-Q transformation, D component of the reference current is calculated and is used to control the active power. Employing a classical PI controller, the inverter output current forced to follow the reference current.

The performance of a 3kW photovoltaic system in different operating conditions is modeled in MATLAB/Simulink. The inverter transfers the maximum power generated by the PV system to the grid according to the irradiation change from the sun. If less power is requested by the grid, the inverter control system creates the new value of the reference current corresponding to this new power value ensuring that the desired power is delivered to the grid.

In order to obtain the THD value in accordance with the standards, lower inductance and capacitance values are determined by using the LCL filter structure and the desired THD value is achieved.

Keywords: Solar Energy, Photovoltaic Inverter, Active Power Control, Maximum Power Point Tracker

1. GİRİŞ

Son zamanlarda dünya nüfusunun artmasıyla beraber enerji kaynaklarına olan taleplerin artması, fosil yakıt kaynaklarının sınırlı olması ve yarattığı çevresel kirlilik gibi sebepler yenilenebilir enerji kaynaklarının kullanımını zorunlu hale getirmiştir (Bose, 2010). Günümüzde kullanılan yenilenebilir enerji kaynaklarının başlıcaları güneş enerji, rüzgar enerji, jeotermal enerjisi gibi enerji kaynakları olup güneş enerjisi, dünya üzerinde en yaygın kullanılan yenilenebilir enerji kaynaklarından biri olmuştur. Kullanımını incelediğimizde özellikle günümüzde son birkaç on yıla kıyasla fotovoltaik (PV) modüllerinin fiyat olarak uygun hale gelmesi ve şebekeye bağlanması için kullanılan eviricinin güç başına maliyetinin azalması özellikle çatı üstü uygulamalar için küçük güçlü şebeke bağlantılı evirici uygulamalarını dikkat çekici hale getirmiştir (Kjaer, Pedersen, ve Blaabjerg 2005).

Fotovoltaik sistemden üretilen enerjinin doğrudan şebekeye bağlanması uygun olmaması sebebiyle bu enerji kaynaklarını şebekeye bağlamak için güç elektroniği dönüştürücülerin kullanılması zorunludur (Ciobotaru, Teodorescu, ve Blaabjerg 2006).

Bu sebeple çatı üstü uygulamaları gibi üretim kapasitesinin birkaç kilowatt ile sınırlı olduğu birçok durumda güç elektroniği dönüştürücü olarak tek fazlı akım kontrollü gerilim kaynaklı eviriciler kullanılmaktadır. Kullanılan eviriciler fotovoltaik panellerden üretilen enerjiyi şebekeye aktarmada büyük rol oynar. Tek fazlı eviricilerin iki ana görevi olup bunlar fotovoltaik sistemlerin maksimum güç noktasında çalıştırılmasını sağlamak ve ilgili yönetmelikleri ihlal etmeden şebekeye sinüsoidal bir akım aktarmaktır (Kjaer, Pedersen, ve Blaabjerg 2005).

Literatürde şebeke tarafından talep edilen gücün şebekeye aktarılması için ve evirici çıkış akımı tarafından harmonik komponentleri azaltmak için birçok kontrol yöntemi kullanılmıştır. Bunların başlıcaları histerisis, PR (Oransal Rezonans), PI (Oransal Integral) vb. kontrol yöntemleridir (Monfared, Sanatkær, ve Golestan 2012). Evirici çıkış akımının kontrolü fotovoltaik panellerin maksimum noktada çalışmasını saglayacak şekilde belirlenen referans akımın takip edilmesiyle mümkün olup endüstride çok kullanılan PI kontrolü yardımıyla gerçekleştirilerek istenilen gücün şebekeye aktarımı gerçekleştirilir. Belirtilen referans akımın üretilmesi için senkron referans düzlem yöntemi kullanılır (D-Q yöntemi). Tek fazlı sistemlerde D-Q yöntemi doğrudan uygulanmamakta beraber tek fazlı sinyalden 90 derecelik bir faz farkına sahip olacak ortogonal bir hayali sinyal üreterek bu kontrol gerçeklenebilmektedir.

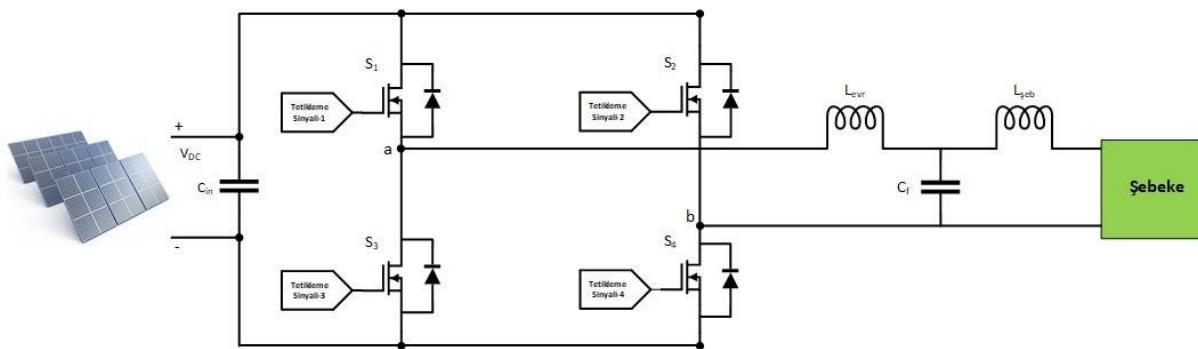
Şebekeye verilen akımın temel frekans bileşeninin THD değeri IEC 61727, IEEE 1547-2003 (Kjaer, Pedersen, ve Blaabjerg 2005) standartlarına göre %5'in altında olması gerekmektedir. Standartlardaki değeri sağlamak için evirici çıkışına mutlaka filtre kullanılması gerekmektedir (Büyük vd. 2016). Kullanılan çıkış filtreleri genelde L, LC ve LCL olmak üzere 3 grupta incelenebilir. Her çıkış filtresinin avantaj ve dezavantajları mevcuttur. L filtresinin tasarıımı diğer filtrelere göre kolaydır ancak L filtresinin değeri düşük seçilirse anahtarlama frekansı büyük seçilmelidir (Karafil, Akif, Özbay 2018). Bu dezavantajdan kurtulmak için L filtresinin değeri artırılmalıdır. Bu da sistemdeki gerilim düşümünün artmasına sebep olmakla beraber sistemin maliyetini artırmaktadır. Filtre değerinin düşürülmesi, maliyetin azalması ve THD değerinin yeteri kadar azalması için LC ve LCL filtreleri kullanılabilir (Reznik vd. 2014; Liserre, Blaabjerg, ve Hansen 2005). LC滤器 genellikle şebeke bağımsız sistemlerde kullanılır. Şebeke bağlantılı sistemlerde, şebekenin kendi endüktans değeri hesaba katıldığında çıkış filtesi en yaygın kullanılan LCL filtre durumuna dönüşür. Bu filtre türü kullanıldığından daha düşük endüktans ve kapasitans değerleri çıkış filtresinde kullanılarak istenen THD değeri sağlanmaktadır (Karabacak vd. 2016).

Bu çalışmada, şebeke bağlantılı çatı üstü evirici uygulaması modellenmiş olup D-Q yöntemiyle aktif güç kontrolü gerçekleştirılmıştır. Harmonik bozunumu azaltmak için çıkış filtesi olarak LCL tip filtre kullanılmıştır.

2. SİSTEM TASARIMI VE KONTROLÜ

2.1. Sistemin Tanıtımı

Fotovoltaik sistemlerden üretilen enerjinin şebekeye aktarılması için DC/AC dönüşümü gerçeklenmesi gerekmektedir. Paneller tarafından üretilen DC gerilimin her zaman için AC kaynağının tepe geriliminden fazla olması durumunda DC/DC dönüştürücü kullanılmaksızın direk olarak DC/AC dönüşümü yapılmaktadır. Çatı üstü uygulamaları için gerçekleşen tek fazlı tam dalga eviricinin basit yapısında Fotovoltaik panel, DC bara kapasitörü, tek fazlı evirici, çıkış滤器 ve AC tarafında şebeke bulunmakta olup ilgili yapı Şekil 1'de görülmektedir. Tek fazlı eviricilerin tetikleme sinyallerinin kontrolü vasıtasiyla S1, S2, S3 ve S4 anahtarın açılıp kapanma durumuna göre üretilen gerilim Tablo 1'de gösterilmiştir.



Şekil 1: Tek Fazlı Tam Dalga Evirici Yapısı

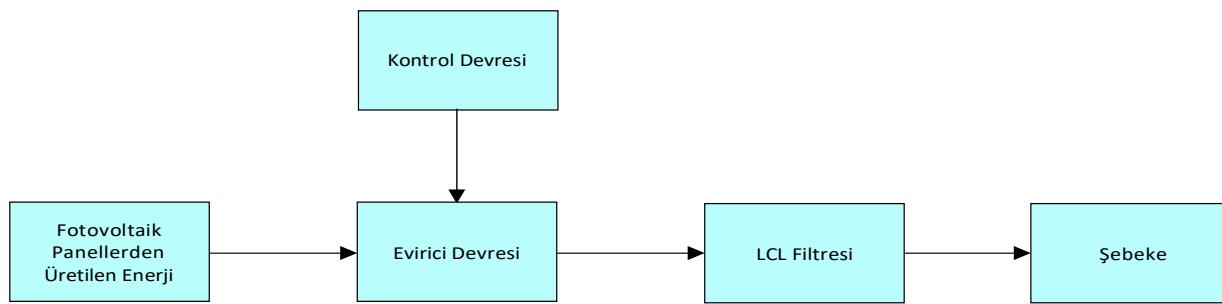
Tablo 1: Tek Fazlı H Köprü Eviricinin Anahtarlama Durumları

S1	S2	S3	S4	V_{ab}
KAPALI	AÇIK	AÇIK	KAPALI	V_{DC}
AÇIK	KAPALI	KAPALI	AÇIK	$-V_{DC}$
KAPALI	KAPALI	AÇIK	AÇIK	0
AÇIK	AÇIK	KAPALI	KAPALI	0

2.2. Sistemin Kontrolü

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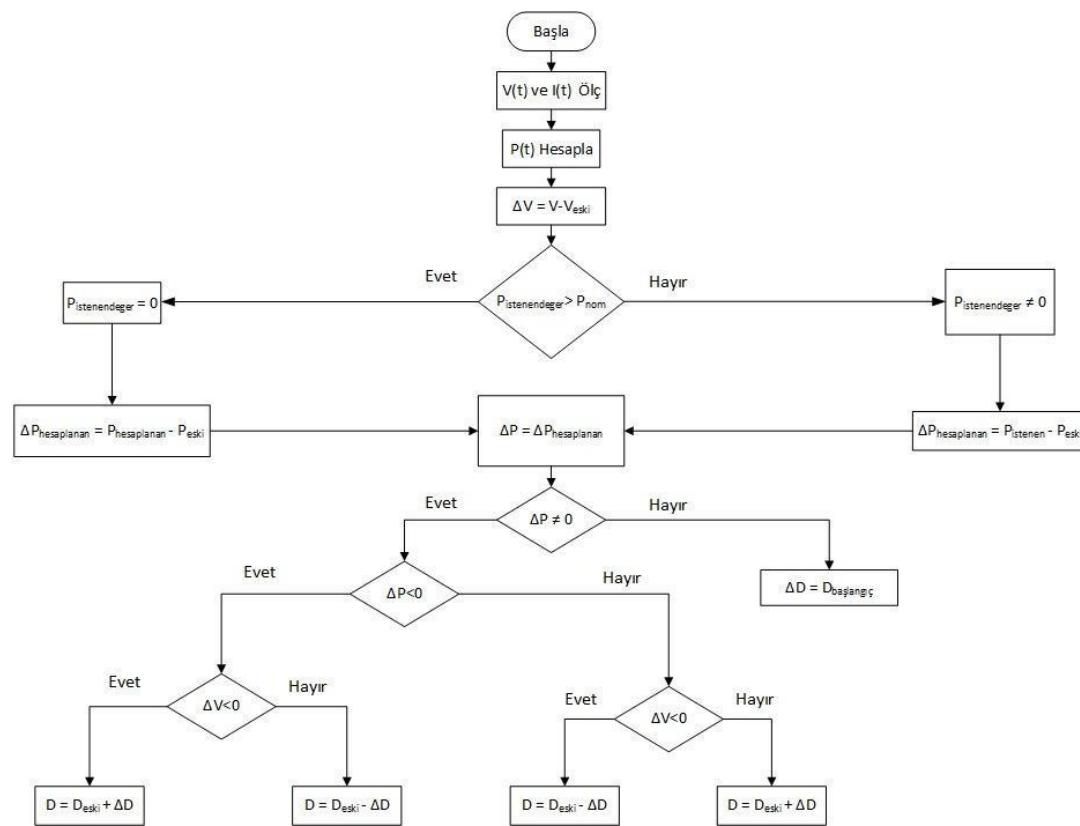
Tek fazlı eviricilerin fotovoltaik panellerin maksimum güçte çalışmasını sağlamak ve şebeke tarafından istenen aktif gücün aktarılması için evirici çıkış akımını kontrol edebilmesi gerekmektedir. Bu bağlamda, Değiştir ve Gözle (D&G) algoritmasını kullanan Maksimum Güç Noktası İzleyici (MPPT) yöntemi evirici kontrol sisteminde kullanılmakta olup istenen aktif gücü elde edebilmek adına evirici çıkış akımının üretilen referans akımı takip etmesi beklenir. Belirtilen referans akımın üretilmesi için senkron referans düzlem yöntemi kullanılır (D-Q yöntemi). Çatı üstü uygulamalar için tasarlanan tek fazlı eviricilerin blok şeması şekil 2'de gösterilmiştir.



Şekil 2: Sistemin Blok Şeması

2.2.1. Maksimum Güç Noktası İzleyici (MPPT) yöntemi

Fotovoltaik sistemlerin ürettiği çıkış gücü güneş ışınımı, ortam sıcaklığı, gölgelenme miktarı gibi farklı etmenlere bağlı olarak değişmektedir. Belirli atmosferik koşullarda PV sistemlerin tek bir maksimum güç noktası bulunmaktadır (Altın ve Yıldırımoğlu 2011). Maksimum güç noktasında PV'nin sürekli çalışması beklenmekte olup değişen ışınım, sıcaklık vb. etmenlere göre PV sisteminin üretebileceği maksimum güç ayarlanarak şebekeye aktarılması istenmektedir. Değiştir & Gözle algoritması maksimum güç noktası takibinde uygulanmasının kolay olması sebebiyle tercih edilmiştir. Değiştir & Gözle algoritmasının çalışma prensibi dışarıdan şebeke tarafından talep edilen güç kontrol sistemine girildikten sonra ilgili referans sinyalin değişimi ve güçte meydana gelen değişim arasında ilişki kurarak değişimin yönü hakkında karar verme şeklindeki yapılmıştır. İlgili algoritmanın akış diyagramı Şekil 3'de gösterilmiştir.



Şekil 3: Değiştir & Gözle algoritmasının Akış Diyagramı

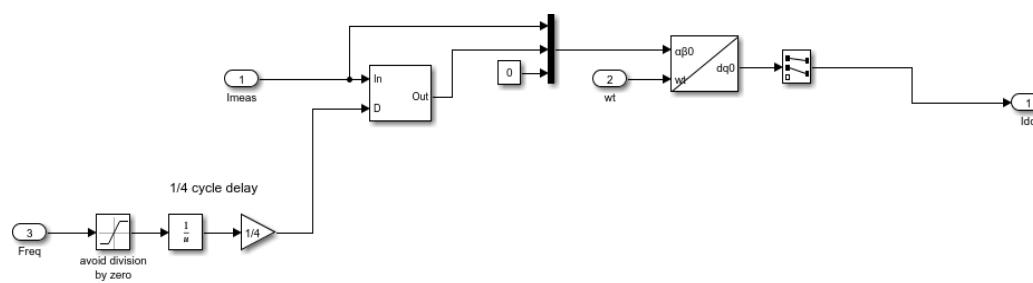
2.2.2. Senkron Referans Düzlem Yöntemi

Tek fazlı evirici kontrol sistemi, evirici çıkış akımının talep edilen güç doğrultusunda sistemde oluşturduğu referans akımı takip etmesi sonucunda istenilen gücü şebekeye aktarılmış olur. Referans akımları oluşturabilmek için senkron referans düzlem yöntemi kullanılmıştır (Kesler, R, ve Üniversitesi 2004). Genellikle bu yöntemde ot ile dönen tek fazlı akım ve gerilim vektörleri diferansiyel denklemlerle ifade edilmekte olup bu ifadeleri ortak bir referans düzleme aktarmak kontrolü kolaylaştırmaktadır (Vatansever 2019). Bu bağlamda, ot ile dönen tek fazlı akım ve gerilim vektörleri önce Clarke daha sonra da Park dönüşümleri yapılarak D ve Q vektörlerine dönüsürler (Altintas & Bingol, 2004). Bu dönüşümler en yaygın bilinen dönüştürücüler olup bu çalışmada kullanılmıştır. Tek fazlı sistemlerde Clarke dönüşümü doğrudan uygulanmamakta beraber tek fazlı sinyalden 90 derecelik bir faz farkına sahip olacak ortogonal bir hayali sinyal üreterek bu dönüşüm gerçeklenebilmektedir. İlgili dönüşüm örneği Denklem 1'de verilmiştir (Sharma, 2014). Clarke dönüşümünden Park dönüşümüne geçilebilmesi için aşağıda belirtilen Denklem 2 kullanılmıştır (Awasthi vd. 2016). İlgili dönüşümlerin tek fazlı eviricinin kontrol sisteminde gerilim ve akım vektörlerinin dönüşümlerinin gerçekleşmesi ile ilgili kullanımı Şekil 4 a ve b'de gösterilmiştir.

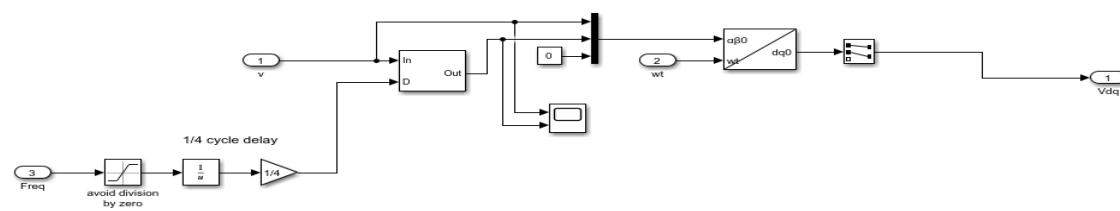
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$$\begin{bmatrix} \alpha \\ \beta \end{bmatrix} = \begin{bmatrix} \omega t + \phi \\ \omega t + \phi + \pi / 2 \end{bmatrix} \quad (1)$$

$$\begin{bmatrix} D \\ Q \end{bmatrix} = \begin{pmatrix} \cos(\omega t) & \sin(\omega t) \\ -\sin(\omega t) & \cos(\omega t) \end{pmatrix} \begin{bmatrix} \alpha \\ \beta \end{bmatrix} \quad (2)$$



Şekil 4-a: Akım vektörünün D ve Q vektörüne dönüşümü

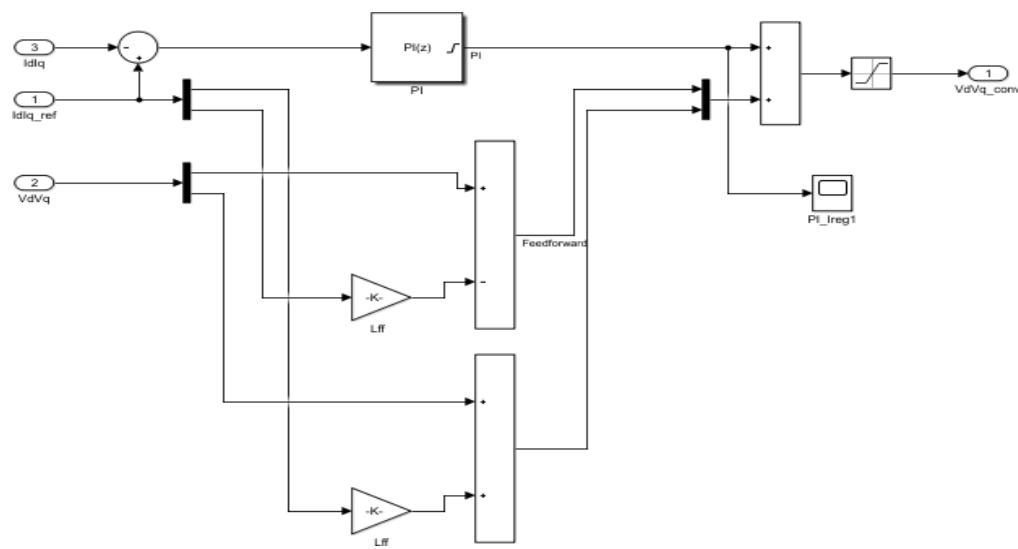


Şekil 4-b: Gerilim vektörünün D ve Q vektörüne dönüşümü

2.2.3. Akım Kontrolü

Değiştir & Gözle algoritmasının dışarıdan şebeke tarafından talep edilen gücün kontrol sistemine girdildikten sonra ilgili referans sinyalin değişimi ve güçte meydana gelen değişim arasında ilişki kurarak değişimin yönü hakkında karar verme yetkisi doğrultusunda MPPT yönteminden elde edilen gerilim ile DC bara gerilimi karşılaştırılır ve PI kontrolü sayesinde referans akımın D bileşeni oluşturulur. Evirici çıkışında güç faktörü değerinin bir olması için (sıfır reaktif güç) D-Q dönüşümü sonrasında referans akımın Q bileşeni sıfır alınır. Bu bağlamda aktif gücün kontrol edilmesi için referans akımın D bileşeni kullanılmaktadır. Evirici çıkış akımının referans akımını takip etmesi PI kontrolü yardımıyla gerçekleşmektedir. Uygulanan akım kontrolü aşağıdaki denklemler yardımıyla gerçekleşip sonucunda D ve Q bileşenlerinde referans gerilim elde edilmektedir. Bu referans gerilim ile testere dışı sinyal karşılaştırılarak tek fazlı eviricilerde bulunan yarı iletken elemanlara tetikleme sinyali verilmektedir. İlgili dönüşümlerin hesabı Denklem 3'de gösterilirken simülasyon uygulaması Şekil 5'de gösterilmiştir (Peltoniemi vd. 2009). Şekil 5'de gösterilen L_{ff} ifadesi şebeke ve evirici tarafındaki endüktansların toplamına eşittir.

$$\begin{aligned} Vd, \text{evirici}_{ref} &= V_d + \Delta V \text{evirici}_d - \omega I_q (L_{\text{evirici}} + L_{\text{sebeke}}) \\ Vq, \text{evirici}_{ref} &= Vq + \Delta V \text{evirici}_q + \omega I_d (L_{\text{evirici}} + L_{\text{sebeke}}) \end{aligned} \quad (3)$$



Şekil 5: Akım Kontrolü

2.3. LCL Çıkış Filtresinin Tasarımı

LCL filtrenin tasarımına başlamadan önce tek fazlı eviricinin parametreleri Tablo 2'de gösterilmiştir.

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Tablo 2: Tek Fazlı Eviricinin Parametreleri

Parametreler	Değer
Eviricinin Çıkış Gücü	3000 W
Bara Gerilimi	372 V
Şebeke Frekansı	50 Hz
Anahtarlama Frekansı	15 kHz
Şebeke Gerilimi	220Vrms

Çıkış akımının temel frekans bileşeninin çeşitli standartlara göre %5'in altında olması istenmektedir. Bu sebeple çıkış滤re tasarımlı önem kazanmaktadır.

Bu çalışmada LCL tipi çıkış滤resi kullanılmıştır. Başlangıç olarak evirici tarafındaki endüktans değeri hesaplanmak istenmiştir. $L_{evirici}$ değeri maksimum izin verilen akım dalgalanmasına göre seçilmektedir. Akım dalgalanma miktarı %20 olarak seçilerek gerekli hesaplamalar yapılmıştır. İlgili endüktansın hesabı Denklem 4'de verilmiştir (Araújo vd. 2007; Bauer, 2010).

$$L_{evirici} = \frac{U_{dc}}{16 f_{sw} \cdot \Delta I_{L_{max}}} \quad (4)$$

Burada;

U_{dc} : DC bara gerilimi

ΔI_L : Akımın dalgalanma miktarı

f_{sw} : Anahtarlama frekansını ifade etmektedir.

Filte kapasitörünün değeri hesaplanırken baz kapasitor değerinin belirli bir k faktörü alınır. Hesaplarda k faktörü %3 seçilmiştir. Filtre kapasitörünün hesabı Denklem 5'de verilmiştir (Reznik vd. 2014; Liserre, Blaabjerg, ve Hansen 2005).

$$C_f = \frac{k \times P_n}{U_n^2 \cdot 2\pi f} \quad (5)$$

Burada;

P_n : Nominal Güç

U_n : Nominal Gerilim

f : Şebeke Frekansını ifade etmektedir.

$L_{şebekе}$ değeri belirli bir r faktörü alınarak Denklem 6'deki şekilde hesaplanır (Kahlane, Hassaine, ve Kherchi 2014).

$$L_{şebekе} = r \cdot L_{Evirici} \quad (6)$$

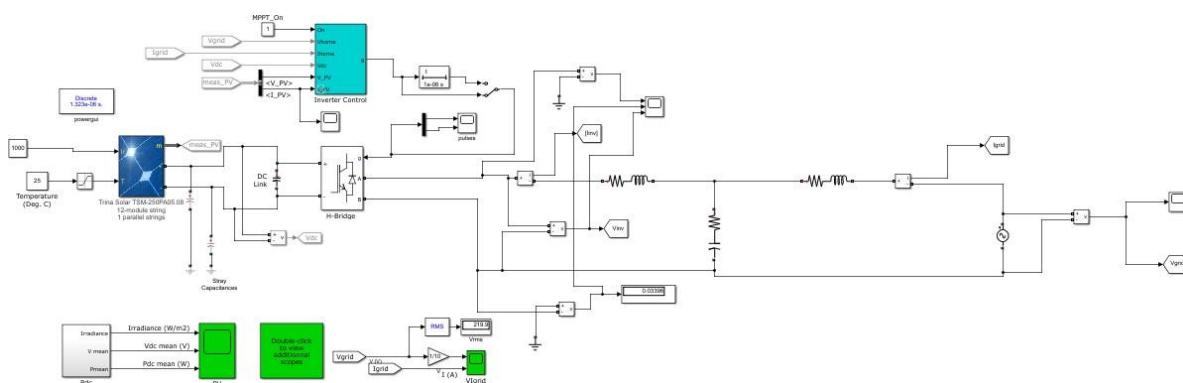
Gerekli hesaplamalar yapıldığında filtre değerleri Tablo 3'de belirtilmiştir.

Tablo 3: Hesaplanan Filtre Değerleri

Filtre	Sonuçlar
$L_{evirici}$	1.40×10^{-3}
$L_{şebekе}$	2.5×10^{-3}
$C_{kapasite}$	5.91×10^{-6}

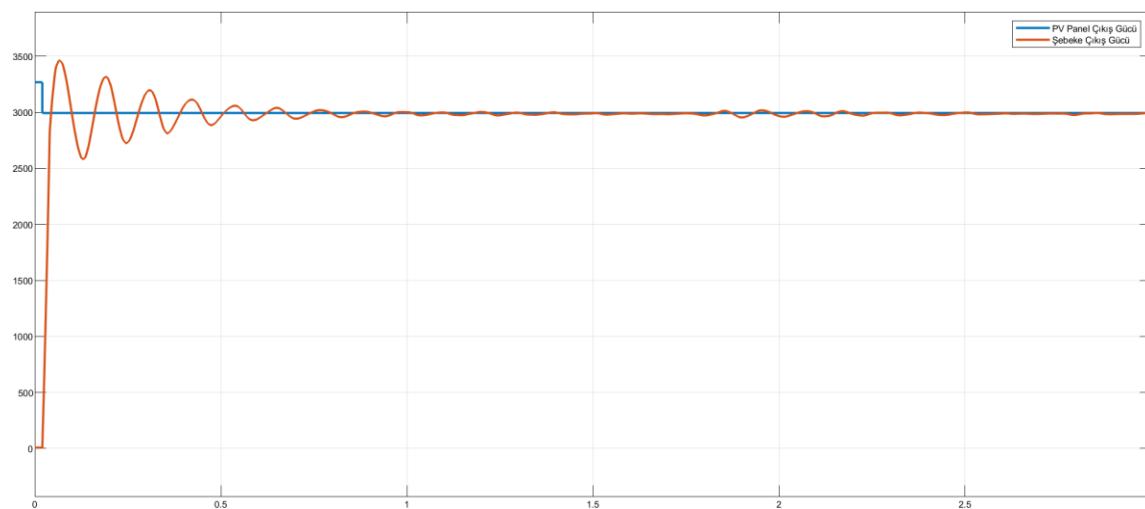
3.SİMÜLASYON SONUÇLARI

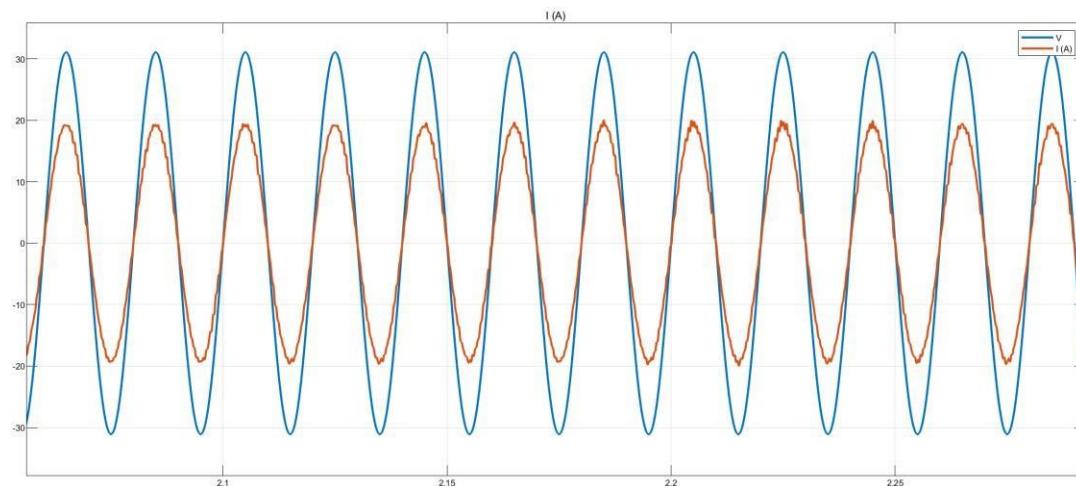
3kW gücünde bir fotovoltaik sistemin farklı çalışma durumlarındaki performansı Matlab/Simulink ortamında uygulanmış olup evirici çıkış akımının temel frekans bileşeninin toplam bozulum değerleri hesaplanmıştır. Şekil 6'da şebeke bağlılığılı çatı üstü evirici uygulama devresi, Şekil 7'de şebeke tarafından talep edilen 3kW gücüne göre Şebeke-PV panel güç ve gerilim-akım grafiği, Şekil 8'de şebeke tarafından talep edilen 2kW gücüne göre şebeke-PV panel güç ve gerilim-akım grafiği, Şekil 9'da şebeke tarafından talep edilen 1kW gücüne göre Şebeke-PV panel güç ve gerilim-akım grafiği verilmiştir. Akım-Gerilim tepe değerleri daha anlaşılır görülmesi adına şebeke gerilimin $1/10$ 'u alınarak grafiklerde gösterilmiştir. Ek olarak, şebeke tarafından talep edilen gücüne göre çıkış akımının toplam bozulum değerleri üç durum için Tablo 4'de gösterilmiştir.



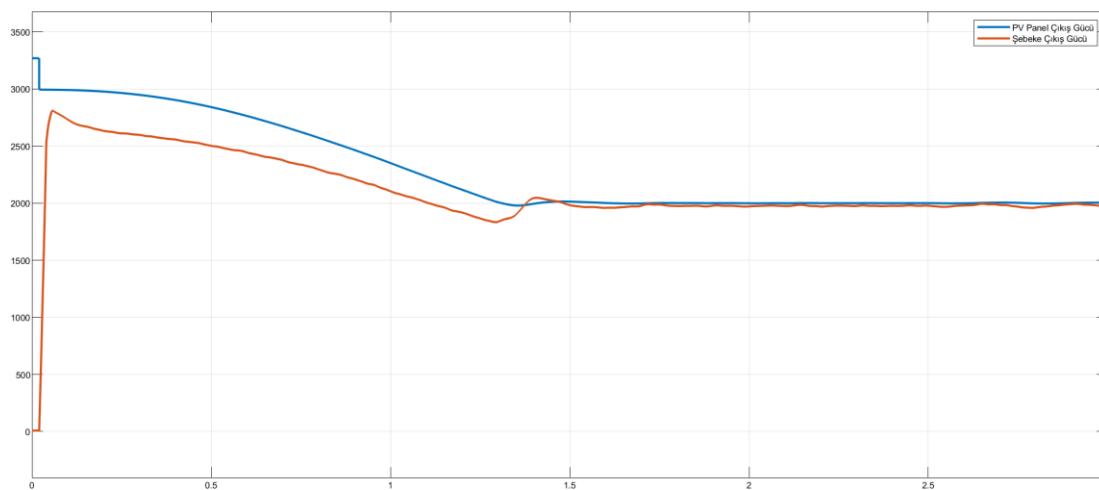
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Sekil 6. Şebeke Bağlılı Çatı Üstü Evirici Uygulamasının Devresi

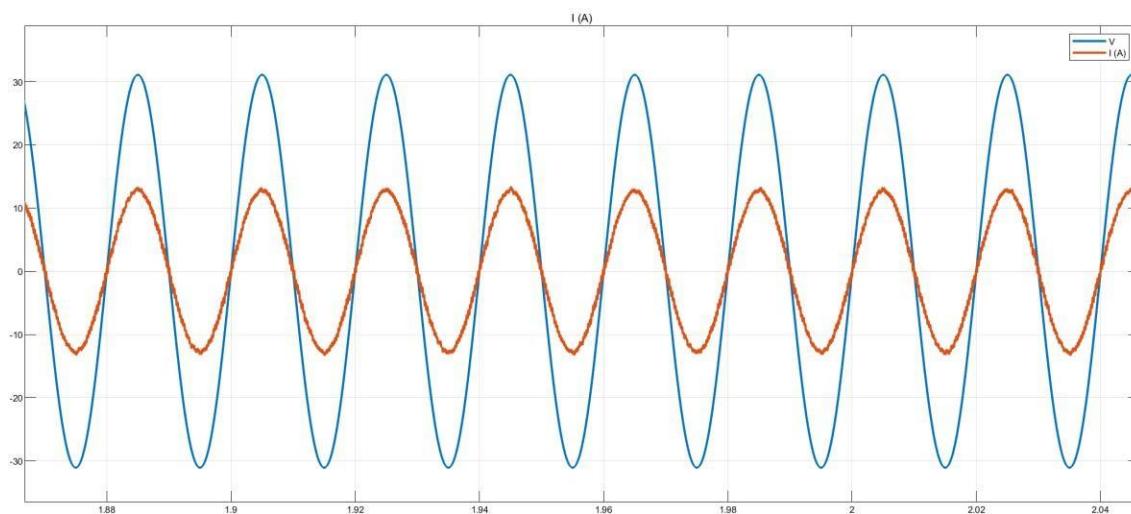




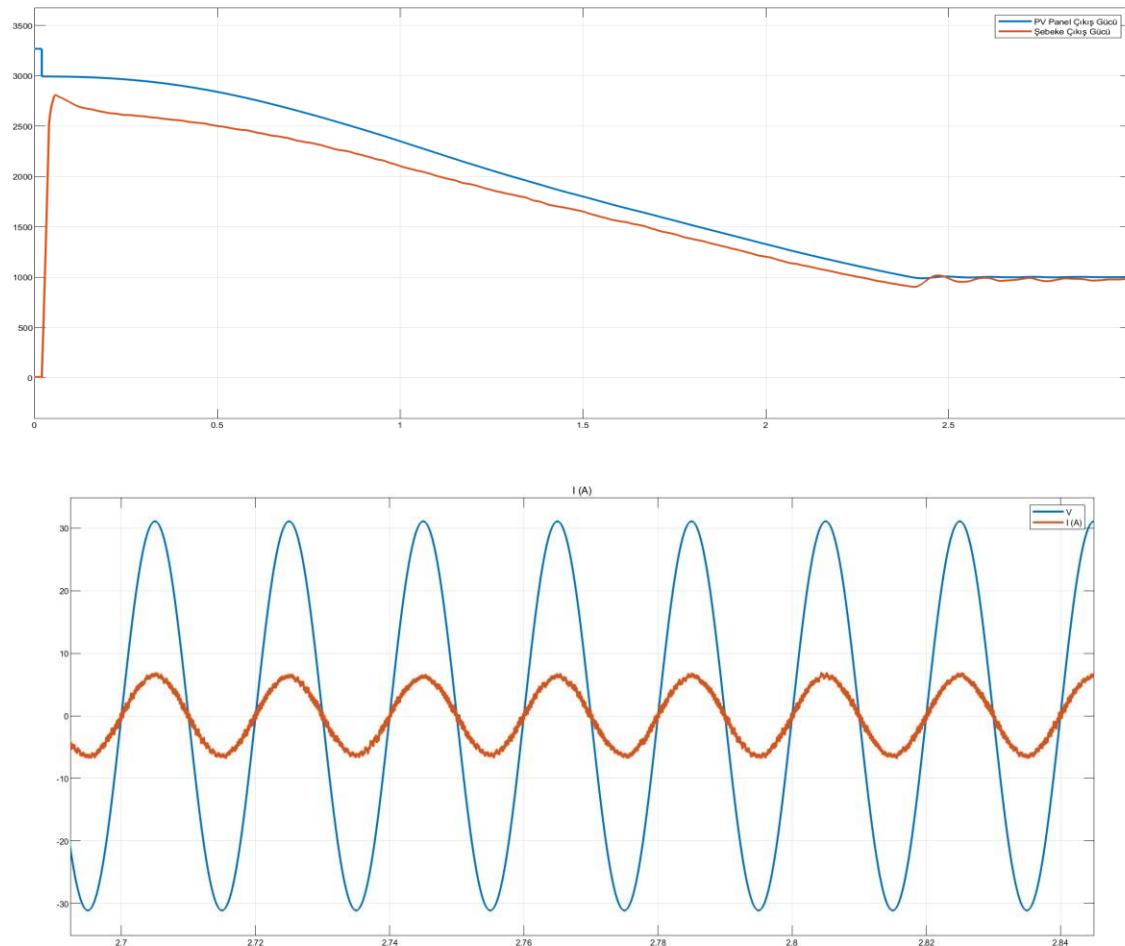
Şekil 7. 3kW İçin Şebeke-PV Panel Güç ve Gerilim-Akım Grafiği



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Şekil 8. 2kW İçin Şebeke-PV Panel Güç ve Gerilim-Akım Grafiği



Şekil 9. 1kW İçin Şebeke-PV Panel Güç ve Gerilim-Akım Grafiği

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Tablo 4: Çeşitli Güç Durumları için Toplam Bozulum Değerleri(THD)

Güç Değerleri	Toplam Bozulum Değerleri
3kW	%3
2kW	%3,48
1kW	%4,12

4. SONUÇLAR

3kW gücünde bir fotovoltaik sistemin farklı çalışma durumlarındaki performansı Matlab/Simulink ortamında gerçeklenmiştir. Çeşitli güç değerleri için analizler yapılmış olup istenen aktif güç kontrolü sağlanmıştır. Evirici güvenheten gelen ışınım değişimine göre PV sistemin ürettiği maksimum gücü şebekeye aktardığı gözlemlenmiştir. Eğer şebeke tarafından daha az güç şebekeye verilmesi talep edilmesi durumunda evirici kontrol sistemi bu yeni güç değerine uygun referans akımın değerini oluşturarak şebekeye istenen gücün verilmesi sağlanmaktadır. Standartlara uygun THD değerini elde edilmek için LCL filtre yapısı kullanılmıştır. Bu bağlamda daha düşük endüktans ve kapasitans değerleri belirlenerek değişken güç durumlarında standartlara uygun istenen THD değerleri sağlanmıştır.

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ULAŞIM AĞLARINI KESEN AKARSU GEÇİŞLERİNİN HİDROLİK ANALİZİ

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ÖZET

Doğu Karadeniz Bölgesi’nde birçok bölgede çok sık taşın olayları görülmekte ve taşınlar sırasında havzalarda erezyon ve akarsu kıyılarında aşınma olayları vuku bulmaktadır. Bahar aylarındaki ani sıcaklık artışı ile eriyen kar sularının yağmur şeklindeki yağışlarla da birleşmesi neticesinde yüksek debiler oluşmakta ve yatağına sığmayan sular etrafına yayılarak taşınları meydana getirmektedir. Yaz aylarındaki yoğun, kısa süreli yağışlar da ani akışa geçmekte ve taşınlara meydan verebilmektedir. Havzalardan ve akarsulardaki kıyı aşınmalarından kaynaklanan rüsumatın da etkisiyle, karayolu ve demiryolu güzergahları üzerinde bulunan menfezlerde yapısal tedbirler alınması gerekmektedir. Bu çalışmada; öncelikle Rize ili Ardeşen ilçesi Işıklı Yayla Mahallesi’nde yer alan Okurdile Deresi’nde havza büyülü dikkate alınarak Rasyonel Metotla 100 yıl tekerrürlü taşın debisi belirlenmiştir. Daha sonra, Okurdile Deresi üzerinde farklı konumlarda ve taşın riski bulunan üç farklı menfezde Hecras, HY-8, Culvert Master ve Culvert-Studio hidrolik yazılımları ile taşın analizi yapılmış, modellerin sonuçları değerlendirilerek kıyaslanmıştır. Tüm hidrolik modellerde mansap bölgesinde yer alan menfezin taşın analizleri açıklanmış, menfez planı, enkesiti ve boykesiti verilerek elde edilen sonuçlar grafik ve tablolardan yardımçı olarak sunulmuştur. Yapılan hidrolik analizler ve değerlendirmeler sonucunda Okurdile Deresi’nin memba bölgesinde yer alan iki menfezin hidrolik açıdan yetersiz ve taşın riskinin olduğu ortaya konulmuştur. Bu menfezler için menfez boyutlarının revize edilmesi ve bazı önlemlerin alınması gerekliliği görülmüştür.

Anahtar Kelimeler: Menfez Hidroliği , HY-8 ,Hecras ,Culvert Master, Culvert Studio

HYDRAULIC ANALYSIS OF RIVER CROSSING ROAD NETWORK

ABSTRACT

Flood events have been observed in many regions in the east part of the Black Sea Region. Continuous flooding and coastal carving events have occurred, which have been recorded. Sudden increase of the temperature with the coming of the spring leads to melting of the snow and river flood occurring. In summer time, sudden and heavy short time rain also leads to river flooding. On the other hand, the sedimentary effects result from the negative structure of the basin and flood showed the necessity to take precautions at the determined culverts of the highway and the railway route. In this study, the 100 year flood discharge of the Okurdile Creek located in Rize Ardeşen Işıklı Plateau calculated with the Rational Method concerning the size of the basin area. Then, flood analysis of three different culverts located at differential locations on Okurdile Creek and containing flood risk has been determined by Hecras, HY-8, Culvert Master and Culvert-Studio hydraulic software and the results of the models were evaluated using the comparison method. For all hydraulic software, the stages of flood analysis of the culverts located in the downstream region are described by showing the culvert plan, cross-sections and profiles and the results are explicated with graphics and tables. As a result of the evaluations made, it has been revealed that two culverts located in the upstream region of the Okurdile stream are not found to be hydraulically sufficient and hence, results to flood risk. With the hydraulics analysis of these culverts, it has been determined that it is necessary to revise the dimensions of the culverts and to take some measures.

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Keywords: Culvert Hydraulics, HY-8, Hecras ,Culvert Master, Culvert Studio

1. GİRİŞ

Yüksek yoğunluklu yağışın etkisiyle kısa zamanda akarsu hacminin artarak kendi yatağını aşması durumuna akarsu taşkını denmektedir. Sel ve taşkınlar genellikle akarsuların vadilerinde ve akarsuların oluşturduğu havzalarda olmaktadır. Taşkınlar akarsu yatağının çevresinde bulunan tarla ve bahçe gibi tarım arazilerine, depo ve fabrika gibi iş yerlerine, okul, bina ve hastane gibi yerleşim alanlarına ve köprü, menfez gibi sanat yapılmasına geri dönüşümü çögulnukla mümkün olmayan zararlar verebilmektedir. Taşkınların meydana gelmesi ve oluşturduğu zararın büyüklüğü, önemli oranda o bölgenin klimatolojik biyolojik ve jeolojik özellikleri ile doğrudan bağlantılıdır.

Doğal afetlerin etkileri düşünüldüğünde tüm dünyada olduğu gibi ülkemizde de sel ve taşkınlar ilk sıralarda yer almaktadır. Taşkınların etkilerinin azaltılabilmesi için bir takım önlemler alınması gerekmektedir.

Akarsu yataklarının düzenlenmesi, sel kapanı ve bağlama tasarlanması, akarsu yataklarının ıslah edilmesi ve ulaşımı sağlayan sanat yapılarının gerekli kontrollerinin yapılması bu önlemlerden bazlılarıdır. (DSİ, 2019).

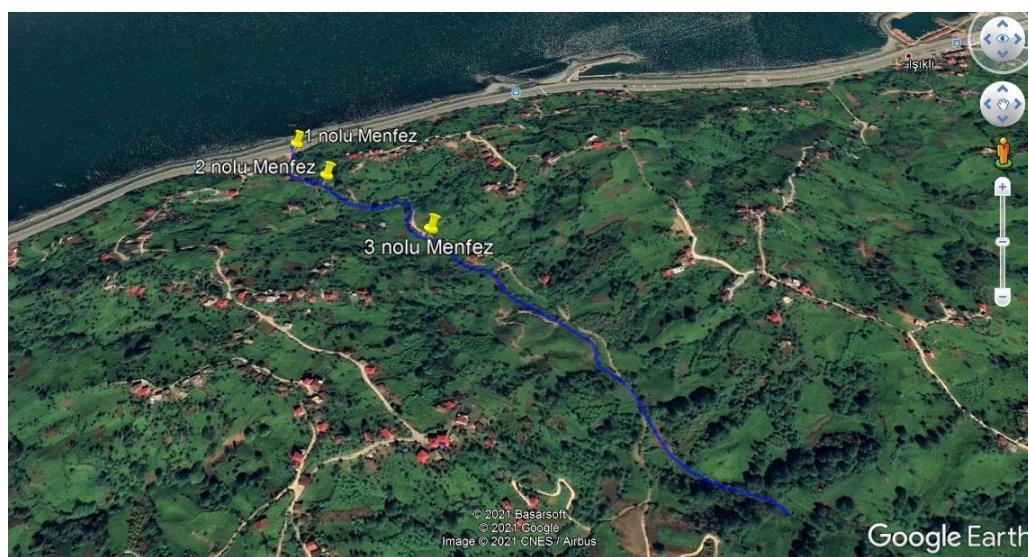
Karadeniz bölgesinde sel olayları genellikle bahar ve yaz aylarında oluşmaktadır. Kuzey ve batı avrupalıdan ülkemize ulaşan hava kütlelerinin nem kazanarak karadenizde bulunan kıyı dağlarının denize bakan yamaçları boyunca yükselmesi ve soğuyarak yağışa dönüşmesi sonucunda orografik yağış tipi oluşmaktadır. Yoğun şiddetli ve kısa süreli yağışlarından kaynaklı sel ve taşınlar özellikle Doğu karadeniz bölgesinde görülmektedir(Ozcan, 2006).

Bu çalışmada Rize ili Ardeşen ilçesi Işıklı Yayla Mahallesi’nde yer alan Okurdile Deresi’nde bulunan üç farklı karayolu menfezinin bilgisayar yazılımları(Hecras, HY-8, Culvert Master ve Culvert-Studio) yardımıyla hidrolik analizi yapılmıştır. Proje alanındaki tekerrürlü taşın debileri farklı yöntemlerle hesaplanmış, havza büyülüüğü dikkate alınarak rasyonel yöntem seçilerek analizlerde kullanılmıştır.

2. GELİŞME

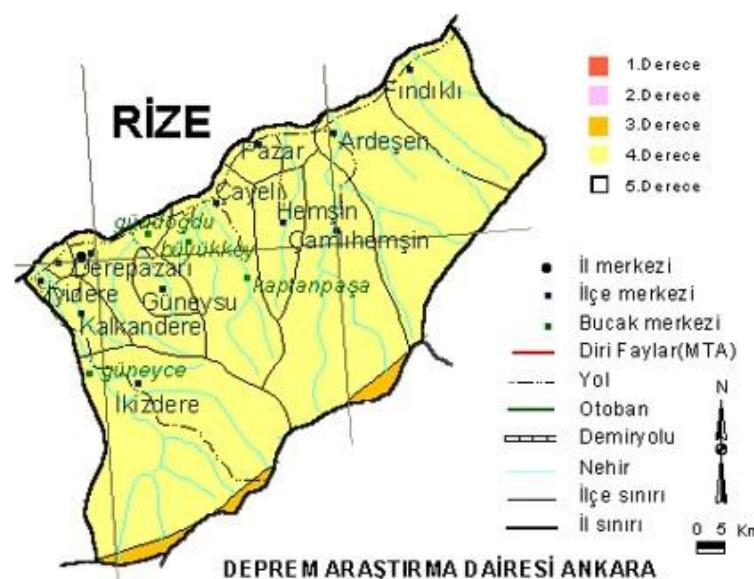
2. 1. Proje Alanı

Proje sahası, Rize ili sınırları içerisinde Ardaşen ilçesi Işıklı köyü Yayla Mahallesinde olup, Okurdile deresini, akarsu vadilerini, yol sanat yapılarını, tarım arazilerini ve yerleşim yerlerini kapsamaktadır. Okurdile Deresi köy sınırları içerisinde başlayıp mansap noktasında denize dökülmektedir. Analizi yapılacak olan üç adet menfez Şekil 2.1’de görüldüğü üzere bu bölgede bulunmaktadır.



Şekil 2.1 Rize Ardeşen İlçesi Işıklı Köyü

İnceleme alanında yaşıdan gence doğru çağrıyan formasyonu, çayırbağ formasyonu, bakırköy formasyonu ve kaçkar granotoitleri görülmektedir. Bölge en genç zamanda oluşan örtü malzemesi alüvyonlardır.. Alüvyonlar ve sekiller daha çok büyük dere yatakları ile denize yakın kesimlerde izlenmektedir. Bunlar alttaki yaşı birimlerden türeyen değişik boyuttaki volkanik kökenli kum ve çakıllardan oluşmuş, kötü boylanmalı güncel oluşuklardır. Rize ili yöresinde iki seki seviyesi saptanmıştır.



Şekil 2.2 Rize ili Deprem Haritası

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Rize, eryüzünün en aktif fay zonlarından biri olan Kuzey Anadolu Fay Zonu'nun (KAFZ) yaklaşık 180 km kuzeyinde yer almaktadır; Şekil 2.2'de görüldüğü üzere T.C. Bayındırlık ve İskan Bakanlığı tarafından hazırlanan Türkiye Deprem Bölgeleri haratasına göre Dördüncü (4) Derece Deprem Bölgesi içine girmektedir. KAF, Alp – Himalaya kuşağının en aktif bölgelerinden biri olup; D- B doğrultulu ve buna dik yönde bulunan kırık sistemlerine sahiptir.(Durmaz, 2016)



Şekil 2.3 1-Nolu Menfezin Gösterimi

Şekil 2.3'de görüldüğü üzere 1-Nolu menfez Okurdile deresinin mansap bölgesinde Karadeniz sahil yolunun kesiştiği bölgede bulunmaktadır. 3 metre genişliğinde 2.5 metre yüksekliğinde iki adet kutu menfezden oluşmaktadır. Taban eğimi %2 olmak üzere yaklaşık 18 m uzunluğundadır.



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Şekil 2.4 2-Nolu ve 3-Nolu Menfezin Gösterimi

2-Nolu Menfez şekil 2.4'den görüleceği üzere Okurdile deresi üzerinde memba ve mansap bölgeleri arasında yerleşim yerlerine ve tarım alanlarına yakın bölgede bulunmaktadır. Kutu menfezin yüksekliği 2.5 metre genişliği 3 metredir. Yaklaşık 5 metre uzunluğundaki menfez eğimi yüzde %3'dür.

Şekil 2.4'de görülen 3-Nolu menfez ise Okurdile deresi'nin memba bölgесine yakın konumda bulunmaktadır. Menfez üzerindeki yol genişliği yaklaşık 10 metre olup 2x2 kutu menfez tipindedir. Su seviyesi özellikle bahar aylarında yol seviyesine kadar yükselebilmekte kritik duruma geçebilmektedir.

2. 2 Hidrolojik Veriler

Okurdile Deresi 2,75 kilometre uzunluğundadır. Mansabında Kuzeye akarak Karadeniz'e dökülmektedir. Proje alanı ve civarında MGM ve DSİ tarafından işletilmekte olan meteoroloji gözlem istasyonları bulunmaktadır.

Proje kapsamındaki tesis yerleri taşının değerlerinin hesaplanması istatistiksel ve sentetik taşının hesaplama yöntemleri kullanılmıştır. İstatistiksel metodlardan Noktasal Taşın Frekans Analizi (NTFA) ve Bölgesel Taşın Frekans Analizi (BTFA) yöntemleriyle gözlemlenmiş akımlar yardımcı ile taşının değerleri hesaplanmıştır. Taşın hidrografının sentetik yöntemler ile bulunmasında ise Süperpozesiz Mockus ve Rasyonel Yönteminden faydalanyılmıştır. Her bir yöntemle hesaplanan taşınlar karşılaştırılmış ve proje tasarımasına esas taşın debisi belirlenmiştir. (Durmaz, 2016)

Tablo 2.1'de görüldüğü üzere

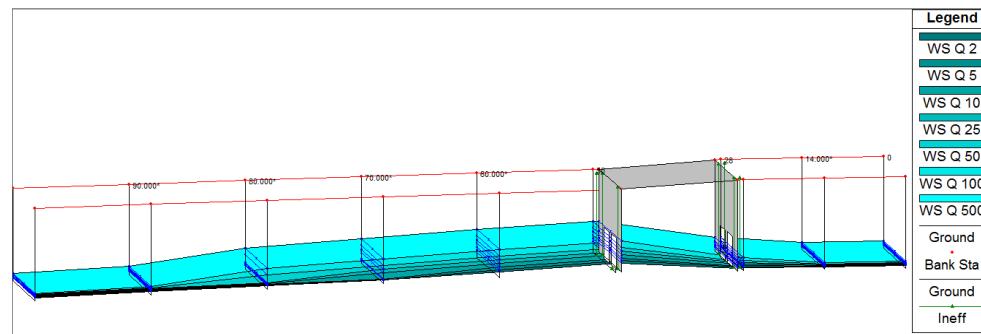
Tablo 2.1. Proje Taşın Debi Değerleri

Sıra No	Adı	Yağış alanı (km ²)	Önerilen Yöntem	Önerilen Proje Taşın Debi Değerleri (m ³ /s)							
				Q ₂	Q ₅	Q ₁₀	Q ₂₅	Q ₅₀	Q ₁₀₀	Q ₅₀₀	Q ₁₀₀₀
1	Okurdile Deresi	2.43	RASYONEL	8.40	11.20	14.30	19.40	24.40	30.70	42.00	46.90

2. 3 HECRAS

A.B.D Askeri Mühendislik Hizmetleri tarafından geliştirilmiş kararlı ve kararsız akım analizi yapabilen çok işlevli bir paket programdır. Köprü ve menfez gibi yol sanat yapılarının hidrolik analizinde en çok kullanılan programlardan birisidir. Analiz için gerekli veriler tanımlanırken menfez bilgileri ile birlikte, akarsuya ait manning pürüzlülük katsayı, tekerrürlü taşın debileri, akarsu memba ve mansap uçlarının eğimleri gibi bazı hidrolik parametreler de programa tanımlanmalıdır.

Analiz sonucunda derenin plan enkesit, boykesit ve su yüzü profillerine ulaşılabilir. Profiller farklı dere debileri için ayrı ayrı incelenebileceği gibi Şekil 2.5'de görüleceği üzere tek profil üzerinde de gösterilebilir.



Şekil 2.5 1-Nolu Menfezin 3-D Profil Gösterimi

Veri sonuç tablosunda menfez giriş ve çıkış taban kodu, kritik ve normal su yüksekliği, giriş ve çıkış kontrollü su yükü değerleri gibi bazı değerlere ulaşılabilir. Su seviyesinin menfezi aşıp yol kotuna ulaşması durumu menfez taşkını göstermektedir. Şekil 2.6'da görüleceği üzere menfezde taşkın durumunu belirlemek için Qweir kolonu incelenmelidir. Bu kolon taşkın olması halinde ne kadarlık debinin taşkında kullanıldığını belirtir. Boş olması ise taşkın oluşmadığını göstermektedir. (Hecras, 2008)

HEC-RAS Plan: Plan 02 River: okurdile Reach: menfez-1												
Reach	River Sta	Profile	E.G. US. (m)	W.S. US. (m)	E.G. IC (m)	E.G. OC (m)	Min El Weir Flow (m)	Q Culv Group (m³/s)	Q Weir (m³/s)	Delta WS (m)	Culv Vel US (m/s)	
menfez-1	40	Culvert #1	Q 2	8.06	7.97	8.06	8.01	13.90	8.40		0.97	2.39
menfez-1	40	Culvert #1	Q 5	8.26	8.17	8.26	8.20	13.90	11.20		1.07	2.64
menfez-1	40	Culvert #1	Q 10	8.47	8.36	8.47	8.39	13.90	14.30		1.18	2.86
menfez-1	40	Culvert #1	Q 25	8.77	8.65	8.77	8.68	13.90	19.40		1.34	3.17
menfez-1	40	Culvert #1	Q 50	9.05	8.91	9.05	8.94	13.90	24.40		1.48	3.42
menfez-1	40	Culvert #1	Q 100	9.37	9.22	9.37	9.25	13.90	30.70		1.64	3.69
menfez-1	40	Culvert #1	Q 500	9.90	9.72	9.90	9.75	13.90	42.00		1.91	4.09

Şekil 2.6 1-Nolu Menfezin Analiz Sonuç Tablosu

2. 4 HY-8

Federal Karayolları İdaresi(FHWA) tarafından karayolları menfezlerinin hidrolik analizi yapılmak üzere geliştirilmiştir. FHWA 1960 lı yılların başlarından beri menfez hidrolik hesaplarının geliştirilmesinde destekte bulunmuştur. İlk olarak HY-1 sürümü ile başlayan süreç 1980'li yıllarda HY-8 ile devam etmiş 2007 yılı Mart ayın da HY-8'in ilk windows 7.0 versiyonu yayınlanmıştır.

HY-8 memba ve mansap su yükseklik değerlerini ve su yüzü profillerini hesaplayabilir. Çoklu tünele sahip menfezlerde analiz yapabilme ve yol taşkını saptayabilme özelliğine de sahiptir.

Menfezin mansap bölgesinde kanal tipinin tanımlanması için programda farklı seçenekler mevcuttur. Kanal zemin kotları mevcutsa düzensiz şekilde seçilerek bu veriler manning katsayı ile birlikte

tanımlanabilir. Kanal eğimli değilse sabit kotlu seçenek seçilebilir veya anahtar eğrisi verileri varsa bu veriler de kullanılarak tanım yapılabilir.

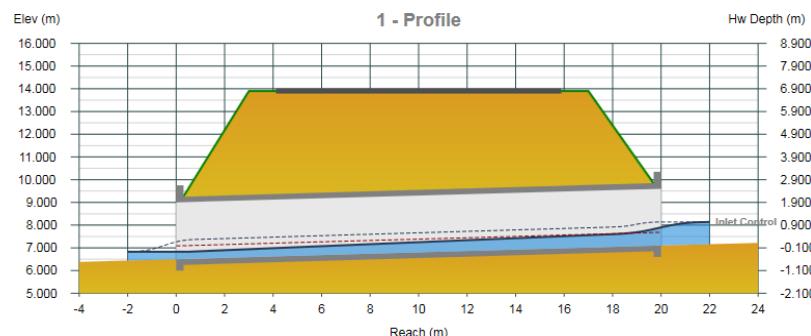
Tablo 2.2 HY-8 Menfez Akım Tipleri

Flow Control	Length Full	Flow Type		Flow Profiles	Outlet		Outlet Depth
		HW>D	HW<D		TW>D	TW<D	
Inlet	none	5	1	S2		n	Normal
Inlet	none	5	1	S1		t	Tailwater (TW)
Inlet	none	5	1	JS1		t	Jump, S1, TW
Inlet	none	5	1	M3, S3, H3, A3		t	Tailwater
Inlet	none	5	1	H3J, A3J		t	H3, Jump, TW
Inlet	part	5	1	S1	f		Full
Inlet	part	5	1	S1	f		Full
Inlet	part	5	1	JS1	f		Jump, S1, Full
Inlet	part	5	1	H3J, A3J	f		H3, Jump, Full
Outlet	none		2	M2, H2, A2		c	Critical
Outlet	none		3	M2, H2, A2		t	Tailwater
Outlet	none		3	M1		t	Tailwater
Outlet	part		3	M1	f		Full
Outlet	all	4		FF	f		Full
Outlet	most	6		FF		t	Tailwater
Outlet	most	6		FF		c	Critical
Outlet	part	7		M1		t	Tailwater
Outlet	part	7		M2, H2, A2		t	Tailwater
Outlet	part	7		M2, H2, A2		c	Critical

Tablo 2.2'den görüldüğü üzere, HY-8'de tanımlı 7 adet akım tipi bulunmaktadır. Giriş kontrollü akımlarda 1 ve 5 nolu akım tipleri çıkış kontrollü akımlar için 2, 3, 4, 6 ve 7 nolu akım tipleri kullanılmaktadır. Giriş kontrollü akımlarda giriş su yükü yüksekliğinin, giriş çapından fazla olması menfezin batık çalışması durumunu ifade eder. Bu durum 5 nolu akım tipini gösterir .Menfez girişinin batık olmama durumu ise 1 nolu akım tipi olarak tanımlanmıştır. (HY-8, 2006)

2. 5 CULVERT STUDIO

Menfez tasarımlı ile birlikte menfez dizaynında kullanılabilen, açık kanal tasarımlını yapabilen Hydrology Studio tarafından geliştirilen bir hidrolik analiz programıdır. Giriş ve çıkış kontrollü akımları modelleme özelliğine sahiptir. Hidrolik eğim çizgilerini, akım rejimleri ile birlikte hesaplar ve profilde görünümünü sağlar. Yol kotuna çıkan taşın hesabını yapabilir ayrıca gömülü menfezlerde de çalışabilmektedir. Culvert-Stuido Rip-rap tasarımı ve oyulma geometrisini tanımlama özelliğine sahiptir.



Şekil 2.7 1-Nolu Menfezin Profil Gösterimi

Culvert- studio da gerekli tanımlamalar yapıldığında Şekil 2.7'de görüldüğü gibi menfez profili üzerinde giriş veya çıkış kontrollü akım bilgisi verilir. Hecras'da olduğu gibi tek profil üzerinde bütün debilerin sonuçları yer almasa da tekerrürlü debiler için ayrı ayrı profillerin görünümü sağlanabilir.

Profilde ayrıca kritik akım yüksekliği, enerji eğim çizgisi ve hidrolik eğim çizgisi bulunmaktadır. Bu çizgilerin konumuna göre batık durum veya giriş ve çıkış kontrollü menfez tespiti yapılabilir

2. 6 CULVERT MASTER

Bentley firması tarafından dizayn edilen Culvert Master programı hızlı menfez hesabı ve analizi özelliğine sahiptir. Tekli ve çoklu tünelli menfez hesabı ile birlikte yol taşkını analizi de yapabilimektedir. SCS veya rasyonel metod kullanılarak dizayn debisi hesaplanabilir. Ek olarak şiddet-zaman-tekerrür eğrisini(IDF) oluşturabilmektedir.

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Menfez bilgileri tanımlanırken hızlı menfez hesabı, yeni analiz ve yeni dizayn olmak üzere üç ayrı seçenek bulunmaktadır. Hızlı menfez hesabında bulunmak istenen değere göre giriş yükü kotu, debi ve ebat hesaplama yapılabılır. Maksimum giriş yükü ve kuyruk suyu yüksekliği tanımlaması yapıldıktan sonra şekil ve malzeme bilgileri programa tanımlanmalıdır. Ebat bilgilerinde HY-8 ve Hec-ras'dan farklı olarak hazır ölçülerde seçenekler bulunmaktadır uygun olan değer seçilip giriş takımı ve giriş kaybı sürdürme katsayısı programa girilmelidir.

3. SONUÇ

1- Nolu menfez, Okurdile deresinin mansap bölgesinde yer almaktadır. Sahilde bulunan karayolun altından geçerek derenin iletimini sağlamaktadır. Okurdile deresinin denize dökülmeden geçtiği son sanat yapısıdır. İki gözlü kutu menfez şeklindedir. Ölçüleri diğer sanat yapılarına göre büyuktur, Hesaplanan taşkın değerleri göz önünde bulundurulduğunda ani yağış durumunda taşkın riski bulunmamaktadır. Buna rağmen dere yatağında moloz harfiyat ve atıkların birikmesi dere akış rejimini olumsuz etkilemeye menfez çevresinde dere yatağını daraltmaktadır.

Bundan dolayı 2006/27 sayılı Başbakanlık Genelgesine göre menfez bölgesinde düzenli olarak kontrollerin yapılması ve atık maddelerin toplanması gerekmektedir.

Tablo 2.3'de görüldüğü gibi giriş kontrollü su yükü değerleri çıkış kontrollü su yükü değerlerinden fazla olduğu görülmüştür.

Tablo 2.3 1-Nolu Menfezin Kontrol Seçimi

	Q2	Q5	Q10	Q25	Q50	Q100	Q500
HY-8	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
HEC-RAS	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
Culvert Studio	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
Culvert Master	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş

2-Nolu Menfez konumu itibariyle Yayla köyü içerisinde yerleşim yerlerinin ve tarım alanın yakınında bulunmaktadır. Bahar aylarında eriyen sular kar suları ile birlikte su seviyesi yükselerek yol seviyesine ulaşmakta ve taşkın oluşumuna sebep olmaktadır. Oluşan taşkınlar yıkıcı etkiye sahip olmasa bile yüksek yoğunluktaki ani bir yağışta risk teşkil etmektedir. Bundan dolayı menfez ebatları revize edilerek su taşıma kapasitesi artırılmalıdır.

Tablo 2.4'de görüldüğü üzere 10 senelik tekerrürlü debi değerlerine kadar çıkış su yükü değerleri giriş su yükü değerinden büyüktür. 25 yıllık debi değerlerinden sonra ise giriş su yükü değeri baskın hale gelmiştir.

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Tablo 2.4 2-Nolu Menfezin Kontrol Seçimi

	Q2	Q5	Q10	Q25	Q50	100	Q500
HY-8	Çıkış	Çıkış	Çıkış	Giriş	Giriş	Giriş	Giriş
HEC-RAS	Çıkış	Çıkış	Çıkış	Giriş	Giriş	Giriş	Giriş
Culvert Studio	Çıkış	Çıkış	Çıkış	Giriş	Giriş	Giriş	Giriş
Culvert Master	Çıkış	Çıkış	Çıkış	Giriş	Giriş	Giriş	Giriş

3-Nolu Menfez Okurdile deresinin membاسında bulunmaktadır. 2-Nolu menfezde olduğu gibi ani ve yoğun yağış durumunda menfez ebatları derenin taşınımı için yeterli kapasitede değildir. Bundan dolayı menfez ölçülerini revize edilerek taşkın oluşumu engellenmelidir.

Tablo 2.5'de görüldüğü üzere giriş su yükü değerleri baskın durumdadır menfez giriş kontrollüdür.

Tablo 2.5 3-Nolu Menfezin Kontrol Seçimi

	Q2	Q5	Q10	Q25	Q50	100	Q500
HY-8	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
HEC-RAS	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
Culvert Studio	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş
Culvert Master	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş	Giriş

KAYNAKÇA

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NUMERICAL INVESTIGATION OF REPLACEABLE REDUCED BEAM SECTION WITH WEAK BEAM SPLICE

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ABSTRACT

This paper presents numerical findings of replaceable reduced beam section with weak beam splice. The replaceable reduced beam section utilized in this paper includes an extended end plated connection and beam splice connection. The extended end-plated connection is used to connect the beam to the column. On the other hand, the beam splice is utilized to connect the beam to the beam. These two connections allow the reduced beam section to be replaced without any flame cut and hydraulic jack. The plates of the beam splice connection are intentionally designed as weak in order to dissipate additional energy by yielding. In this study, the replaceable reduced beam section is examined with the use of a finite element tool, ABAQUS. The numerical model was constructed to mimic the experimented replaceable reduced beam section. The numerical model was exposed to cyclic loading same with the experiment. The results showed that the numerical model successfully captured the hysteresis behavior of the experimented specimen. The strains that occurred in the plates of beam splice connection increased as the rotation increases.

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Keywords: Reduced beam sections, beam splice, finite element tool, ABAQUS

1. Introduction

Reduced beam section was developed by the study of Plumier (1990) in order to eliminate the brittle failure observed in the welded beam-to-column connections After the 1994 Northridge and 1995 Kobe earthquakes. Reduced beam section is one of two strategies which were proposed to shift the damage away from the connection area. One of the solutions is to increase the resistance of the connection. The other one is to reduce the resistance of the beam in a predefined area to shift the damage. The flanges of the beam are trimmed in order to locate the damage to the predefined area.

Different shapes of flange cut were developed (Sophianopoulos and Deri, 2011).

The results of Swati and Gaurang (2014) showed that the seismic performance of RBS exhibited a better hysteresis curve than without RBS. Pachoumis et al. (2009 and 2010) examined the performance of the European sections for the reduced beam sections. Reduced beam sections were investigated under the

weak axis of the column of column-tree connections Oh et al. (2015 and 2016). Roudsari et al. (2015 and 2018) utilized stiffeners in the reduced beam sections in order to improve the seismic performance.

During a severe earthquake, the reduced beam is expected to have serious damage or a failure. Therefore, this beam should be removed and a new beam should be mounted in order that the structure continues its activity. However, for the traditional reduced beam section, flame cut and welding are required to replace the beam and these require intense work time and cost. In order to solve these problems, Özkılıç (2020) proposed a replaceable reduced beam section. The replaceable part of the beam is separated from the beam and column using an end-plated connection and beam-splice connection. Later, Özkılıç (2021) developed a reduced beam section with weak beam splice in order to dissipate more energy. In this connection, the beam splice is deliberately designed as weak in order to allow that it is yielding so that it can dissipate energy.

In this study, a numerical study is conducted to investigate the behavior of the reduced beam section with weak beam splice developed by Özkılıç (2021). The analyses were conducted to verify experimental results and more importantly is to examine the strains that occurred in the beam-splice connection.

2. Numerical Analyses

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Numerical analysis was conducted to examine the performance of the replaceable reduced beam section with a weak beam splice. Numerical analyses were created utilizing ABAQUS finite element program. Numerical models were constructed using solid elements. The column was not modeled in order to reduce computational time and eliminate any convergence problems. NIgeom option in ABAQUS was utilized to introduce geometric nonlinearity for taking account of large displacements and deformations.

The element type of C3D8R, general purpose linear brick element, with reduced integration, was selected to mesh the members. In order to simulate buckling and bending behavior, four elements through the thickness were recommended by Özkılıç (2020). Therefore, four layers through the thickness of flanges, web and plates of beam splice connection were utilized. The small mesh size was selected for the members where yielding is expected. On the other hand, a large mesh size was selected for the rest of the members. The detailed mesh configurations are given in Figure 1.

The bolts utilized in the end-plated connections and beam-splice connections were pre-tensioned using Bolt Loads options in ABAQUS according to AISC 2016 specification for structural steel buildings (AISC, 2016c). In order to apply the loading to the model, a rigid constraint was modeled at the top of

the beam. Cyclic loading mandated by AISC provisions (AISC, 2016b) given in Figure 2 exposed to the rigid region.

The finite sliding surface to surface interaction was defined between beam splice and bolts, between beam splice and beam and between end plate and column flange. The penalty method with a friction coefficient of 0.3 was applied for the tangential behavior. The welding between the end-plate and beam was not explicitly included to the model. Instead, tie constrain was connect end-plate to the beam. The analyses were performed in three steps. In the first step, boundary conditions were defined. The bolts were pre-tensioned in the second step. The beam was exposed to the loading at the last step.

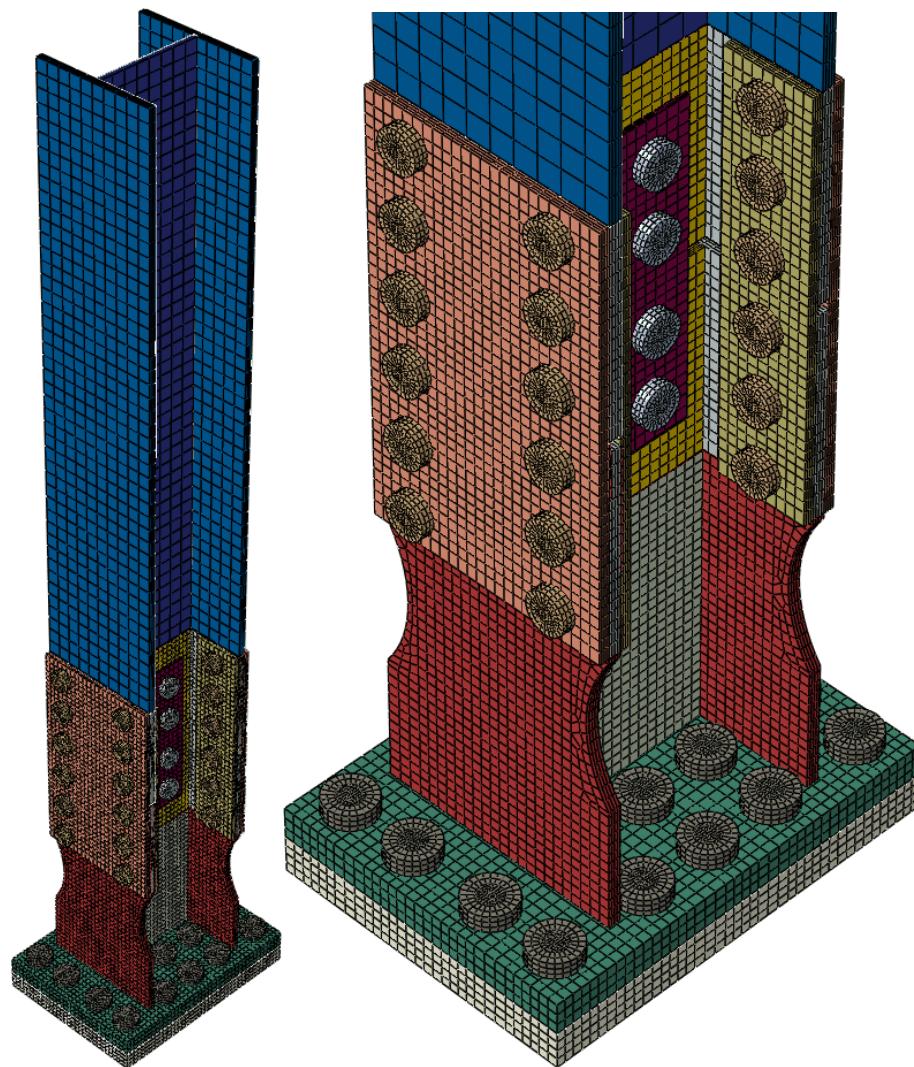


Figure 1. Selected mesh configurations

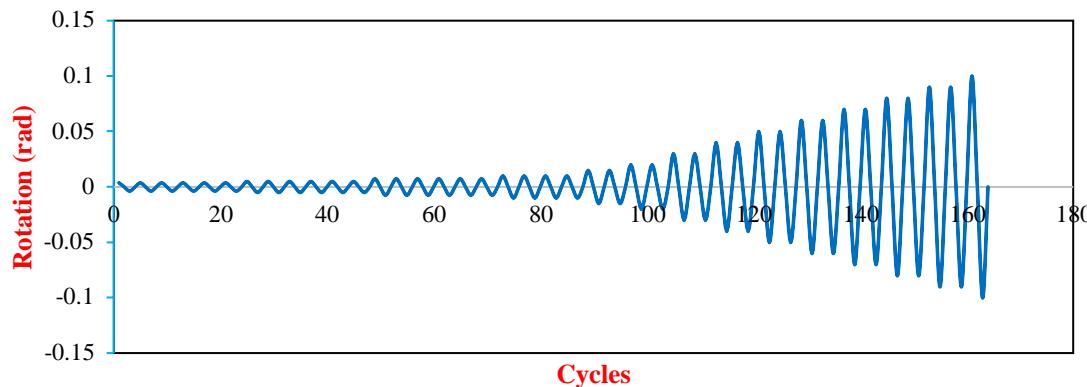


Figure 2 AISC Loading Protocol (AISC, 2016b)

Nonlinear isotropic and kinematic hardening material utilized in the study of Özklılıç (2020) was adapted. The yielding stress and modulus of elasticity were taken from the coupon test. The parameters used in the material model were computed using the following equations:

$$\alpha = \frac{C}{F_y}(\sigma - \alpha)\varepsilon_{pl} - \gamma\alpha\varepsilon_{pl}$$

$$\sigma = F_y + Q_\infty(1 - e^{-b\varepsilon_{pl}})$$

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where C is the initial kinematic hardening modulus, γ is the rate at which C decreases with cumulative plastic strain ε_{pl} , α is the backstress, b is the rate at which the size of the yield surface changes as plastic deformation develops and Q_∞ is the maximum change in the size of the yield surface.

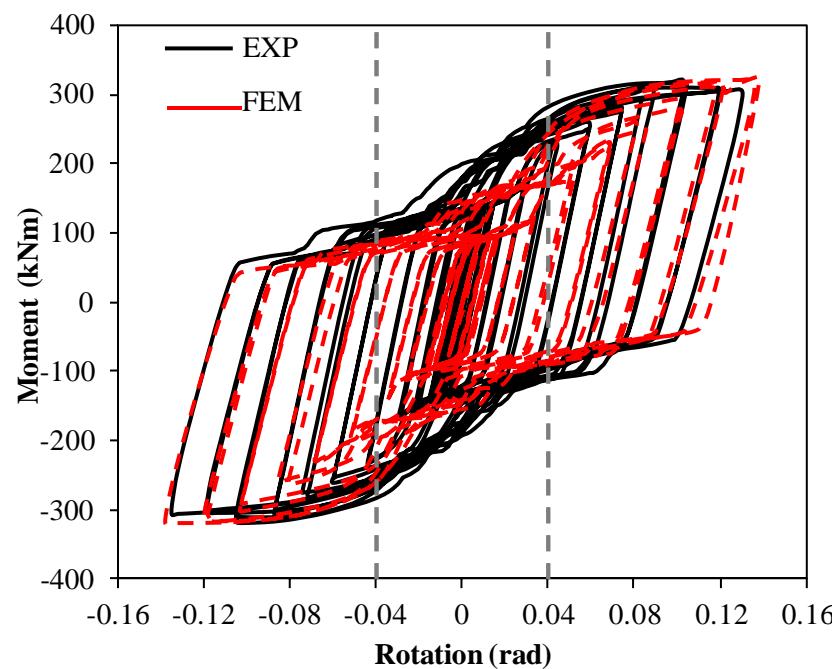
3. Results and Discussion

The numerical study was conducted in order to further investigate the results of the experiment conducted by Özklılıç (2021). Özklılıç (2021) carried out an experiment to study the replaceable reduced beam sections with weak beam splice. Hot rolled I sections of HEA240 section was utilized as the beam. On the other hand, HEB340 was selected as the column. The parameters used in the experiment are given in Table 1. The AISC provision (AISC, 2016a) provides the limitations of these parameters. The experiment was conducted at Structural Engineering Laboratory of Civil Engineering Department in Necmettin Erbakan University.

Table 1 Dimensions of HEA240 section and reduced beam section

HEA240 Section				Reduced Beam Section				
d	b _f	t _w	t _f	a	b	c	e	R
230	240	7.5	12	120	150	24	0	129

The moment rotation curve of the experimented specimen Özklıç (2021) and the numerical study is shown in Figure 3. %5 difference in the maximum load was detected. In earlier cycles, numerical study exhibited in a slightly lower capacity. This can be attributed to the weak beam splice. However, in late cycles, numerical study performed similar capacity with the experimented specimen. When compared to hysteresis behaviors, good conformance was captured between the moments at each cycle (except earlier cycles) of numerical and experimental results.



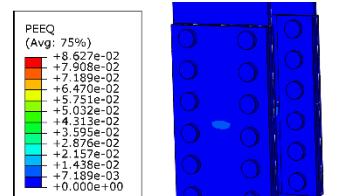
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Figure 3 The Comparison of Experimental Study and Numerical Model

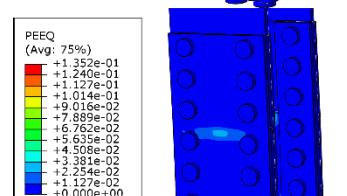
Figure 4 compares deformed shapes of the reduced beam section at 0.03 rad, 0.05 rad, 0.07 rad and 0.09 rad. Moreover, the figure demonstrates PEEQ strains occurred in the reduced beam sections. It is seen that at 0.03 rad almost no PEEQ was observed at the beam splice. As rotation increases, PEEQ distribution spread over the reduced beam section and also the value of PEEQ increased.

Similarly, as the rotation increases, PEEQ distribution at beam splice penetrated towards the edges and also the value of PEEQ increased.

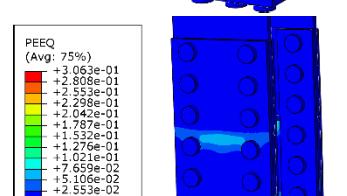
0.03 rad



0.05 rad



0.07 rad



0.09 rad

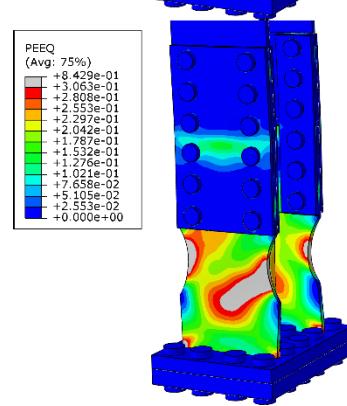


Figure 4 The Strain Observed in the Numerical Model

4. Conclusions

In this study, numerical analyses of the replaceable reduced beam section connection with beam splice connection were carried out. Numerical analyses were performed using the finite element tool, ABAQUS. The developed model has exposed a cyclic loading required by AISC seismic provision. The following can be drawn from this study:

- The replaceable reduced beam section with weak beam splice exhibited stable seismic performance.
- The plate in the beam splice is experienced yielding under cyclic loading. This yielding is demonstrated with the help of PEEQ distributions.
- As the rotation increases, the PEEQ value observed in the reduced beam sections increased and also yielding spread all over the reduced beam section.
- As the rotation increases, the strain observed in the beam splice increased and also the yielding expanded towards the edge.

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RECYCLABLE BUILDING STOCK INVENTORY MODEL (RBS) AND THE ROLE OF ADAPTIVE REUSE IN A MORE EFFICIENT CIRCULAR ECONOMY

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ABSTRACT

Reusing valuable buildings is a prominent way to revitalize historic city centers. Conceptually, adaptive reuse of buildings represents an urban development scenario with emphasis on the circular economy. Granting the buildings' complete life cycle, its extension to prevent any resource loss, and entering building stock into development plans would promote resource recycling strategies. In Iran, despite valuable buildings in historical urban fabrics, little attention has been paid to building maintenance, and the necessity to maintain buildings paved its way only during the last decade as one of the topics in building engineering codes with no executive guarantee. One of the shortcomings of this system is the lack of a comprehensive information system of the building stocks and a database in which there is information about the age, quality, and architectural style of the buildings, containing information about recyclable building stocks and maintenance. This article sought to elaborate a model called the "Recyclable Building Stock Inventory Model" (RBS), creating a sample database for one of the Shiraz historical neighborhoods. Providing indicators to re-classify buildings, there would be three categories for the existing structures: "necessary to maintain", "maintainable", and "replaceable (re-developable)". The model can provide an overview of building stock conditions in each urban area and provide a perspective for more sustainable use of buildings, buildings' life cycle extension, and adherence to the circular economy principles.

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Keywords: adaptive reuse, building life cycle, building stock, circular economy.

MODELING RESIDENTIAL RENTAL VALUE IN BAUCHI METROPOLIS USING HEDONIC PRICING MODEL

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1.0 INTRODUCTION

Residential property has been universally accepted as a basic essential human need that comes only after food and clothing. Housing in all its ramifications is more than a mere shelter since it embraces all the social services and utilities that make a community or neighborhood a livable environment, improves people welfare and a valuable economic asset of every nation (Adedeji *et al.*, 2010; Golubchikov & Badyina, 2012; Jiboye, 2013). The rental values of residential properties are influenced by various building characteristics which are related to neighborhood, location and dwelling characteristics (McDonald & MacMillan, 2007; Aluko, 2011; Anthony, 2012). It is indeed a complex goods which consist of many different aspects including structures which comprises all the physical characteristics of the dwelling, accessibility and facilities that constitute a bundle of services related to housing as well as neighborhood attributes which include the environment and the society in which the dwelling exist (Edward, 1997; Usman, 2015).

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The first and perhaps the most important characteristic of a house is that it is a very large portion of an average household's assets over the life-cycle of the household in many countries (Ozsoy & Sahin, 2009). Therefore, making a decision to buy a house is not an easy task for an average household. The household, before purchasing the house, must decide on the type of house and the way it is to be financed. The second feature that makes housing different from many other goods is that a house is durable, heterogenic and fixed in terms of its location. Thirdly, households, as potential purchasers of houses are different from each other in terms of their preferences. Consequently, each potential house purchaser attributes different values for different features of houses available during a specific time period. As the result, purchasers of houses are likely to be heterogenic. The last feature of houses that makes housing different from many other goods is that there are houses of different ages at different locations within the same

market segment at the same time. These characters of houses as a good make each and every single house very unique in terms of its value and due to these aspects, determining housing prices is not an easy task (Ozsoy & Sahin, 2009).

There are many structural, neighborhood and locational attributes that could have impacts on house prices (Teck-Heng, 2011). The most common structural attributes that are included in measuring property prices are built-up area, size of living area or dining area, number of bedrooms or bathrooms in a house, car porch and internal or external structure of a house (Teck-Heng, 2011). Common neighborhood attributes are quality of public schools, distance to urban park and a view of garden, sea, lake and valley. Distance to workplace, school, retailing outlets and public transportation stations are part of locational attributes (Hui et al., 2006; Jim & Chen, 2006; Redfearn, 2009; Poudyal et al., 2009). It has long been known that residential property values or rental prices depend on prevailing levels of residential amenities or local public goods and that under certain circumstances, that dependence provides a way to measure households' willingness to pay for such amenities or public goods. It is also known that housing values are influenced not only by the characteristics of the house in question but by those of the surrounding neighborhood (Can, 1992; Teck-Heng, 2011)

Determination of housing values is done using different approaches. Traditionally, the cost approach, sales comparison approach, income approach, profit approach and residual approach are mostly used (Scarrett, 2008). However, these approaches are deficient in handling heterogeneity and mass number of properties. Accordingly, the hedonic modeling attempt to overcome this limitation (Ogunba, 2013). The hedonic method accounts for the fact that housing is a heterogeneous good which broadly varies in three important dimensions: relative location, neighborhood and structural characteristics (Yau, 2009). Using the hedonic terminology, one would state that different houses could be characterized by different attributes. According to the hedonic theory, the total price of houses is determined by the amount of these attributes and the implicit price of each attribute (Rotimi & Albert, 2016). This is because the market price of a housing unit can be determined by the buyers' evaluations of the housing unit's bundle of inherent attributes, such as locational, structural, or neighborhood attributes (Freeman 1979; Chin & Chau, 2003; Usman, 2015).

The price of an attribute is named implicit, because it cannot be observed directly on the market, but only indirectly through the total price of the house (Yau, 2009). In order for researchers to include the different features that have impact on housing prices, hedonic price regression model were developed and widely used since the 1920s (Haas, 1922; Wallace, 1926; Waugh, 1928; Court, 1939). There has been a

tremendous amount of literature on the use of hedonic price regression to analyze determinants of housing prices since then and therefore, it is impossible to mention all of them here.

Some of these studies include: Lancaster (1966), Ridker & Henning (1967), Ball (1973), Borukhov et al. (1978), Goodman (1978), Follain & Malpezzi (1980), Mendelsohn (1984), Bover et al. (1989), Arimah (1992), Malpezzi (1998), Cheshire and Sheppard (1998), Bover & Velilla (2002), Mok et al. (1995), Song & Shon (2007), Gao et al. (2006), Gao & Asami (2007) Onur & Hasan (2009). Hedonic price model is widely exploited by public administration, business and academia to estimate willingness to pay for different attributes. In the real estate domain, the popularity of this methodology used for mass valuation can be explained by its applicability in urban planning, property tax assessment, mortgage loan support and price indices calculation to name just several applications (Marko, 2013).

In Bauchi Today, it is not clear how the various mentioned housing attributes influence the rental value of residential properties. Similarly, the price property renters are willing to pay for the housing attributes is not yet ascertained. Such uncertainty could have devastating effect on the investment decision of the property investors in Bauchi metropolis. This massive population creates housing problem in the area, as well as opens opportunities for real estate developers to gain profit over the price of housing with its increasing value over time. It is against this background that this study seeks to modeled residential rental values in Bauchi metropolis using hedonic price modeling with a view to ascertain the specific influences of the housing attributes on rental value and the amount the renters are will to pay for changes in housing attribute in order to help property investors to make sound, viable and rational property investment decision.

The increasing rate of variations on rental values of residential properties among varying residential neighborhoods in many towns and cities in Nigeria, in recent time has continue to dominate discussions within the spheres of practicing estate surveyors and valuers, property; owners, investors, users, estate brokers, as well as policy makers on housing investment and management in Nigeria (Usman, 2015). Cruz (2008) stated that the population and urbanization increases, demand for housing for both owner-occupancy and rental increases.

However, since the middle of the 20th century, house owners, housing investors and house users have struggled to identify the basic factors that influence residential property prices in the global housing market (Fernandez *et al.*, 2011). This problem has attracted a lot of interest from researchers, real estate surveyors and other relevant stakeholders concern with housing development, investment and management. For instance, rental values of a residential properties in a particular residential neighborhood in most cases differs significantly with rental values of similar residential properties in

another residential neighborhood within the same metropolis. Similarly, a rental value of similar houses within the same residential neighborhood also differs due to various silent reasons. While some of the studies are of the view that attributes of residential location are core factors that influences house prices (Fernandez et al, 2011; Ivy & Ernest, 2013), others are of the view that structural attributes such as number of; bedrooms, living rooms, bathroom, toilets, structural condition among others are major determinants of house prices (Semararo & Fregonara, 2013; Anthony, 2012; Bhargava 2013).

Other researchers have yet identified neighborhood attributes as major factors that influence house prices particularly between different residential neighborhoods (Haizan, Yan & Lin, 2013; Tan, 2010; Dziauddin, Alvanides & Powe, 2013 and Douglas et al., 2002, among others). Few Nigerian studies have also investigated the influence of the housing attributes on prices of residential properties (Oluseyi, 2014 in Ibadan; Kemiki *et al.*, 2014 in Ewekoro; Aluko, 2011 in Lagos; Babawale & Yawande, 2011 in Lagos; Famuyiwa & Babawale, 2014 in Lagos, Usman, 2015 in Minna among others).

Despite the growing concern on the issues from both the foreign and local housing market, only a hand full of studies in that regard have been conducted in Nigeria, with no particular study found to have statistically analyzed the combined effect of dwellings, location and neighborhood attributes on rental values of residential properties. Most of the studies on the impact of housing attributes on house prices in the global housing market focused attention on studying the impact of individual housing attributes rather than analyzing the combined effect of the attributes on residential property prices. The most unfortunate is that, no study was found in relation to the impact of housing attributes and housing prices in the current area under study, as all the related studies found in Nigeria were carried out in different geographical regions of the country other than in the area currently being examined.

However, no studies carry out on influence of locational attributes, neighborhood attributes, building attributes on residential rental value in Bauchi. This study will tend to analyze the influence of location, neighborhood, and houses characteristics on residential rental values using hedonic pricing model.

2.0 LITERATURE REVIEW

Residential housing market

Current financial sector woes have left many real estate owners and investment fund managers wondering how to properly value real estate assets. Recent mark-to-market valuations based on comparable properties and area cap rates are driving down the market value of many assets even though the underlying fundamentals have not changed (Ariyawansa, 2009). The rental housing market is characterized as imperfect and inefficient, because the product is long-lasting, fixed on a given site,

heterogeneous, and controlled by extensive governmental regulation. Since each rental housing market is confined to a given area, characteristics of a market in one area are not necessarily an accurate representation of other markets (Ariyawansa, 2009).

The rental housing market is significant in neighborhood closer to urban areas specially where there are factories and higher educational institutes. In land owners' perspective, his ultimate goal is to make a profit with little additional effort (Shami, 2011). For that better to determine the maximum amount of income can be gain from rental without having any vacancies. Most probably land lords determine the rent amounts by guessing, or decided arbitrarily or ask charges of comparable adjoining properties due to the absences of a particular guideline (Shami, 2011). Recently some observers argue that the growth in residential property prices and rents were spurred by the increased number of real estate agents and their speculations in the real estate market (e.g. Vakili, 2008; Shami, 2011; Azizianpour, 2008; Somalov, 2010).

Factors affecting residential property values

The rental values of residential properties are influenced by various housing characteristics which are related to neighborhood, location and dwelling characteristics (McDonald & MacMillan, 2007; Aluko, 2011; Anthony, 2012). McDonald & MacMillan, (2007) in their study of neighborhood characteristics on house value, identified two categories of neighborhood variables which could positively or negatively influence house price. The positive neighborhood variables outlined by these researchers which are termed neighborhood amenities, include schools, playground, hospitals and health centers, police station, parks and recreational facilities, sporting facilities, shopping centers, community services and other environmental considerations like good drainages and waste disposal management tools. The negative neighborhood variables termed as disamenities include industrial noise, neighborhood crime rate, air pollution, heavy traffic on streets and contaminated environment.

On location, Thorncroft (1965), Poudyal et al. (2009) and Aluko (2011) have all asserted that residential property value depends majorly on access to those locations which support related uses, such as proximity to work place, shopping centers, distance to schools, nearness to recreational facilities, accessibility to public transport, open space, proximity to place of entertainment, place of worship, distance to CBD and other related community services. The variables are however positive locational attributes that could positively impact on property value. Tom (2003) stated that localized negative externalities such as nuisance could affect house price negatively. He emphasized that houses located at close distance to hazardous waste site or close to high voltage power transmission line or flood areas are liable to have a decline in value.

For dwelling characteristics, Thorncroft (1965) and Anthony (2012), identified various dwelling characteristics that influences residential house values. These attributes highlighted include the forms and quality of estate with regards to it layout, structure and design, age, condition of dwelling facilities, fences and gates, number of rooms, floors adequacy of ventilation, availability of garage, swimming pools, landscape ,material type and quality used for construction, quality of finishing and available land area.

The increasing rate of variations on rental values of residential properties among varying residential neighborhoods in many towns and cities in Nigeria in recent time has continue to dominate discussions within the spheres of practicing estate surveyors and valuers, property owners, investors, users, estate brokers, as well as policy makers on housing investment and management in Nigeria (Usman, 2015). Real estate has no value if it has no utility, if it is not scarce and if it is not effectively demanded. Real estate has significance only if it satisfies man's needs and desires. It is this man's collective desire for property that gives rise to value (Olusegun, 2003).

Location

On location, Poudyal et al. (2009), Aluko (2011) and Usman (2016) have all asserted that residential property value depends majorly on access to those locations which support related uses, such as proximity to work place, shopping centers, distance to schools, nearness to recreational facilities, accessibility to public transport, open space, proximity to place of entertainment, place of worship, distance to CBD and other related community services. The variables are however positive locational attributes that could positively impact on property value.

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Physical attributes

Physical attributes of a building is refers to the characteristics of such building itself which is known as dwelling features. For dwelling characteristics, Anthony (2012) and Usman (2016), identified various dwelling characteristics that influences residential house values. These attributes highlighted include the forms and quality of estate with regards to it layout, structure and design, age, condition of dwelling facilities, fences and gates, number of rooms, floors adequacy of ventilation, availability of garage, swimming pools, landscape ,material type and quality used for construction, quality of finishing and available land area. Lee (2010) studied the impact of leisure and sport facilities on house value with an increase number of dwelling characteristics variables.

Building conditions as a determinant of property price

The literature on the implicit prices of various inborn building characteristics, such as floor level, location, size and service provision, is profuse (Yiu & Wong, 2005;Yau, 2009). These inborn

characteristics are relatively fixed and usually difficult to change technically or economically once the building has commenced operation. In the other extreme, there exist some quality aspects that change over time but have impacts on property prices. One of these aspects is the property condition. Building conditions was found to be a significant property price determinant. The results of that study evidenced price premiums for properties in better condition in terms of interior and external physical environments.

Neighborhood attributes

McDonald & MacMillan, (2007) in their study of neighborhood characteristics on house value, identified two categories of neighborhood variables which could positively or negatively influence house price. The positive neighborhood variables outlined by these researchers which are termed neighborhood amenities, include schools, playground, hospitals and health centers, police station, parks and recreational facilities, sporting facilities, shopping centers, community services and other environmental considerations like good drainages and waste disposal management tools. The negative neighborhood variables termed as disamenities include industrial noise, neighborhood crime rate, air pollution, heavy traffic on streets and contaminated environment.

Impact of Neighborhood Characteristics on House Prices

Various studies have been carried out on neighborhood amenities and disamenities that affects house value. For instance, on neighborhood amenities, Chang & Lin (2012) investigated the impact of neighborhood characteristics on house price in Taipei, Taiwan, using hierarchical linear modeling. The purpose of the study was to examine the relationship between neighborhood characteristics and house price. The study adopted three neighborhood variables which include environmental quality, convenience of life; and sport and leisure facilities as the explanatory variables. The data for the survey was obtained through secondary sources derived from 2006 survey of residential houses status by agency of construction and planning, Ministry of interior affairs, Taiwan. The data covered dwellings from 31 neighborhoods. Five point liker scales was used in measuring the satisfaction level of items comprises in each of the house characteristics and neighborhood variables adopted for the study. The variables included are: convenience of life; and sport and leisure to the earlier variable “time to get to down town” as explanatory variables.

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Residential value determination

The real estate market is complex and challenging in nature. Each piece of property is a unique and multidimensional good differentiated into a bundle of attributes that vary in quantity and quality (Marco, 2008). As such, the mainstream economist's explanation that rent is solely determined by supply and demand seems rather incomplete and sociologically naive as rents within any particular area are set by

landlords whose decisions are shaped by a variety of social as well as economic factors (Gilderbloom, 1985; Amenyah, 2013). Economists and financial analysts have therefore invested a tremendous amount of energy and effort in an attempt to explain what determines residential sale and rental prices (Gilderbloom, 1985; Amenyah, 2013).

At least, the bundle of factors that determine rent can be broadly classified into economic and non-economic factors. Some of the economic factors are interest rate and income level. (Égert and Mihaljek, 2007) established that a robust negative relationship between real interest rate and housing prices exists. (Égert & Mihaljek, 2007), (Berglund, 2007), (Marco, 2008) and (Amenyah, 2013) all found that there exists a positive relationship between income and housing prices. This suggests that increases in incomes give incentives to landlords to take advantage of the increased purchasing power of tenants and increase house prices and rents, though this cannot happen in all localities within a city. Population, as a non-economic factor, is found to have a positive relationship with house prices (Égert & Mihaljek, 2007; Amenyah, 2013). Increases in population lead to excess demand for accommodation in the short run and eventually push rent up. Sometimes, the location of an apartment can have a significant impact on the level of rent that a household is likely to pay.

Hedonic pricing model Origin

It has been noted that in property literatures there are mainly four approaches in the construction of house price index. These are mainly the hedonic regression, repeat-sales, hybrid and the sale price appraisal ratio (SPAR). Among these four methods, hedonic regression mainly dominates the literatures due to its ability to decompose house prices with respect to specific housing attributes (Lizam et al, 2014). The method was first introduced by Griliches & later formalised by Rosen in 1974. The basis of hedonic hypothesis, as pointed by Rosen (1974), is that the product or goods are valued by their specific attributes. Hedonic pricing models can be useful to determine the intrinsic value of each attribute, as well as to predict transaction prices. This can be particularly useful when traditional discounted cash flow models fall short because of the absence of a market, when no comparable buildings exist, and for non-income generating buildings (Monson, 2009).

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Housing by its nature is heterogeneous and the application of hedonic regression to determine prices of each attribute is appropriate since the hedonic price is also defined as an implicit price of housing attributes (Lizam et al, 2014). Hedonic models are displayed for the first time with the assessment of agricultural land by Haas (1922) and Wallace (1926), but the term “hedonic” was mentioned for the first time by Court (1939) to determine the hedonic price index of automobiles. Lancaster (1966) defined the concept of utility of the products through the value of their special characteristics, considering that a

linear relationship. His study is based on the theory of consumption, according to which the demand for a heterogeneous product such as real estate depends on its characteristics which create the consumer benefit.

Thanasi (2012) estimated that properties are heterogeneous and the total value is composed by the sum of each property characteristic value, estimating that hedonic pricing models should be nonlinear. According to Thanasi, the benefits consist of a set of attributes which cannot be separated and are selected according to a combination of consumer preferences.

Application of Hedonic pricing model in property appraisal

The first application of HPM in property price appraisal could be traced back to early 1920s. Although, there is no consensus as to the actual date of introduction, for instance, Colwell & Dilmore (1999) reported that Haas(1922) is the first study to employed HPM in the property price appraisal research, by adopting it to value a farmland in Minnesota (United States). Similarly, Bruce and Sundell(1977) argued that the HPM technique was firstly introduced in the real estate pricing research in 1924. Besides, Wallace (1926) adopted the HPM technique in appraising farmlands in the US. Ridker & Henning (1967) employed HPM for the estimation of the effect of air quality on residential property values, suggesting that this is the first application of HPM in property pricing appraisal research (Chin & Chau, 2003).

However, Freeman (1979) provided a theoretical justification for HPM application in property pricing appraisal research (Chin & Chau, 2003). Scholars mostly refer to Court (1939) as the pioneer of HPM. Court (1939) developed a pricing index for automobiles, which illustrate that the demand for automobiles can be explained by numerous variables which include wheelbase, dry weight and horsepower of the car. Thereafter, other scholars (e.g., Muth, 1966; Oates, 1969) adopted HPM to real estate research. Subsequently, Rosen (1974) developed the theoretical support for the application of HPM in property value appraisal. After the study of Rosen (1974), scholars in different real estate markets around the world have been adopting the HPM technique for real estate appraisal. Examples of these studies include but are not limited to Adair et al. (1996), Tse and Love (2000), Paz (2003), Mbachu & Lenono (2005), Cebula (2009) (United States), Ge (2009), Selim (2008), Ong (2013) and Mallick & Mahalik (2015).

Advantages of Hedonic pricing model (HPM)

Such as hedonic price models aim at estimating implicit price for each attributes of a good, and a property could be considered as a bunch of attributes or services, which are mainly divided into structural, neighborhood, accessibility attributes, etc. Individual buyers and renters, for instance, try to maximize their expected utility, which are subject to various constraints, such as their money and time (Gaetano-Lisi, 2011).

Nigeria is the largest economy in Africa and the 26th in the world, this was established by the rebasing of Nigeria's gross domestic product (GDP) that was estimated to be US\$ 510 billion (National Bureau of Statistics, 2014; PricewaterhouseCoopers, 2014). Thus, it is imperative for real estate researchers, investors and stakeholders to gain valuable insights into the Nigerian real estate market. This will be achieved by reviewing published studies that applied HPM in property value research in Nigeria.

First, the functions of hedonic house price are estimated for each potential market segment in order to compare the submarket price for a standard dwelling. Secondly, a chow test is computed in order to show whether there are significant differences between the submarket specific prices. Thirdly, a weighted standard error is calculated for the submarket model, which acts as a further common-sense test of the significance of price differences for standard dwellings in different submarkets. This procedure also enables us to compare the effects on the accuracy of the house price models when different submarket definitions and stratification schemes are being compared.

Weaknesses of Hedonic pricing model (HPM)

One of the most important assumptions to come under attack is the one relating to perfect equilibrium. For this assumption to hold, it requires perfect information and zero transaction costs (Maddison, 2001). If the equilibrium condition does not hold, the implicit prices derived from hedonic analysis are biased, because there is no a priori reason to suppose that the extent of disequilibrium in any area is correlated with the levels of particular amenities contributing to the hedonic house price. Gaetano-Lisi (2011) argued that the marginal price derived from the hedonic function does not actually measure a particular household who is willing to pay for a unit of a certain characteristic. Rather, it is a valuation that is the result of demand and supply interactions in the entire market. The market for housing can be viewed as a stock-flow model where the flow is a function form, but the price at any point in time is determined only by the stock at that point in time. This raises a concern about the accuracy of the price data itself. Given that the data is based on assessments, appraisals, or self-reporting, it may not correspond to actual market price.

The hedonic price model relies on regression technology, which is criticized by some authors for a series of econometric problems that can lead to the bias of estimation, such as function specification, spatial heterogeneity, spatial autocorrelation, housing quality change, multicollinearity, and heteroscedasticity (Monson, 2009; Gaetano-Lisi, 2011).

Another limitation of hedonic model application is considered the fact that it is based on considerations that the market operates in perfect unrealistic conditions, with many buyers and sellers, none of which

affects demand and supply individually and the information is distributed symmetrically (Chin, 2003; Thanasi, 2012). Sample selection is considered an important issue on hedonic specification models.

Bourassa *et al.* (2003) and Thanasi (2012) noted that the main conflict in hedonic price appraisal relates with the segment size; smaller the segments, the more homogeneous they are, but on the other side, the estimate error increases, while there is an inverse correlation between sample size and standard error.

3.0 METHODOLOGY

The term research design refers to the way an investigator applies a logical structure to his/her research work; it describes the plan or strategy for conducting the research (McNabb, 2009; Oso & Onen, 2011). The study adopted survey design where it will use the questionnaire to collect data, the population of the study is the entire renters living in Dan Amar ward, Birshi ward and Miri ward. The target population is based on records obtained from Bauchi Local Government Immunization unit, the purpose of this research stratified simple random techniques will be adopted due to the heterogeneity nature of the population, in which the study area are categorized into Miri ward, Birshi ward, and Dan-Amar ward.

4.0 Result and Discussion

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Table 4.1: Locational characteristics in the study Area

Locational characteristics	Very close		Close		Moderately close		Far		Very far		M	R
	F	%	F	%	F	%	F	%	F	%		
Fire services	10	5.6	26	14.4	41	22.8	42	23.3	61	33.9	3.66	1st
Recreational facilities	15	8.3	35	19.4	41	22.8	50	27.8	39	21.7	3.35	2nd
Security facilities	17	9.4	31	17.2	51	28.3	54	30.0	27	15.0	3.24	3rd
Waste disposal facilities	18	10.0	38	21.1	42	23.3	48	26.7	34	18.9	3.23	4th
Health facilities	32	17.8	33	18.3	44	24.4	49	27.2	22	12.2	2.98	5th
Working place	19	10.6	50	27.8	49	27.2	40	22.2	22	12.2	2.98	6th
Transportation facilities	17	9.4	60	33.3	48	26.7	35	19.4	20	11.1	2.89	7th
Market	23	12.8	62	34.4	45	25.0	25	13.9	25	13.9	2.82	8th
Access roads	33	18.3	58	32.2	36	20.0	28	15.6	25	13.9	2.74	9th
Educational facilities	39	21.7	55	30.6	59	32.8	18	10.0	9	5.0	2.46	10th
Place of worship	72	40.0	59	32.8	31	17.2	12	6.7	6	3.3	2.01	11th

Source: Field Survey, 2021

The Table 4.1 revealed that majority of the respondent 72 representing 40.0% are renting very close to place of worship. Market, transportation facilities, access roads and working place are mostly close to residential rental properties, each having 62,60,58 and 50 respondents representing 34.4%, 33.3%, 32.2% and 27.8% respectively. 59 respondents representing 32.8% are renting moderately close to educational facilities. However, renters in the study area are renting far from security facilities, recreational facilities, health facilities and waste disposal facilities each having 54, 50, 49, and 48 respondents representing 30.0%, 27.8%, 27.2% and 26.7% respectively. While 61 respondents representing 33.9% are renting very far from fire service facilities.

4.4 Conditions of neighborhood characteristic

Table 4.2: Neighborhood characteristics in the study are

Neighborhood characteristics	Very good		Good		Fair		Bad		Very bad		M	R
	F	%	F	%	F	%	F	%	F	%		
Drainage facilities	10	5.6	27	15.0	35	19.4	59	32.8	9	7.2	3.61	1st
Waste disposal facilities	8	4.4	26	14.4	45	25.0	64	35.6	37	20.6	3.53	2nd
Environmental and landscaping	6	3.3	32	17.8	46	25.6	56	31.1	40	22.2	3.51	3rd
Fire services facilities	12	6.7	40	22.2	32	17.8	54	30.0	42	23.3	3.41	4th
Recreational facilities	10	5.6	33	18.3	50	27.8	56	31.1	31	17.2	3.36	5th
Security facilities	13	7.2	47	26.1	51	28.3	36	20.0	33	18.3	3.16	6th
Electricity facilities	14	7.8	45	25.0	58	32.2	28	15.6	35	19.4	3.14	7th
Water supply	17	9.4	44	24.4	57	31.7	37	20.6	25	13.9	3.05	8th
Public health facilities	14	7.8	47	26.1	58	32.2	44	24.4	17	9.4	3.02	9th
Access roads	14	7.8	60	33.3	48	26.7	27	15.0	31	17.2	3.01	10th
Communication facilities	17	9.4	53	29.4	53	29.4	38	21.1	19	10.6	2.94	11th
Educational facilities	18	10.0	60	33.3	52	28.9	30	16.7	20	11.1	2.86	12th
Level of noise	28	5.6	52	28.9	47	26.1	27	15.0	26	14.4	2.84	13th
Market	26	4.4	69	38.3	54	30.0	17	9.4	14	7.8	2.58	14th

Source: Field Survey, 2021

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The Table 4.2 revealed that none of the neighborhood facilities are in very good condition in the study area. The market, educational facilities, access roads, communication facilities, level of noise each having 69, 60, 60, 53 and 52 respondents representing 38.3%, 33.3%, 33.3%, 29.4% and 28.9% respectively are in good condition in study area. Public health facilities, electricity facilities, water supply and securities facilities are in fair condition, each having 58, 58, 57 and 51 respondents representing

32.2%, 32.2%, 31.7% and 28.3% respectively. Majority of the neighborhood facilities are in bad condition because the revealed that waste disposal facilities, drainage facilities, neighborhood recreational facilities, environmental/landscaping and fire service facilities are in bad condition each having 64, 59, 56, 56, and 54 respondents representing 35.6%, 32.8%, 31.1%, 31.1% and 30.0 respectively. While none of the neighborhood facilities are found in very bad condition in the study area.

4.5 Condition of building/physical characteristic

Table 4.3: Condition of building/physical characteristics in the study area

Building/physical characteristics	Very good		Good		Fair		Bad		Very bad		M	R
	F	%	F	%	F	%	F	%	F	%		
Parking space	15	8.3	37	20.6	30	16.7	50	27.8	48	26.7	3.44	1st
Aesthetic/landscaping	11	6.1	43	23.9	26	14.4	59	32.8	41	2.8	3.42	2th
Adequacy of toilets	15	8.3	62	34.4	16	8.9	50	27.8	37	20.6	3.18	3rd
Finishes	15	8.3	57	31.7	28	15.6	51	28.3	29	16.1	3.12	4th
Toilet facilities	12	6.7	77	42.8	14	7.8	50	27.8	27	15.0	3.02	5th
Kitchen facilities	31	17.2	53	29.4	25	13.9	28	15.6	43	23.9	2.99	6th
Electrical fittings	16	8.9	69	38.3	31	17.2	36	20.0	28	15.6	2.95	7th
Lighting	18	10.0	65	36.1	3	18.3	43	23.9	21	11.7	2.91	8th
Wall	25	13.9	69	38.3	16	8.9	40	22.2	30	16.7	2.89	9th
Doors	23	12.8	79	43.9	20	11.1	38	21.1	20	11.1	2.74	10th
Ceiling	20	11.1	95	52.8	18	10.0	33	18.3	14	7.8	2.59	11th
Roofing	26	14.4	91	50.6	15	8.3	34	18.9	14	7.8	2.55	12th
Floor	20	11.1	102	56.7	14	7.8	29	16.1	15	8.3	2.54	13th
Ventilation	31	17.2	84	46.7	20	11.1	32	17.8	13	7.2	2.51	14th
Room size	31	17.2	97	53.9	13	7.2	27	15.0	12	6.7	2.40	15th

Source: Field Survey, 2021

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The Table 4.3 revealed that none of the building/physical characteristics of residential rental properties in the study area are in very good condition. However, majority of the physical or building characteristics of the properties occupies by the renters are in good condition because the table shows that floor, room size, ceiling, roofing, ventilation, doors, toilet facilities, wall, electrical fittings, lightning, adequacy of toilets, finishes and kitchen facilities are in good condition considering 102, 97, 95, 91, 84, 79, 77, 69, 65, 62, 57, and 53 respondents representing 56.7%, 53.9%, 52.8%, 50.6%, 46.7%, 43.9%, 42.8%, 38.3%, 36.1%, 34.4%, 31.7% and 29.4% respectively. While aesthetic/landscaping and parking

spaces are in bad condition each having 59 and 50 respondents representing 32.8% and 27.8%. However, none of the attributes are in very bad condition.

4.6. Level of rent variation

Table 4.4: Rent variation within the study area

Rent	Mean	Medians	Mode	Minimum	Maximum	R
Old airport	137391.30	150000.00	80000	25000	350000	1st
Gwallameji	55744.68	47000.00	70000	10000	250000	2nd
Yelwa	40979.17	36500.00	45000	2000	150000	3rd
Wuntin dada	39709.68	40000.00	35000	10000	80000	4th
Sabon kaura	31064.52	27000.00	30000	15000	80000	5th

Source: Field Survey

Table 4.4 shows the level of rent in the study area which indicated that Old airport ranked 1st having the mean rent of N137391.30 (modal rent of N80,000). Gwallameji ranked 2nd with mean rent of N55744.68 (modal rent of N70,000). Yelwa ranked 3rd with mean rent of N40979.17 (modal rent N45,000) while Wuntin Dada and Sabon Kaura ranked 4th and 5th with mean of N39709.68 (modal rent of N35,000) and N31064.52 (modal rent of N30,000) respectively.

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4.7 Regression analysis of locational, neighborhoods and physical/buildings characteristics with rent.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456 ^a	.208	.175	44508.072

Source: Field Survey, 2021

The R-Square value is essentially a measure of the predictability of the model (i.e. Independent variables in relation to the dependent variable). The R-Square value can range from 0 to 1 where 1 would represent a perfect correlation between the independent and dependent variable(s) (Corsini, 200009).

From the table above, it can be said that the 20.8% of the changes (Variation) on dependent variable **rental value** are explained by Proximity to economic area, neighborhood noise, physical characteristics (external), waste disposal, toilet, neighborhood amenities, physical characteristics (internal).

This implies that about 79.2% variations on the dependent variable **rental value** are explained by other factors. The R-Squared statistic indicates that the model is fitted to explain 20.8% of the variability in rent paid within the study area. The adjusted R-squared statistic, which is more suitable for comparing models with different numbers of independent variables, is 17.5%.

Table 4.6: Analysis of Variance

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89329088200.841	7	12761298314.406	6.442	.000 ^b
	Residual	340726572910.270	172	1980968447.153		
	Total	430055661111.111	179			

- a. Dependent Variable: Rent**
b. Predictors: (Constant), Proximity To Economic Area, Neighborhood Noise, Physical Characteristics (External), Waste Disposal, Toilet, Neighborhood Amenities, Physical Characteristics (Internal)

Source: Field Survey, 2018

From Table 4.6, the P-value is .001 which is less than 0.05. Since the P-value is less than 0.05, it implies that there is statistically significant relationship between rental value and Proximity to economic area, neighborhood noise, physical characteristics (external), waste disposal, toilet, neighborhood amenities, physical characteristics (internal) in the absence of other variables.

Table 4.7: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	115283.889	18280.363	6.306	.000
	Physical characteristics (internal)	13133.299	4742.801	-.237	.006
	Physical characteristics (external)	6994.498	3954.654	.146	.079
	Toilet	-5663.185	3337.605	-.139	.092
	Neighborhood amenities	15096.902	4491.417	-.264	.001
	Waste disposal	-2056.744	3694.590	-.042	.578
	Neighborhood noise	-2711.424	2673.914	-.070	.312
	Proximity to economic area	10804.916	3841.002	.199	.005

Source: Field Survey, 2018

Results from the above table 4.7 show that neighborhood amenities, proximity to economic area, security, physical characteristics (internal) and physical characteristics (external) can explain at least 20.8% of the variance in rental value (Adjusted Square = .175). it is obvious that Toilet, Waste Disposal System and Neighborhood Noise had p value > 0.05 this signifies that there is statistically insignificant relationship with the dependent variable, whereas proximity to economic area and neighborhood amenities had a p value <0.05 which signifies a statistically significant relationship with the dependent variables. However, Physical Characteristics (Internal) and Physical Characteristics (External) had a p value of close to <0.05 which signifies a statistically little significant relationship with the dependent variable.

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4.8 The model of residential rental values from property characteristics

4.8.1 Multiple regression analysis model

The Multiple Regression Analysis (MRA) is based on the correlation analysis. Generally, correlation and regression can be used to conduct multivariate analysis on fairly small samples (Yusof and Ismail, 2012). “Multiple regressions” is a technique that allows additional factors to enter the analysis separately so that the effect of each can be estimated. It is valuable for quantifying the impact of various simultaneous influences upon a single dependent variable (Sykes, 2010). MRA is a flexible method of data analysis that may be appropriate whenever a quantitative variable (the dependent or criterion variable) is to be examined in relationship to any other factors (expressed as independent or predictor variables).

Relationships may be nonlinear, independent variables may be quantitative or qualitative, and one can examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account (Cohen, Cohen, West and Aiken, 2003).

A multiple regression equation for predicting “y” can be expressed as follows:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \dots + \beta_n X_n + \varepsilon$$

4.8.2 The model that analyzes the influence of location, neighborhood and building/physical characteristics on residential rental value in Bauchi metropolis:

Where

Y is the dependent variable

X1, X2... Xn are the independent variables

$\beta_1, \beta_2, \dots, \beta_n$ are multiple regression coefficients for the independent variables.

“e” Std. Error of the Estimate

However, the application of the model to our case study shows that

$$\mathbf{RV} = \text{Constant} + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + \beta_5(X_5) + \beta_6(X_6) + \beta_7 W(X_7) + e \dots \quad (\text{II})$$

$$\text{RV} = 115,283 - 133133(X_1) + 6994(X_2) - 5663(X_3) - 15,097(X_4) - 2,057(X_5) - 2,771(X_6) + 10,805(X_7) \dots \quad (\text{III})$$

Where:

RV = N Rental Value

X_1 = Physical Characteristics (Internal)

X_2 = Physical Characteristics (External)

X₃ = Toilet

X₄=Neighborhoods Amenities

X_5 = Waste Disposal System

X₆ = Proximity to Economic Area

X₇ = Neighborhoods Noise

5.0 Conclusion

The aim of this study is to analyze residential rental value in Bauchi metropolis using hedonic pricing model. With the view to developed a model that analyzes the influence of location and neighborhood characteristics on residential rental value in Bauchi metropolis. To achieve this aim, the current Locational, neighborhood and building/physical characteristics and their corresponding condition were determined.

Based on the findings, the study concludes that the Locational, neighborhood and building characteristics across the study area with wide difference in their state or condition which resulted in rent differentials within the Bauchi Metropolis.

The study also concludes that proximity to economic area, neighborhoods amenities, and physical characteristics (internal) have statistically significant on residential rental value in the study area. Hence, renters consider proximity to economic area, neighborhoods amenities, and physical characteristics (internal) attributes as condition to be met before they are willing to pay.

However, this research concludes that neighborhoods noise, waste disposal, toilet and physical characteristics (external) do not have statistically significant influence on rental value in the study area. This is because most of the renters in the study area are students does not consider neighborhood noise, waste disposal, toilet, and physical characteristics (external) them as a condition to be met before they are willing to pay rent.

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6.0 Reference

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GEOMETRIC MODELING IN A COMPUTER SCIENCE COURSE

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ABSTRACT

The following article considers the geometric model as one of the methods and technologies of computer graphics in the course “Computer Science”. The rapid growth of information in the modern world makes it impossible for everyone to fully assimilate it, resulting in the need for specialization in a particular field, consequently, the specialization of its training based on general education. The solution to this problem can be found in the application of modern means of information processing and in the specialization of the content of education in the field of informatics (Bidaibekov E., 2004). Along with improving the content of computer science training, significant research is also required on possible ways to expand the educational material by considering new thematic areas in the content of computer science training that appear in connection with the development of science and technology and are appropriate for introduction into the system of training specialists (Abdraimov D., 2004). One of these areas is a set of methods and technologies for working with computer graphics, which become the object of consideration of modern pedagogical research. Training in methods and technologies of computer graphics should be based on the one hand, on the study of software tools for processing graphic images, 2-3 dimensional modeling of graphic objects, on the other hand, considering the possibility of familiarizing students with existing developments in the field of mathematical methods of processing and representation of graphic images. The solution to this problem can be achieved by introducing a section on geometric modeling into the content of informatics course, which intersect with discrete mathematics. The development of this branch of informatics is stimulated by a significant leap in the possibilities of modern information technologies, which makes it possible to solve complex geometric problems using special mathematical methods and techniques.

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Key words: computer graphics, modeling, computer science

IMPACT OF TOWN PLANNING REGULATIONS ON RESIDENTIAL PROPERTY VALUE IN BAUCHI METROPOLIS, NIGERIA

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ABSTRACT

Modern development in housing provision is characterised by different phases of factors that affects property value among which and valuable item is town planning regulation. This study holistically investigates the effects of town planning regulations on property value in the study area. Methodology adopted in the study was quantitative and the research design was survey. The sample frame of the study is 1,347 and the sample size was 302. Out of the questionnaires distributed 285 was available for further analysis. Simple random sampling was employed as the sampling techniques. Simple percentage, mean ranking and standard deviation were employed to explain the results of the research study. The results revealed that social factors are the dominants factors affecting town planning regulation in the study area, it was also find out that lack of enforcement of town planning regulation is the least factor affecting smooth implementation of planning regulation. The study further shows the level of compliance of town planning economic factors is the prevalent factor, while house hold size was the last factor that show the level of compliance of town planning regulation in the study area. It was also recommended that effective public sensitisation and awareness should be organised time to time to assist local residents of seeing the importance of town planning. Future researchers should dwell on different dimension of town planning regulations.

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Keywords: Town planning regulation, property value, land market, property development

1. Introduction

Town planning is a process of living in an organised and proper setting of healthy and environmentally sustainable friendly(Brandful, Erdiaw-kwasie, & Amoateng, 2015; Gyau, Awuah, Nikoi, Elizabeth, & Booth, 2014). Town planning regulations programmes in many African metropolises encounter many challenges in providing life-saving answers to inhabitants whoneed them, in relations to managing the impacts of urbanisation (Brandful, Osei, Opoku-gyamfi, & Peprah, 2019). Due to rapid and informal settlements town planning becomes irrelevant to most urban dwellers as their perceptions is that it is not

significant in their lives(Lazaro & Yang, 2019). The significant of town planning for African urban settlements in eliminating urban plight cannot be over emphasised (Gyau et al., 2014). Emphasis has been made by various government that new towns should be according to the town planning regulations but compliance proof abortive. Even though, Africa is the lowest urbanised continent (Gyau et al., 2014; Oduro, 2010), it presently takes the highest urban evolution rate in the world, which is projected to range 60% by 2050(Habitat, 2010b, 2010a)Notwithstanding this growth rate and urbanisation in Sub-Saharan Africa (SSA) has not been convoyed by economic prosperities as in Western economies(Ali, 2015; Ershova & Smirnov, 2017; Gyau et al., 2014; WANG, ZHANG, & KANG, 2009)Although this is not to repudiate any economic improvements that have been on condition to increase rate of urbanisation.Conventional reasons show that African countries' urban growth is forthcoming at a demographic pinnacle point as the monumental quantity of new urban inhabitant expected to rise by over 300 million between 2000 and 2030, which is twice more than the rural population upsurge(Ershova & Smirnov, 2017; UNCCD, 2017). These speedy increases of the urban residents' translates large zones of land to urban usage. (Liu, Zheng, & Bedra, 2018),also jagged it out that universally the rate of urban land development is twofold more than that of the rate of population growth.Planning regulations are restricting development this perception is from the local community, whose main purpose is building without recognizing consequences of lack of planning(Akinola & Oluwatayo, 2018). However, various methods of monitoring town planning effectiveness has been practicalised, but still it is unsuccessful (Mohamed & Worku, 2019). A part from property value the town planning regulations has accelerate its satisfaction, transport system also influenced by the town planning regulation(Ershova & Smirnov, 2017). (Koga, Izumi, Matsubara, Inada, & Gaidar, 2014) stated that problems related to complications in construction of the street and road network satisfactory for the city needs are attributed to abundant objective and subjective motives many of which bring about new prototypical of town planning regulations formed in the post-socialistic period (1950–1961). The main purpose laid in the underdeveloped legal apparatus of that time which resulted in precedence of private interests of stockholders and private developers over the public ones. It was replicated in the possibility of gaining construction permits for tenement buildings (residential buildings as a rule) without deliberation of the fact whether the established areas were provided with engineering, social, and transportation infrastructure(Kumar, 2016; Liu, Chen, Zeng, & Wei, 2011). Town planning hindered the statutory urbanisation growth, usually growth in an urban environment is the outcome of the demands, wants and needs of its inhabitants rather than simply implementing an urban expansion plan, rules and regulations(Tiwari, 2016).

Urban areas are reasonably more dynamic because of its continuouslyvarying environmental, social and monetary scenarios; predisposed by good will of leadership change and scientificadvancements(Lazaro & Yang, 2019). The level of agreement from the crosswise of residents in fact fixes the success or failure of any progressand development plan.According to United Nations Habitat, over 90% of the forthcoming population advancement will be accounted for by hefty cities in unindustrialised nations. The portion of the African metropolitan population in the worldwide population is expected to rise above 60% increase by 2050(Farrell & Nijkamp, 2019; Lazaro & Yang, 2019). Human settlements are characterised as good best and better when it is in conformity with planning regulations (Akinola & Oluwatayo, 2018). The united nations projection of population and settlements availabilities are very alarming because of the social vices that would emanate thereof. It is also obvious that town planning regulations are beautifying cities, towns and urban centres activities. It worth knowing that many aspects of human endeavour have direct or indirect links with town planning regulations. Social amenities are provisioned when the town planning regulations (TPR) were made effective and functional. In Africa Urbanisation took places when they are not severely evolve in harmony with the formation of emerging law and potential fruition(Deng, Fu, & Sun, 2018). The government may adjust the direction of urban development and the key development area according to the new development needs

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1.2 Connection of Town Planning Regulations and Property Value

The effect of the linkage between town planning regulations (TPR)and property values has stretched and had been recognised(Kremlev & Babich, 2014; Martin, 2016). It was later all the problem of betterment which plagued the primer of legal planning from 1947 onwards; and it is planning improvement which has continued to bedevil the action of development control in recentyears. In spite ofthat Property value is determined by different factors such as location, neighbourhood facilities, proximity to schools, flood disaster and other forms of disaster, and the constructional details of a building can influence the value of a property(Koga *et al.*, 2014; Martin, 2016). TPR effectiveness is noticed and recognised apparently(Chapman, 2014). Areas characterised as urban blight, slums and density populated are in deficiency of good TPR. Likewise, properties in these areas are classified as valueless. Conflicts between town planners and property developers nearly affect the urban setting in most African countries as in Malawi (Mwathunga & Donaldson, 2018), Ghana,(Obengodoom, Ameyaw, 2011; Oduro, 2010; Brandful *et al.*, 2019; Gyau *et al.*, 2014),Kenya, (Habitat, 2010a), South Africa,(Loock, 2017; P. V. A. N. D. E. R. Molen, 2008),Sudan, (Deininger, 2003), Uganda, (Nkonya, Pender, & Kato, 2008), Tanzania, (Lazaro & Yang, 2019; McCluskey & Franzsen, 2005). All these are studies that signifies the issue of

TPR and property value. It is obvious that ineffective TPR has significant negative impacts on property values.

1.3 Impacts of TPR on Property Market

Land markets are vital avenue through which economics activities or medium of exchange in relation to land and landed property are taken place, and are seriously affected by poor provision of TPR (Aliyu & Abdu, 2015; Brandful et al., 2019; Chapman, 2014; Wineman & Liverpool-tasie, 2017a). However, through land markets peasants farmers in sub-Saharan Africa gain access to land(Boanada-fuchs, 2015; Famoriyo, 1984; Martinis & Kontoni, 2017). The origin of this relation is population trends and need for sanitary environment that recount TPR and land market in the developed, developing and underdeveloped economies. Connection of property value and town planning regulation has manifested since industrial revolution in the Europe (Ragheba, El-Shimya, & Ragheb, 2016; Versaci, 2016; Woodrow, Clark, 2015; Lysgård, 2019). Land transaction enable property development and the development is hindered by the inefficient of TPR (Mireku, Kuusaana, & Kidido, 2016). Land market can be active if the requisite elements were fully available, most especially the TPR and other statutory elements (Schulz & Wersing, 2018), alternatively rural land market size also were affected by TPR in all ramifications, because access to land and landed property has direct and significant relationship with TPR (Haile, Emil, & Termansen, 2019). Land market access is stalwartly related to economic well-being and TPR in rural sub-Saharan Africa(Dancer, 2017) and “informal” land markets that function outside of a statutory legal context are significant avenue through which record is set on the level of TPR in rural land markets in sub-Saharan Africa (Wineman & Liverpool-tasie, 2017b). Many factors that affects property markets has direct linkages with TPR, inflation rates, government policies and market forces of demand and supply (Amidu, Aluko, & Oyedele, 2008; Oladokun & Aluko, 2012). TPR is a locomotive of property markets lifeline for investors’ achievement. It’s obvious for property markets that location and infrastructure of neighbourhood posit its value and all are influenced by TPR as confirmed in (Deng et al., 2018; Gyau et al., 2014).

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2. Methodology

The population of the research study was the residents of Bauchi metropolis and the research adopted probability sampling because sample frame and size can be determined. Research approach adopted in this study is quantitative and strategy is survey. The sample frame of the study is 1,347 and the sample size was 302 based on Krejcie and Morgan (1970) sample size determination table.

Table 1: Questionnaires distribution

Questionnaires	Number of Questionnaires
Questionnaires distributed	302
Questionnaire retrieved	285

Table1 above shows the total number of questionnaires distributed and the number retrieved within the study area.

Table 2: Gender of respondents

Gender	No of questionnaires	Percentage
Male	197	69
Female	88	31
Total	285	100

Table2 above indicated that males are morethan the female counter by amounting to 69%. Gender in this part of the country is very sensitive due to cultural and belief of people. Al most many part of African continent gender equality is the focal points of discourse. Programmes like gender equality, gender empowerment, gender mainstreaming are the government efforts to curb inequality in peoples life.

Table3: Occupation of Respondents

Occupation	No of respondents	Percentage
Businessmen	131	46
Farmers	98	34
Civil Servants	56	20
Total	285	100

Table 3 shows that different occupation where business has 46% and farming with 34% while civil service has 20%.

Table 4: Factors affecting compliance of Town Planning Regulation

Factors	No of Responses	Percentage
Economic Factors	67	24
Social Factors	98	34
Lack of adequate laws	45	16
Lack of enlightenment	52	18
Lack of enforcement	23	8
Total	285	100

Table 4 indicated various reasons while TPR is not been complied due to economic factors with 24%, social factors with 34%, lack of adequate laws with 16% and lack of enlightenment with 18%, and lack of enforcement 8%. All are the reasons why TPR is not implemented in the study area.

Table 5: Level of Compliance to Town Planning Regulation in Bauchi Metropolis

Compliance to Town Planning Regulation in Bauchi Metropolis			
Factors	N	Mean	Std. Deviation
Economic factor	285	4.01	.952
Social factor	285	3.96	.967
Lack of enlightenment	285	3.99	.978
Lack of commitment	285	3.99	.918
Lack of implementation	285	4.00	.825
Location of property	285	3.95	.863
Households size	285	3.87	.965
Educational level	285	3.93	.872
Government Policy	285	3.93	.916
Cultural belief	285	3.85	.974

Table 5 shows the level of compliance of town planning regulation in the study area. The first factors that shows the level of compliance is economic factor with 4.01 mean follow by lack of implementation with mean 4.00, lack of enlightenment and lack of commitment with 3.99 respectively. The least factor is culture belief with mean ranking of 3.85.

3. Discussion

The results of this study revealed that social and economic factors affect the compliance of TPR which turns influence the property value in the study and it is in conformity with the (Deng *et al.*, 2018; Martin, 2016; Wineman & Liverpool-tasie, 2017a). All property development are guided by the town planning regulation as vindicated by (Yetiskul, Kayasü, & Ozdemir, 2016). This study added that lack of enlightenment by the residents influenced the implementation of TPR which is opposed by study in (Akinola & Oluwatayo, 2018; Ali, 2015; Carmichael *et al.*, 2019). Some studies have also reported that aspects of the regulations and socio-cultural factors of rural land planning significantly shape property value (Brandful *et al.*, 2019; Ershova & Smirnov, 2017; Liu *et al.*, 2018). TPR is considered that new urban settlements are characterised. It was evident that conflict between property developer and town

planners in the study area as confirmed by study of (Carmichael et al., 2019; Ershova & Smirnov, 2017; Parker, Lockwood, & Marano, 2012; Taylor, 1988). TPR level of adoption is very insignificant in the study area due to poor implementation mechanism, it also agree with the work of (Anaafo, 2015; Delladetsima, 2015; Holden & Ghebru, 2016). It is also concluded that many factors associated with property value(Van Der Molen, 2002). It is also revealed that cultural belief of the residents has no relevancy with TPR compliance in the study area and it is disagree with the work of (Lysgård, 2019). Many literatures have revealed that town planning regulations within the African countries are not fully acceptable due to socio-economic characteristic as indicated in this research. Property values are determined by various parameters among the chief indicator is TPR as suggested by this research study and other literatures (Bénard-Sora & Praene, 2018; Litman, 2013).

4. Conclusion

It is evident that TPR has a great impact on property value in many ramifications. Relevant authorities posit that property development plans should be approved before development commences. It is evident that many individuals lack awareness of seeking building permission more especially in the rural areas of the study area. Another issues identified is that many government agencies concerning property development are not sufficiently implementing the laws and regulation provided. It was understood that property values in the area has list significant because of the educational levels of the respondents. Conclusively, government should enhance give emphasis on building permission and approval before development. Future researchers in the area should carry out researches in different direction of town planning regulation to make residents be accustomed with the importance of town planning regulation.

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THE PROVISION AND PERFORMANCE OF FACILITIES MANAGEMENT SERVICES IN SPECIALIST HOSPITAL BAUCHI

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ABSTRACT

Facilities management has not been fully researched in Specialist Hospital, Bauchi; this study is aimed at revealing the situation on ground, FM performance and outpatient's satisfaction in the hospital, this being a relatively new concept without known prior research. This study intends to shed more light if facilities management services have an impact in the Specialist Hospital, Bauchi. Although staff satisfaction is one of the most extensive areas that most of the previous researchers laid more emphasis on, but the relationship between FM services performance and outpatients satisfaction in Specialist hospital Bauchi is lacking. FM service performance is essential to enhance overall user satisfaction, most especially to enhance patient's satisfaction. It is against this background, this paper aimed at evaluating FM service provision and performance in Specialist hospital, Bauchi with a view to examining the effect of FM service provision and performance in the study area. The study adopted quantitative method where A Survey Research design was adopted for this study through the use of questionnaire instrument. A total of four hundred (400) Questionnaires were administered to Outpatients, out of which three hundred and seventy-eight (378) were retrieved. The simple Random sampling technique was adopted for the study; while Data obtained from the field were processed using Statistical Packages for Social Sciences (SPSS). The study found out Sixteen (16) FM services provided in the hospital. These includes; hospital's environment, electricity, security, availability of medical services, competence and expertise of staff, cost of healthcare, cleaning, staff attitude, car parking space, security services, landscaping, catering, telecommunication management, waste disposal, waiting time, toilet management. Although there are many FM services being provided in the hospital but results indicates that the aforementioned were highly provided in the surveyed hospital.

Result on mean ranking of the level of facility management service provision and maintenance shows that Hospital's environment with mean 4.49 and SD 0.666 was ranked 1st, Electricity with mean 4.48 and SD 0.738 was ranked 2nd, while waste disposal, waiting time and toilet management has the least rank of 14th, 15th and 16th respectively. Mean ranking on the level of facility management services performance revealed that structure and fabric with mean 4.44 and SD 0.764 was ranked 1st, competence and expertise with mean 4.36 and SD 0.652 was ranked 2nd, while catering service with mean 3.89 and SD 0.808 was ranked 16th which is least. The study concluded that out patients are quite satisfied with provision and performance of general cleaning service, waste disposal service, vehicle parking, security services, and toilet maintenance. The study recommends that a periodic review of quality of FM services is vital for quality control. This is anchored on the need to ensure that the level of Out-patients satisfaction with FM services is regularly reviewed as a way of building trust and strengthening the hospital management.

Keywords: Facilities, Management, Provision and Performance.

1.0 INTRODUCTION

Over the years, facilities management (FM) has grown from what was traditionally perceived to be mere managing of buildings or maintenance unit of an organisation to be holistic reality of being integrated into the core and support services of organisations (Price, Pitt & Tucker, 2011). In other words, the more developed view of facilities management is an integrated approach to management of building/infrastructure (product) and services of an organisation in order to create an environment that supports the primary objectives of that organisation (Nutt, 2004). In their contributions, Pitt and Tucker (2008) define facilities management as the integration and alignment of the non-core services, including those relating to premises, required to operate and maintain a business to fully support the core objectives of the organisation.

Facilities management came up in the late 70s and since then, it was seen as one of the fastest growing professions in the United Kingdom (UK). FM now represents big service market in the UK, with service providers looking for privilege to diversify somewhere internationally (Moore & Finch, 2004). The growth change of FM confirms findings by a recent research by Service Future (2017) in which the FM global market is expected to increase from ₦3.451 trillion in 2012 to ₦4.7634 trillion in 2018. However, Organisations, industries, and companies perceptions of FM have drastically changed from a mere cleaning and maintenance of a building to providing a service that make a significant impacts to the core business process by controlling all efforts that are related to the workplace as well as enhancing an

organisation's ability to thrive and succeed in a competitive world (Kulatunga, Liyanage&Amaratunga, 2010). Within the context of hospital management, facilities management has continued to live by its definition, creating the right enabling environment that supports the core mandate rendering clinical and medical diagnostic services, which is why Shohet and Levy (2004) considered health care facilities management as one of the key elements for the successful delivery of hospital services. Other areas in which facilities management adds value to health care delivery in hospitals include management of infrastructure facilities such as estate property, indoor air, structure and fabric, water supply, electricity and telecommunication management referred to as hard facilities management; and catering, cleaning, waste management, security and laundry services described as soft facilities management (Liyanage&Egbu, 2008). Research conducted by the Amarantunga and Baldry (2002) concluded that hospital organisations use performance measurement systems as the basis for management to perform better. Facilities management emerged with the integration of three main stands of activity: property management, property operations and maintenance and office administration (Pitt &Tucker, 2008).

The provision of health care facilities is needed to sustain life on earth. Unfortunately, in Nigeria today, the provision of health care facilities seems to be low, as many Nigerians are vulnerably exposed to the danger of death (Abel, 2014). Oladejo (2014) in a study of tertiary health care institutions in South East Nigeria takes a closer look at the management units of university of Nigeria Teaching Hospital Enugu, Ebonyi State University Teaching Hospital, Federal Medical Centre Owerri, Imo State and NnamdiAzikwe University Teaching Hospital Awkar, Anambra State and observes that the management units lack competent staff considering the nature of the facility they are to maintain. This is linked to failures and delays in rectifying breakdown of crucial medical equipment.

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Liu, Hotchkiss and Bose (2007) researched on impact of contracting – out in health system performance. They found out that FM services that are frequently provided in hospitals includes single and multiple services, services with a clear level of need, services for the treatment and prevention of diseases and services with simple or complex technicalities. They further concluded that within these services, there are services which are more contractible or less contractible. Kefale, Atsebah and mega (2016) assessed client's perception and satisfaction toward service provided by pharmacy professionals at mizan – Tepi University Teaching Hospital, Ethiopia. The study shows that the overall mean perception and satisfaction of clients in the hospital was low, even though it was above the mean level of perception and satisfaction. Researchers indicate that addressing client perspectives on quality of care leads to improved client satisfaction, continued and sustained use of services, and improved health outcomes

(Creel, Sass & Yinger, 1998). Despite numerous attempts to improve on quality of health care, there appears to be little or no positive outcomes due to lack of strategies to ensure effective and efficient implementation (Samah, Ibrahim & Amir, 2003). One criterion that patients use to access their satisfaction with health care services at health facilities is the time they spend before seeing a doctor or visit a department of the hospital. In most cases, patients would prefer that health providers spend some time to ask questions and conduct proper examinations before diagnoses were made (Turkson, 2009).

Jabbari, Jazi, Khoeasani, Mardani and Mofid (2014) identified the sources, people, subjects of the complaints and the action taken in this regard in a teaching hospital in Isfahan. Findings revealed that the major subject of complaints has been the issues of public concerns and welfare of the hospital and the hospitals service quality. Shaw and Haynes (2004) in a study on an evaluation of customer perception of FM service delivery. They identified a set of service attributes that applies to the FM. in their study on FM for manufacturing sites, they identified 26 attributes specifically for project management services in FM by holding five focus group sessions. They use factor analysis to analyze their data and their findings revealed six dimensions of service quality: professionalism, provision of competent staff, communication, understanding the customer, reliability and demonstration value.

Turkson (2009) reports from a study conducted in Ghana, which about 90% of respondents were satisfied or very satisfied with the care given during their visit to the health facility. Undoubtedly, patients complain of poor sanitary hospital environment, especially the wards: these make them very uncomfortable. The unhygienic conditions could worsen their condition as there is poor management system in the health facilities. As the adage says: ‘cleanliness is next to godliness’. Akande, Sekoni and Aderibigbe (2012), in a study carried out on the outcome of admissions in a university teaching hospital in Nigeria. Data were entered and analyzed using EPI-INFO software. They concluded that the burden of non-communicable diseases is generally becoming higher than communicable diseases in this study, while shorter duration of hospital days is significantly associated with death. Pooja, Santosh and Sanjay (2012) researched on factors influencing the patients in attaining satisfaction by the services provided in the hospital in India. Interview was conducted and questionnaire was administered for data collection. Findings revealed that the quality of communication and the general condition of the facilities were significant but less important in explaining customer satisfaction with hospital services. With the lack of research in the scope of provision and performance of facility management in specialist hospital in Bauchi this paper is aimed at evaluating FM service provision and performance in Specialist hospital, Bauchi.

2.0 literature review

Concept of Facilities Management

The practice of FM was alien to Nigeria until 1993 when FM was made the focal topic of discourses at the yearly meeting of the Nigerian Institution of Estate Surveyors and Valuers. The meeting excited cognizance in the brains of the real estate professionals who had up to this point been alluded to as specialists in property management. This awareness anyway prodded fomentations among individuals with respect to whether FM was the select protect of the bequest Surveyors and Valuers who are prepared to oversee real property and its facilities. Explaining the issue among the men of the respectable profession, Umezuruike (1998) contended that FM is expansive and requires both specialized and management skills and is accordingly a multidisciplinary profession.

With scarcely any individuals, in any case, the Nigeria section of International Facilities Management Association (IFMA) was fused in 1997. The association has as of now developed into participation solidarity to 700 with individuals having diverse professional foundations,

The order of facilities management (FM) is as yet viewed as advancing (Mudrak, Wagenberg and Wubben, 2004; Goyal and Pitt, 2007). In this way, the practice of FM is as yet another idea to numerous African nations like Nigeria. A large number of these creating nations have not yet been profiting by the favorable circumstances logical from the practice of FM. A related action, which has heretofore been known and normally grasped, is the craft of property management. This demonstration includes the use of information to think about the building and its parts with the point of verifying the best comes back from it (Scarrett, 1995). The accentuation was the requirement for appropriate upkeep of the building segments with the goal that its greatest advantage/return can be delighted in.

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Overtime anyway organisations have gotten aware of the need to focus on their center business exercises and the convenience of decreasing the increasing expense of involving buildings, giving administrations to help business tasks and improving working conditions in order to continue efficiency in their exercises, which has prompted the improvement FM (Alexander, 2003). FM includes the improvement, coordination, and management of all the noncenter pro administrations of an association together with the building and their frameworks, plant, IT hardware, and fittings with the general point of helping any giving association in accomplishing its vital targets (Moore & Finch, 2004). It is about taking control, adding value, supporting the business and ensuring that the space and working environment enhance and not impede productivity of the staff and the core activity (Wiggins, 2010).

The significance of FM has as of late been perceived everywhere throughout the world (Mudrak, Wagenberg & Wubben, 2004). The outcome is that it is a typical practice in business associations in cutting edge nations like the UK and USA. The spread of FM is owing to the worldwide embracement of the practice of redistributing administrations in the public and private sectors (Mudrak, 2003). The practice was grasped in the UK during the 1970s when re-appropriating was accepted to be a principle cost-cutting activity (Nazali, Noor & Pitt, 2009). The practice depicted by Pitt and Hinks (2001) as the management of cost proficiency got well known among associations who want profitable utilization of building resources as work place (Varcoe, 2000). It is presently one of the quickest developing callings in the UK (Nazali, Noor & Pitt, 2009) and is even steadily being advanced in Nigeria and other African nations.

Emerging from this mindfulness, Kaya, Heywood, Arge, Brawn and Alexander (2004) supported that facilities ought to be deliberately arranged and adjusted to the business needs just as show commitment to accomplishing business goals. The arrangement of such different exercises requires contributions from different professional extending from design, building and business management. This affirms the multi-disciplinary nature of FM (Nutt, 1999). It is a calling requiring a wide scope of aptitudes and information. As a calling that spotlights on coordinated management of the working environment to improve the performance of the association (Tay & Ooni, 2009), it includes a wide scope of potential exercises (Alexander, 1993; Chotipanich, 2004). Nazali, Noor, and Pitt (2009) contended that effective FM envelops different exercises under different controls, joins assets and is imperative to the accomplishment of any association. While the ownership of sound professional preparing, as proof of the skill and abilities of facilities managers to deal with facilities management have been archived in the propelled nations like USA and UK by creators like Bell (1994), Barrett, Sexton, and Stanley (1995) and Alexander (1996), little is thought about this in African nations like Nigeria.

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Maintenance Management Strategy

A building and its maintenance have a very close relationship from the main entrance to everything consists else inside. BS 3811, 1964 define maintenance as “a combination of any actions carried out to retain an item in, or restore it to, an acceptable condition or standard”. In 1987, BS3811 upgraded the definition to a “combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function.” The definition of maintenance keeps on changing according to needs and circumstances. In fact, the main purpose of maintenance is to improve and sustain facility function, services and surrounding area using

a systematic system and standard regulations which are to be followed and accepted in the current facility by a competent person in-charge.(Shohet, 2002; Lavy and Shohet, 2009; Cholasuke, Bhardwa and Antony, 2004; Mattew, 2004). According to (Ahmad, 2006) building size and users' standards are the main factors in maintaining buildings in Malaysia. A proper maintenance management strategy helps to minimize the problem of a major breakdown. The Malaysian government has already provided US\$330m for maintenance especially for upgrading, renovating and maintaining various facilities as stated in the Ninth Malaysia Plan (2006-2010).

Types of maintenance strategy

Strategic plans have a long-term focus and address issues related to the organisation business objectives. A maintenance strategy is an integrated system that is needed by corporate management to highlight the significance of a particular piece of equipment that impacts particular types of maintenance work (Lahiri, Sinha, Chowdhury, Chowdhury & Crossley, 2008). A maintenance strategy is developed based on corporate business objectives and a clear understanding of the role of maintenance in line with corporate strategy (Al-Turki, 2011; Muchiri, Pintelon, Gelders and Martin, 2011; Alsyouf, 2009; Lahiri, Sinha, Chowdhury, Chowdhury and Crossley, 2008). It requires the definition of maintenance objectives as an input which will derive directly from the business (Márquez, León, Fernández, Márquez & Campos, 2009). A developed maintenance strategy will not be effective if the foundation not planned properly for each equipment (Onawoga, Sc, Akinyemi & Sc, 2010).

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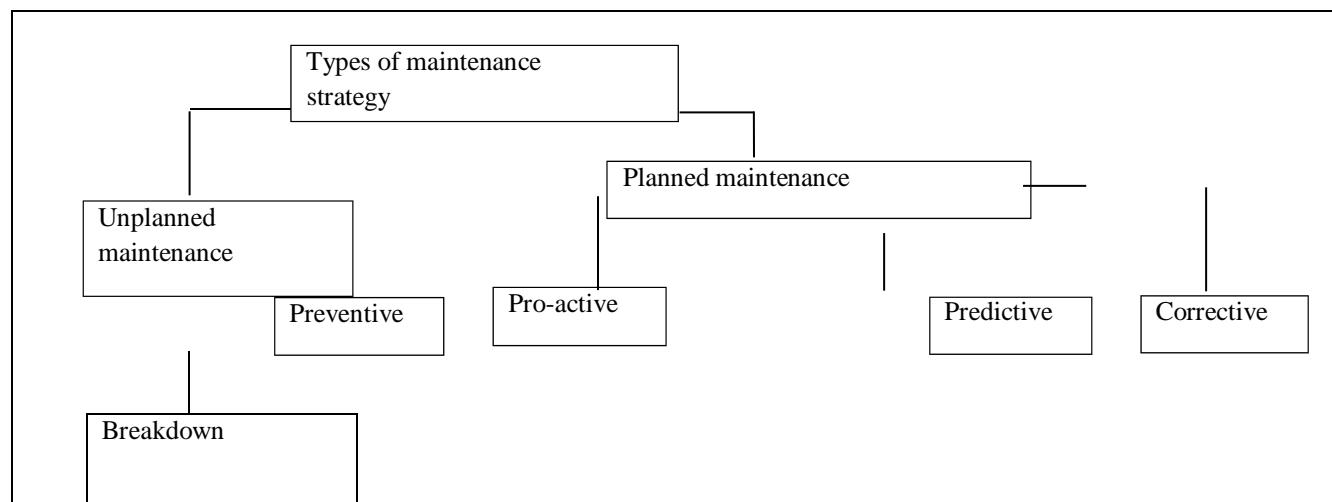


Figure 1: Types of maintenance strategy

Sources: Adapted from BS 3811 (1987 as cited Hisham (2003); NikElyna (2010); Yaakob (2005) and Swanson (2001)

Unplanned maintenance strategy

It is also called reactive maintenance or emergency maintenance. It is maintenance with respect to unexpected cases and leads to high maintenance cost.

Planned maintenance strategy

Widely used in maintenance management. The basis of planned maintenance is reliable and accurate data. Management normally plans its maintenance work properly especially the person in charge of monitoring the maintenance work.

Pro-active maintenance

As mentioned by (Hisham, 2003) proactive maintenance is one type of maintenance that detect the failure from the source of the failure. It can lead to extending the life of equipment and enhancing production capacity. Proactive maintenance is not similar to preventive or predictive maintenance. Hisham, (2003) stated that proactive maintenance is designed to extend the useful age of the equipment to wear-out stage by adopting a high level of mastery with respect to operating precision.

Preventive maintenance

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With this type of strategy, the efficiency of the equipment is assessed at regular time intervals, which can extend the life of the equipment. It is designed to overcome the disadvantages of corrective maintenance by reducing the probability of the occurrence of failure and avoiding sudden failure (Horner, El-Haram, & Munns, 1997). This strategy helps to minimize the cost of building operations besides protecting assets and prolonging the useful life of production equipment while at the same time can improve system reliability.

This strategy can prevent premature failure and reduce the frequency of the failures. It can also reduce the severity of failure and mitigate its consequences besides providing warning of an impending or incipient failure thus allowing planned repair. The management department will also be happy because the overall cost of asset management is being decreasing.

Corrective maintenance or condition based maintenance.

Corrective maintenance tasks often take place in response to breakdown or user request. It is completely different from preventive maintenance because it based on the condition of the equipment. As mentioned by (Horner, El-Haram, & Munns, 1997), corrective maintenance is the simplest maintenance strategy,

which involves just the repair or replacement of an element that has failed in its function. Nik-Elyna (2010) mentions that the corrective maintenance is the most maintenance managers depend on to perform daily maintenance tasks. Corrective maintenance can be extremely expensive because the failure of an item can cause a large amount of consequential damage to other elements in the building and failure of an item can occur at a time that is inconvenient to both the user and the maintaining authority (Horner, El-Haram & Munns, 1997).

Predictive maintenance

This type of maintenance is more like the condition-based or condition monitoring approach to maintenance. This approach helps by measuring the condition of the equipment using tools such as vibration analysis, infrared thermographs, ultrasonic detection (Hisham, 2003) and it involves inspections at equipment running conditions and during stoppage periods (Onawoga, Sc, Akinyemi&Sc, 2010). A balanced approach is needed for each maintenance strategy because these strategies have different function.

Performance

Moullin, 2007 defines performance the evaluation of how good organizations being manage and the value they deliver for customers and other stakeholders. Satisfying the end user such as the patient, medical or administrative staff and visitor can lead to sustainable value creation (Kaplan & Norton, 2004). Saving lives and providing patients with good services are the main business function for healthcare. It is important for healthcare to provide an adequate and appropriate medical support to satisfy patients' during treatment. At the same time healthcare personnel can use the medical support for research purposes. As describe by (Parida& Kumar, 2006) Maintenance Performance Measurement (MPM) is defines as "the multidisciplinary process of measuring and justifying the value created by maintenance investment, and taking care of the organization's stockholder requirements viewed strategically from the overall business perspective." MPM is an important process used to evaluate current and previous jobs done in order to satisfy end user needs. Healthcare need to provide continues training for health-care personnel to improve the physical environment. It is also important for healthcare personnel to provide health care to the local and wider community by giving great clinical service (Loosemore&Hsin, 2001).

The implementation of maintenance strategies will benefit to the management but for end user satisfaction, it will be based on quality performance of the service provided. Hisham, 2003 mentions that

having proper maintenance strategy for plant equipment can significantly reduces the overall operating costs, boost the productivity of the plant and lastly satisfy the end user.

Performance evaluation

Matthew (2009) studied the level of performance measurement sophistication by developing the strategic application to measure customer satisfaction in FM. Through an extensive literature review, the paper researches the application of customer performance evaluation in FM through a strategic management context. Findings revealed that the development of a customer performance measurement system (CPMS) for FM is introduced. The CPMS consists of four stages, combining quantitative benchmarking techniques with qualitative analysis in order to produce strategic objectives for business process improvement.

Amaratunga and Baldry (2000) studied applicability of the Balanced Scorecard into facilities management as a performance assessment tool. The adoption of this process would be a major change initiative in most organisations. The findings of this study raise a series of key issues that need to be addressed; organisations do not identify or learn from their past performances; organisations fail to collect the right information to monitor progress towards achieving the strategic goals; strategic vision requires communicating to the entire organisation and needs to make sure that it is properly understood; operating goals of departments and individuals should have a direct relationship/impact on the strategic vision; and all day-to-day decisions must also be based on the strategic plan. The study reported in the paper provides the basis for the construction of a set of propositions for a “Facilities Management Balanced Scorecard”, which forms the framework for further study at the next phase.

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Evaluation models

Burgelman, Maidique and Wheelwright (2004) point out that the conventional view of performance evaluation in the strategy literature is in terms of the outcomes. This approach, unfortunately, provides little insight in how exactly the outcomes came about. The performance evaluation of a swimmer is used as an example. To simply measure the time needed to swim a certain distance and to communicate that outcome to the swimmer, will not help the swimmer reach his/her highest possible performance. A detailed analysis of the swimmer’s every movement is needed. A key performance area is a managerial activity that is essential to the performance of the organisation. Schutte differentiates between “common” performance areas and “unique” performance areas.

“Common” performance areas relate to a manager’s accountability and thus reflect his responsibility to see that subordinates are performing satisfactorily. “Unique” key performance areas are those for which the manager and he alone is responsible.

Hellriegel, Jackson and Slocum (2002) argue that a performance appraisal, which necessarily reflects the past, is not an end to be achieved. It is rather a means for moving into a more productive future. Regular assessment of progress towards attaining goals keeps employees motivated. Regular feedback also encourages periodic re-examination of goals to determine whether they should be adjusted. Performance appraisal therefore refers to the following:

- Clear definition of envisaged outcome.
- Clear definition of specific outputs that will ensure such outcome.
- Clear definition of key performance areas (linked to outputs) for all staff.
- Evaluating the performance of staff in terms of their key performance areas.
- Agree on changes in behaviour of staff, where required.
- Agree on changes in goals, where required.

Three of the performance evaluation models discussed by Kok (2008) refer to this relationship between input, process, output and outcome. The Three-E’s model is illustrated as follows:

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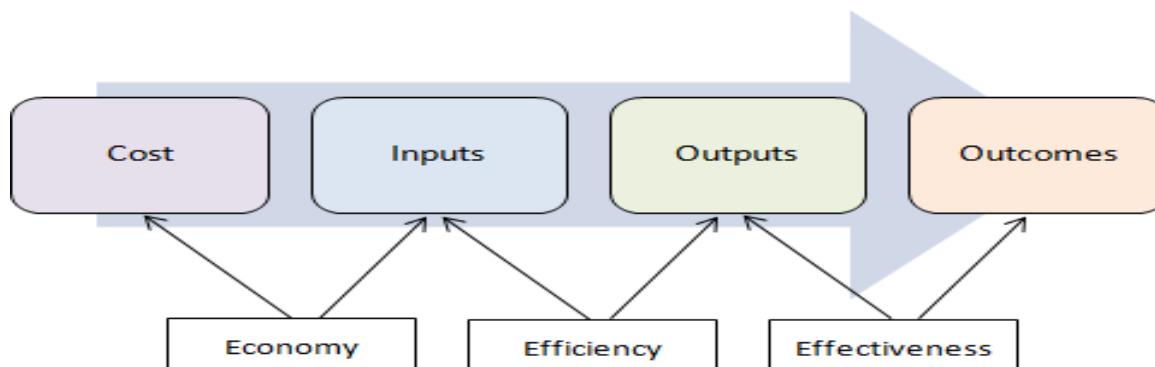


Figure 2: Three-E’s model for performance evaluation

Source: Kok(2008).

The Excellence model is based on the assumption that there is a need to manage the whole system and not only the results.

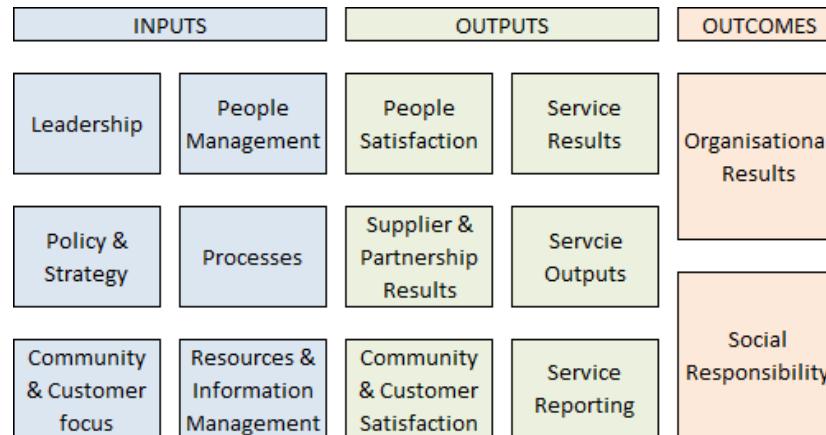
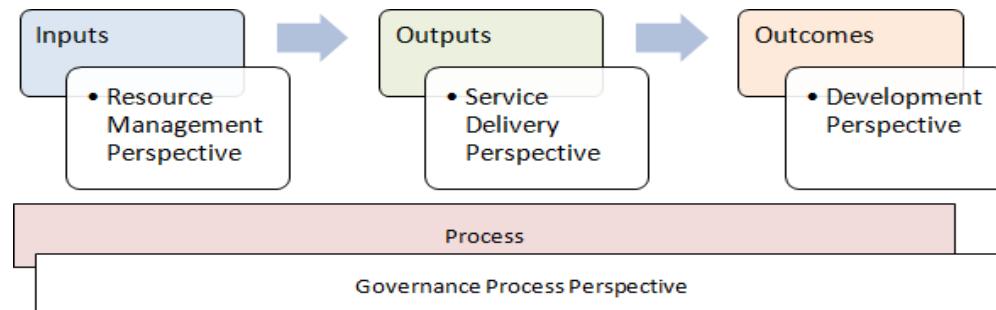


Figure 3: Excellence model for performance evaluation

Source: Kok (2008).

The Local Hybrid model is more clearly aligned with the systems approach to management. Louis Kok illustrates this model as follows:



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Local hybrid model for performance evaluation

Source: Kok (2008)

The preferred model is a multi-dimensional approach proposed by Kreitner and Kinicki (2004). Their model offers the following guidelines towards the identification of an appropriate combination of effectiveness criteria:

a. Goal accomplishment:

- Key organisational results or outputs are compared with previously stated goals or objectives.
- Deviations, either plus or minus, require corrective action.

b. Resource acquisition:

- An organisation is deemed effective in this regard if it acquires the necessary factors of production such as raw materials, labour, capital, managerial and technical expertise.

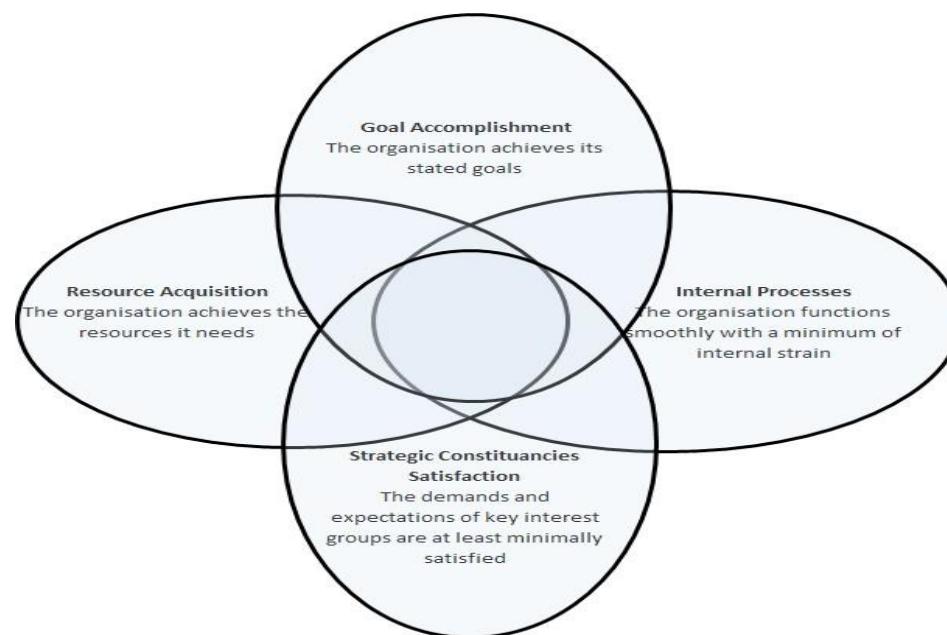
c. Internal processes:

- An organisation is said to be a healthy system if information flows smoothly and if employee loyalty, commitment, job satisfaction and trust prevail.
- Goals may be set for any of these internal processes.

d. Strategic constituencies' satisfaction:

- A strategic constituency is any group of individuals who have some stake in the organisation.
- Constituencies may have competing or conflicting interests.

This model is illustrated below:



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Figure 4: Multi-dimensional model for performance evaluation

Source: Kreitner and Kinicki(2004)

In line with this multi-dimensional model for performance evaluation, a total of twelve performance evaluation instruments were identified to cover the four dimensions indicated above.

Performance measures

Managers are on the whole slaves of the systems within which they function. Schutte (1993) argues that it is therefore vitally important that the structure of systems, and more importantly, control systems, direct attention to those issues which are important from the organisation's point of view. Schutte differentiates between control systems for strategic planning and control systems for operational control.

Nooh, Babburi and Howell (2007) assessed the performance of the colposcopy service of the teaching hospitals of Cardiff. They analysed the case note of 426 women who attended the colposcopy clinic. This study shows that five of the national standards have been achieved.

Key Performance Indicator

Hospital performance may be defined according to the achievement of specified targets, either clinical or administrative (*WHO, 1994*). Ultimately, the goal of health care is better health, but there are many intermediate measures of both process and outcome. Targets may relate to traditional hospital functions, such as diagnosis, treatment, care and rehabilitation as well as to teaching and research. However, both the definition and the functions of hospitals are changing, as emphasis shifts from inpatient care to ambulatory care, community outreach programmes and health care networks (*Healy & McKee, 2002*). Hospital performance may thus be expected to include elements of community care and public health, as well as social and employment functions. These dimensions of hospital performance have been analysed in the European context (*Onyrbuchi, Arah & Klazinga, 2003*).

Measurement is central to the concept of quality improvement; it provides a means to define what hospitals actually do, and to compare that with the original targets or expectations in order to identify opportunities for improvement. Hospitals have many targets and many stakeholders; these may be seen as clusters of values and aims behind performance measurement (*Ovretveit, 2001*), in such areas as:

- **Research:** Data about structure, activities and effectiveness can be used to study the link between organization and performance, and to inform planning and system development.
- **Service improvement:** Purchasers and providers can compare performance within and among hospitals to stimulate and measure change.
- **Referrer and patient choice:** Patients and their referrers can use information such as waiting times, outcomes and patient experiences in choosing a provider.
- **Resource management:** Purchasers and provider managers need data on performance, costs and volume of activity in order to decide on the best use of resources.
- **Accountability:** Politicians and the public increasingly demand transparency, protection and accountability for performance.

Hospitals need positive incentives to provide timely, accurate and complete data to external Assessment programmes. If such programmes are perceived to have intrinsic value to the organization (for example, in staff motivation, team building; clinical and professional development or risk management), hospitals have less need for financial or market incentives to participate.

A review of 195 published studies suggested that few patient surveys were both valid and liable (*Sitzia, 1999*), and governments may be reluctant to publish adverse results for public hospitals. Many patients have low expectations and are too readily satisfied; system at measurement of their experience is a more sensitive indicator of empowerment (*Coultar, 2002*).

Researchers at Harvard Medical School developed and tested a standardized instrument to measure patients' concerns and experience. It was first used at a national level to interview hospital inpatients and relatives by telephone in the United States, and has since been used as the so-called Picker Questionnaire in Australia, Canada and various European countries (*Gulacsi, 2001*; *Coultar & Cleary, 2001*).

Current thinking of Performance measurement in FM

It is worth noting that there is no universal agreement on the definition of "performance" (*Avkiran, 1997*). However, Hronec (1993) defines performance measurement as: "a quantification of how well the activities within a process or the outputs of a process achieve a specified goal". In simple terms, performance is achievement against intention (*Gagendran, 2000*). Hronec (1993) lists four potential benefits that can arise as a result of having an appropriate performance measurement system: satisfying customers; monitoring progress; benchmarking processes and activities; and driving change. The emphasis on promoting customer satisfaction and driving change in accordance with the response to external pressures from an increasingly global competitive marketplace, while the emphasis on monitoring progress and benchmarking is a clear reflection of the culture promoting continuous improvement, driven from both within and outside the organisation (*Then, 1996*). The development of performance measurement within the context of business management is important in that it sets the background against which senior management within organisations will evaluate the current performance and contribution of their facilities services in fulfilling corporate objectives.

Even in FM environments, where performance measurement was not adequately addressed, the acceptance of performance measurement is growing. As Grimshaw and Keeffe (1992) stated: "A link exists between the physical environment and the operational efficiency of the organisation". The need for FM performance measurement systems has already been emphasised by identifying FM as a business resource (*Amaratunga & Baldry, 2000*).

Today's organisations constantly review the composition of their core business and the way it operates (Royal Institution of Chartered Surveyors, 1993). Therefore, clear attention must be paid both to the effective maintenance of support systems and the culture of the organisation.

Tranfield and Akhlaghi, (1995) emphasised that FM is an important emerging business sector with an annual size well into tens of billions of pounds in the UK. The FM budget of an organisation can often require thirty to forty per cent of total organisational expenditure, second only in cost to payroll (Williams, 1994). Therefore, good performance in FM is essential. In the research described in the paper, it was found out that FM managers no longer reject FM performance measurement and further acknowledge the benefits of their various measurement procedures.

Concept of Patient Satisfaction

Patient satisfaction concept covers whether the patients are satisfied from health services and if necessary ask for their rights (Heidegger, Saal&Nuebling, 2006). Patient satisfaction is the percent that the expectation of the patient is covered by the health service (Naidu, 2009).

Patient's Satisfaction in Hospital

Williams, Coyle and Healy (1998) identify whether and how service users evaluate services. Data were collected through unstructured in-depth interviews with users of mental health services and through more structured discussion around their responses on a patient satisfaction questionnaire (CSQ 18B) whose psychometric properties has been well documented. The data revealed that service users frequently described their experiences in positive or negative terms. However, the process by which these experiences were transformed into ``evaluations" of the service was complex. Medicinal services Market develop on patient's deliberate conduct in future, fulfilled patients will return and to prescribe the doctor's facility to their families and companions, regarding the critical significance of patient fulfilment on the budgetary position of the social insurance establishments (Karmakar& Sippy, 2018). As of late, social insurance supervisor in creating nations acknowledged how the understanding view of value infers their decisions among doctor's facilities. Karmakar and Sippy (2018) clarified a few purposes behind enhancing quality in medicinal services benefits in created nations; beginning with recording the abnormal state of patient fulfilment related with high costs, understanding quality techniques causes troughs to take care of issues, improve relations between wellbeing suppliers and to distinguish strategies in helping decreasing waste and sparing. In addition, Patients' fulfillment is developed from viable reactions to patient's needs, and on-going change of the human services administrations, alongside top to bottom connection amongst specialists and patients (Karmakar& Sippy, 2018).

Then again, Amin and Nasharuddin (2013) closed five measurements assume an imperative part in molding persistent fulfillment; affirmation, therapeutic administration, comprehensive administration, release and social weight. Likewise, Peprah (2014) proposed other basic components influencing as; the

states of mind of medical caretakers toward patients, adequacy in conveying administration, and the capacity to impart what patients need to know and also the accessibility of avant-garde innovation.

Patient Satisfaction of the Quality of Health Care Provided by Outpatient Services in Hospital

The expectations and demands of the citizens during crises periods from the health system are increased (Gurgel, Sousa, Oliveira, Santos & Diderichsen, 2017). The need for quality not only in the medical-clinical work of oncology patients but all the departments providing administrative or financial services is high and there are many factors that affect patients'. One of the most modern ways of investigating the quality of health care is the measurement of the patients' opinion as users of services. The assessment of patient satisfaction as 'evaluation index' is important because it helps in understanding their expectations as 'client' and to identify the needs and expectations of the health system. Also, a comparison of expectations with the perceived performance of services helps to identify the critical dimensions that need improvement and to find the necessary solutions. In recent years, the interest of specialists in the health sector is increasingly turning to projects and studies relating to the satisfaction of users of the care provided. It is characteristic that in the literature appear more than 1000 manuscripts each year related to patient satisfaction (Toundas, Lopatatzidis & Chouliara, 2003).

It should be noted that in recent years the assessment of patient satisfaction has gained increasing importance as to clearly identify the overall level of performance of a health unit and defines the possible superiority compared to other equivalent (Tso & Chan, 2006). Sekandi, Makumbi, Kasangaki, Kizza, Tugumisirize, Nshimye, Mbabali and Peters (2011) studied factors associated with general satisfaction among clients attending outpatient clinics in a referral hospital in Uganda. This study highlights the important findings about outpatient services at Mulago hospital. The sub-optimal satisfaction scores for outpatient care strongly suggest that more could be done to assure that services provided are more patient centered. Significant factors including category of clinic visited, waiting time, costs incurred, accessibility of services and perceived providers' technical competence at this hospital should be explored by the Makerere University College of Health Sciences and Mulago hospital for potential improvements in quality of the health service delivered. Result shows that the overall the clients' general satisfaction was suboptimal. Average satisfaction was higher among clients with a primary or secondary education compared with none, those attending HIV treatment and research clinic compared with general outpatient clients, and returning relative to new clients. Conversely, satisfaction was lower among clients incurring costs of at least \$1.5 during the visit, and those reporting longer waiting time (>2 h). Client's perceived technical competence of provider, accessibility, convenience and availability of services especially prescribed drugs were the strongest predictor of general satisfaction.

Various Actor Roles and Links That Shape Patient Satisfaction and Healthcare Quality.

Naidu (2009) studied factors affecting patient satisfaction and healthcare quality. In his study, a total of 24 articles from international journals were systematically reviewed for factors determining patient satisfaction and healthcare quality. Findings indicate that Patient satisfaction is a multi-dimensional healthcare construct affected by many variables. Healthcare quality affects patient satisfaction, which in turn influences positive patient behaviours such as loyalty. Patient satisfaction and healthcare service quality, though difficult to measure, can be operationalised using a multi-disciplinary approach that combines patient inputs as well as expert judgement.

According to Pitta and Laric (2004), healthcare delivery value can be described using elements that precede service delivery. The value chain includes five groups:

- Payers – government, employer and individuals;
- Fiscal intermediaries – insurers;
- Providers – hospitals, hospital systems and alternate site facilities;
- Purchasers; and
- Producers.

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Their study elaborates how links are created from the simplest, direct physician-patient to more complex and elaborate networks, which include other players such as employers, insurers, retailers, diagnosis systems and alternate medical service providers. Healthcare value chains also carry a large amount of patient information, which patients may feel a perceived risk in disclosing. The study shows how each of these links and players create positive or negative patient experiences. All value chain entities are important for service success and any one can harm image. As in all services, the customer tends to blame the contact organization when there is a problem (the hospital, in this case). Authors suggest that hospital managers can increase perceived value for the customer by handling the bulk of behind-the-scenes detail, providing clear and appropriate patient information and showing care and concern (Pitta & Laric, 2004).

Factors Influencing Patients' Satisfaction with Hospital Service in Public Hospitals

Chen, Li, Wang, Xue, Ding, Nong, and Zhang,(2016) observed the current status of inpatient satisfaction and analyze the possible factors influencing patient satisfaction during hospitalization. A cross-sectional investigation was conducted to obtain basic information about inpatient satisfaction, and statistical methods were used to describe and analyze the data. A total of 878 questionnaires were included in this study. A 5-point Likert scale rating was employed to assess items related to hospitalization care.

Nonparametric tests and ordinal logistic analysis were used to explore the relationship between predictors and the patients' overall satisfaction. Result shows that among the respondents, 89.75% were satisfied overall with the service they received during hospitalization, while 0.57% reported dissatisfaction. Inpatient demographic characteristics such as sex of the patients, occupation, age, and residence had significant associations with satisfaction, while monthly income and marital status did not.

Patient satisfaction has been used as a tool for measuring whether the available health care supply meets patients' health needs and expectations. This tool is widely used in the health care field around the globe. Patient satisfaction is a valuable indicator of health service quality and effectiveness, and it also has an impact on patient recovery (Zendjidjian, Baumstarck, Auquier, Loundou, Lançon& Boyer, 2014). In recent decades, patients have become increasingly knowledgeable about health care. As a result, they have begun to require higher standards of medical effectiveness, health-staff services, expenditure, and so on (Sahin, Yilmaz& Lee, 2007). By using information gleaned from patient satisfaction studies, health care providers and regulatory institutions can better observe overall patient satisfaction, meet patient expectations, and discover deficits in medical service conditions, all of which would be beneficial for improving health care provision. Higher satisfaction ratings indicate fewer complaints and medical disputes, better patient recovery, and increased hospital assessment, so it is essential to conduct studies related to patient satisfaction (Mittal, Huppertz&Khare, 2008). Because there is wide diversity in patient satisfaction among inpatients, outpatients, and emergency patients, this study focuses solely on inpatient satisfaction.

Existing studies of satisfaction have generally investigated patients' evaluations of services, they received in order to uncover patient demands and preferences for medical projects and hospitals; they also provided information to health institutions about the areas that needed the most improvement. Previous analyses have observed that inpatient satisfaction was influenced by multiple factors, including patient factors (demographic characteristics, physical and psychological status, and expectations), health institution factors (health-staff characteristics, staff-patient interactions, health quality, treatment process, finances, medical facilities, and health organization environment including physical environment and food service), and governmental factors (social environment, health policy, medical insurance, and welfare conditions) (Kuosmanen, Hätonen, Jyrkinen, Katajisto&Välimäki, 2006).

Healthcare Facility Maintenance

Lavy and Shohet (2007) developed a decision-support system based on core parameters affecting the performance of health-care facilities. The paper presents the preliminary development of a quantitative integrated health-care facility management model, subdivided into the following three interfaces: input,

reasoning evaluator and predictor, and output findings indicate that the benefits of applying the proposed model may be significant to FM understanding, as it provides new concepts for measuring the effectiveness and efficiency of maintenance and performance of facilities.

Shohet and Lavy, (2003) considered healthcare facility maintenance as one of the key elements for successful delivery of healthcare services. Lavy and Shohet (2007) enumerated competent areas of coverage of hospital facilities maintenance to include: maintenance of all plant, equipment, building, infrastructure and landscape through a comprehensive maintenance program.

- Maintenance of all medical and laboratory equipment through a comprehensive maintenance programme
- Cleaning of general areas as well as specialised areas including supply of toiletries and consumables.
- Supply if clean new tailored linen, collection, transporting and laundering of soiled linen, repair of torn or damaged linen and provisions of curtains, cushion covers, and screens including consumables and facilities for bagging.
- Supply of consumable items such as waste bins, sharp containers and coloured bags, collect and transport waste from the source of generation within the hospital to the incineration plant for disposal, In other hospital setting, the situation differ from what Lavy and Shohet (2007) presented.

Oladejo (2014) in a study conducted on tertiary hospitals in South East Nigeria observed that healthcare facilities maintenance centered mainly on structure, equipment and machinery used by healthcare institutions while the cleaning of wards, offices and general areas as well as the supply of clean linen and disposal of waste bins were carried out by the facility management unit. The maintenance units of tertiary hospitals were responsible for maintaining the structural aspects of healthcare buildings, equipment and plants and machinery. This reduces the responsibility of the maintenance unit but by no means reduces the complexity of their duty.

3.0 Methodology

The study was carried out in Specialist hospital, Bauchi. The hospital was initially established by the colonial masters as a Leprosarium in 1917. After independence, the government converted it to General hospital in the early 1960s. It was upgraded to a Specialist hospital in 1979 and was made an autonomous entity (Specialist hospital board) in 1996. The board was however dissolved along with other boards in 2000 and has since then never been reconstituted.

This study adopted the use of quantitative research method where used questionnaire survey to collect the data from the respondents in the study area, in the process of determining the sample size for this research, Krejcie & Morgan (1970)table of determining sample size was used. The table indicates that for population size of twenty-seven thousand two hundred and seventy-eighty (27,278), sample size of three hundred and seventy-seven (377) can be used. Study adopted the simple random sampling technique in selecting sample, So that each element or member of the population will has equal chance or probability of being selected. SPSS was use as tool for data analysis

4.0 Result and Discussion

4.1 Descriptive Analysis of Respondents' Opinion

Descriptive statistical analysis was carried out to explore the levels of FM services provision and performance in Bauchi Specialist hospital

Table 4.1: Mean Ranking of Levels of FM services provision in Specialist hospital, Bauchi

S/N	Levels of FM services provision in Specialist hospital	Mean	Std. Dev.	Ranking
	Hospital's environment	4.49	0.666	1 st
	Electricity	4.48	0.738	2 nd
	Security	4.38	0.68	3 rd
	Availability of medical services	4.36	0.839	4 th
	Competence and Expertise of staff	4.34	0.679	5 th
	Cost of Healthcare	4.29	0.77	6.5 th
	Cleaning	4.29	0.77	6.5 th
	Staff attitude	4.25	0.646	8 th
	Car parking space	4.24	0.778	9 th
	Security services	4.22	0.652	10 th
	Landscaping	4.17	0.747	11 th
	Catering	4.15	0.728	12 th
	Telecommunication management	4.15	0.751	13 th
	Waste disposal	4.1	0.718	14 th
	Waiting time	4.03	0.785	15 th
	Toilet Management	4	0.953	16 th

Source: Field survey, 2020

In order to assess the level of facility management service provision and maintenance in specialist Hospital Bauchi, the mean and standard deviation were used. Based on the analysis presented in table 4.1, it can be seen that Hospital's environment with mean 4.49 and SD 0.666 was ranked 1st, Electricity with mean 4.48 and SD 0.738 was ranked 2nd, security with mean 4.38 and SD 0.68 was ranked 3rd, availability of medical services with mean 4.36 and SD 0.839 was ranked 4th. Also, competence and expertise of staff with mean 4.34 and SD 0.695 was ranked 5th, cost of health care and cleaning with mean 4.29 and SD 0.77 were ranked 6.5th, staff attitude with mean 4.25 and SD 0.646 was ranked 8th, car parking space 4.24 and SD 0.778 was ranked 9th, security service with mean 4.22 and SD 0.652 was ranked 10th. Furthermore, landscaping with mean 4.17 and SD 0.747 was ranked 11th, catering with mean 4.15 and SD 0.728 was ranked 12th, telecommunication management with mean 4.15 and SD 0.751 was ranked 13th. Table 4.4 also revealed that waste disposal, waiting time and toilet management has the least rank of 14th, 15th and 16th respectively.

Table 4.2: Mean Ranking of Levels of FM services performance in Bauchi Specialist hospital

S/N	Levels of FM services performance in Bauchi Specialist hospital	Mean	Std. Dev.	Ranking
1	Structure and Fabric	4.44	0.764	1 st
2	Competence and expertise	4.36	0.652	2 nd
	Office furniture & stationery	4.31	0.728	3 rd
	Staff attitude	4.25	0.842	4 th
5	Accessibility of medical services	4.19	0.835	5 th
6	Air Conditioning	4.18	0.751	6.5 th
7	General Cleaning Service	4.18	0.721	6.5 th
8	Telecommunication management	4.07	0.894	8 th
9	Waste Disposal Service	4.03	0.826	9 th
	Vehicle parking	4.01	0.807	10 th
11	Security Service	3.97	0.73	11.5 th
12	Pottering	3.97	0.811	11.5 th
13	Reprographics services	3.93	0.776	13 th
14	Toilet maintenance	3.92	0.95	14 th
15	Landscaping	3.91	0.794	15 th
16	Catering service	3.89	0.808	16 th

Source: Field Survey, 2020

Data presented in table 4.2 revealed the respondents view on the level of facility management services performance in specialist hospital, Bauchi. Mean ranking and standard deviation were used to assess the respondents' opinion on the FM services performance. The structure and fabric with mean 4.44 and SD 0.764 was ranked 1st, competence and expertise with mean 4.36 and SD 0.652 was ranked 2nd, office furniture and stationery with mean 4.31 and SD 0.728 was ranked 3rd. Also, staff attitude with mean 4.25 and SD 0.842, accessibility of medical services with mean 4.19 and SD 0.835, air conditioning with mean 4.18 and SD 0.751, general cleaning service with 4.18 and SD 0.721 were ranked 4th, 5th, and 6.5th respectively. Furthermore, telecommunication management with mean 07 and SD 0.894 was ranked 8th, waste disposal service with mean 4.03 and SD 0.826 was ranked 9th, vehicle parking with mean 4.01 and SD 0.807 was ranked 10th, security services with mean 3.97 and SD 0.73 was ranked 11.5th pottering with mean 3.97 and SD 0.811 was ranked 11.5th. Table 4.6 also revealed that reprographic service with mean 3.93 and SD 0.776 was ranked 13th, toilet maintenance with mean 3.92 and SD 0.95, landscaping with mean 3.91 and SD 0.794, catering service with mean 3.89 and SD 0.808 were ranked 14th, 15th and 16th respectively.

5.0 Conclusion

This study aimed at evaluating Facility Management service provision and performance in Specialist hospital, the provision and performance FM service Findings revealed a strong FM service provision and performance on for the outpatient's satisfaction in the study area. provision Specifically, in relation to structure and fabric, competence and expertise, office furniture and stationery, staff attitude, accessibility of medical services, air conditioning, general cleaning service, telecommunication management, waste disposal service, vehicle parking, security services, pottering,, toilet maintenance, landscaping and catering service. More precisely, the findings suggest that outpatients are quite satisfied with performance of general cleaning service, waste disposal service, vehicle parking, security services, and toilet maintenance.

MODEL YAPIMI YOLUYLA TASARIM İLETİŞİMİ: TASARIM EĞİTİMİNDE FİZİKSEL MODELLERİN SINIFLANDIRILMASI

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ÖZET

Güncel endüstriyel tasarım eğitiminde düşünsel yaratımlara ait form, morfoloji ve kütlesel özellikler neredeyse her zaman üç boyutlu fiziki çıktılar ile denetlenmesi gerekmektedir. Bu sayede düşünsel yaratıma dair oran, oranti, ölçü ve ölçek hakkında gerçekçi bilgiler edinmek mümkün olabilmektedir. Model yapımı gibi üç boyutlu temsiller bu noktada dikkat çekmektedir. Özellikle tasarım sınıfında veya tasarım stüdyosunda öğrencilerin kısıtlı mesleki terminoloji ve anlatımlarıyla kendilerini ifade etmekte zorlanmaları veya yanlış anlaşılmaktan kaçınmaları için model yapımı bir öğrenme aracı olarak da görev yapmaktadır. Endüstriyel tasarım eğitiminde fiziksel üç boyutlu modellerin studio ortamında tasarım fikirlerinin gösterilmesi ötesinde; aynı zamanda diğer tasarım ortamlarında da çeşitli fikirler sunmak için de kullanışlı daha derin bir anlamda kullanımı söz konusudur. Bu noktada iletişim kavramı ön plan çıkmaktadır. Tasarım eğitimi sürecinde gerçekleştirilen tasarım uygulamalarının süreçlerinde çeşitli seviyelerde ve detaylarda model yapımı ihtiyaçları bulunmaktadır. Bu da tasarım sürecinin farklı aşamalarda farklı iletişimlerin kurulmasını gerekli kılmaktadır. Sonuç olarak bu araştırma çalışmasında model yapımının farklı bileşenleri ve yöntemleri fiziksel model alternatiflerinin ayrıntılı bir sınıflandırmasıyla örneklerle ortaya konulmaya çalışılmaktadır. Çalışma ayrıca modelleri kullanarak problem çözme için bir dizi temel ilkeyi de ortaya koymaya çalışarak, model yapımı yoluyla iletişim, model yapımının öğrenme bileşenleri, model uygulama yöntemleri tanım ve özellikleyle ortaya konulmaya çalışılmıştır.

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Anahtar Kelimeler: Ürün Tasarımı, Model Yapımı, Fiziki Modeller, Tasarım İletişimi, Tasarım Eğitimi

YARATICI DİSİPLİNLERDE TASARIM PORTFOLYOLARINA AİT ÖZELLİKLERİN İNCELENMESİ

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ÖZET

Görsel tasarım, iletişimim temelidir. Sözel iletişimin dile getiremediği konuları ve duyguları grafik sanatlar açıklayabilir. Bir tasarıma bakarak onu okumak neredeyse imkansızdır, zira iki işlem birbirinden tamamıyla farklı algılar yaratabilir. Dil ile ifadenin gücü ne katkı sağlayan, görsel ifadedir. Tasarım mesleğinin eğitiminin almış kişilerin özellikle iş arayışlarında kullanılmak üzere tasarladıkları portfolyolar, işverenlere yönelik hazırlanan belgelerdir. Portfolyo tasarım, tipografi ve renk kullanımına dayanan bir grafik tasarım yöntemidir. Goldsby ve Fazal (2001), öğrencilerin portfolyolarının, öğrencilerin becerilerinin ve uzmanlıkların görselleştirilmesi amacıyla kullanılmasından bahseder. Bu sebeple portfolyolar, öğrencilerin becerilerinin, uzmanlıklarının ve eğitiminin açıklanma amacıyla hazırlanır (DiMarco, 2005). Farklı tasarım disiplinlerinde benzer prensiplere dayanan yöntemlerin hedefinde, tasarımcının kendi yaratıcı vizyonunu yansıtma arzusu bulunur. Çağdaş tasarım yaklaşımlarına uygun portfolyo belgelerinin tasarlanması, öğrencilerin ve profesyonellerin sektörde kendilerini ifade etmelerine imkan vermektedir.

Çalışmada kalitatif bir yöntem kullanılmaktadır ve ana hipotez, ‘Mesleki eğitimi gösteren bireysel portfolyolar, kişisel yaklaşım farklılıklarının açıklanmasıyla tasarımcı vizyonunun daha detaylı bir şekilde ortaya konulmasını sağlayabilir’ şeklindedir. Yazarın 15 yıldır farklı kurumlarda yaptığı çalışmalar sunulmakta, Endüstriyel Tasarım, İç Mimarlık ile Gemi ve Yat Tasarımı bölümlerinde yapılan portfolyoların, çalışmada sunulan literatüre bağlı olarak oluşturulan ölçütlerde uygun biçimde farklılıklarını ve benzerlikleri değerlendirilmektedir. Çalışmada sunulan portfolyo tasarım kriterlerine uygun biçimde açıklanan tüm proje içerikleri, yazar tarafından farklı bölümlerde gerçekleştirilmiş olan portfolyo tasarımını dersine ait çıktılardır. Bu amaçla bölümler tarafından verilen eğitim farklılıklarının, portfolyo tasarımını açısından etkileri incelenmekte; bulgular mesleki farklılıkların ortaya konulması amacıyla literatüre bağlı olarak oluşturulan ölçütlerde göre değerlendirilmektedir.

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Anahtar Kelimeler: Eğitim, Grafik, Portfolyo, Kurumsal Kimlik, Tasarım

ABSTRACT

Visual design is the basis of communication. Graphic arts can explain the subjects and emotions that verbal communication cannot express. It is almost impossible to perceive a design just by looking at it, as subjects and emotions may create perceptions that are completely different from each other. Visual expressions can contribute to the power of expression of language. Portfolio design is a graphic design method based on the use of typography and color. Portfolios are documents prepared for employers designed by people who have received training in a design profession to be used in job enquiries. Goldsby & Fazal (2001), mention the use of student portfolios for visualization of profession-centered skills and expertise. For this reason, portfolios are prepared in order to explain students' skills, expertise and education (DiMarco, 2005). The scope of the approach based on similar principles in different design disciplines, is the desire to reflect individual creative vision. Designing portfolio documents suitable for contemporary design approaches allows students and professionals to express themselves in the sector. A qualitative method has been used in the study and the main hypothesis can be presented as: : "Portfolios reflecting design-centered education may provide an idea on the designer insight by visualizing individual approach differences". In the research, portfolios of Industrial Design, Nautical Design and Interior Architecture departments are evaluated according to the composed criteria based on the study literature. All the project contents described in accordance with the portfolio design criteria presented in the study, are the results of the portfolio design course conducted by the author in different institutions. For this purpose, the effects of educational differences between design departments in terms of portfolio design are examined and findings are evaluated according to the composed criteria in order to reveal professional differences.

CULTURAL HERITAGE OF PRISHTINA-KOSOVO

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ABSTRACT

Abstract: This paper will provide an overview of cultural heritage management in Prishtina. Cultural heritage, tangible and intangible is special interest and value, is undoubtedly one of the priorities for our past. Mainly in this paper we will present cultural heritage and its management. Our research was done on fieldwork, observation of the situation, conversations with responsible people for the management of cultural heritage. Cultural heritage management is a new field, which has begun to be identified and developed in recent years after the independence of Kosovo in 2008. It is an important source of revenue to support its ongoing management. Now it is time to present and promote a variety of cultural strata of Kosovo, where for a part of this treasure is silent, and another part is being discovered every day. Today, cultural heritage is treated not only as a national asset, but also as part of the tourism industry.

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Keywords: Prishtina, cultural heritage, management, institution, presentation.

HASMER KOYUN IRKINDA NERVUS İSCHİADİCUS'UN DAĞILIMI

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ÖZET

Hasmer, Türkiye'de yeni bir et tipi koyun ırkı geliştirmek için, Bahri Dağdaş Uluslararası Tarımsal Araştırma Enstitüsü'nde yapılan melezleme çalışmaları sonucunda oluşturulmuş bir koyun ırkıdır. Resmi Gazete'nin 2973. sayısında yayımlanan tebliğe göre (tebliğ no: 2014/50) Hasak koyunu Türkiye'nin resmi yerli hayvan ırkı olarak tescil edilmiştir (Resmi Gazete, 2014).

Bu çalışmada Hasmer koyununda nervus ischiadicus'un dallarının makroanatomik yapısının belirlenmesi amaçlanmıştır. Bu amaçla 5 Hasmer koyunu kullanılmıştır. Kadavraların vücut boşlukları açıldıktan sonra kadavralar formaldehit solüsyonunda tespit edildi. Nervus ischiadicus'un dalları ayrı ayrı diseke edilerek fotoğrafları çekildi.

Hasmer koyununda nervus ischiadicus'un, nervus gluteus caudalis isimli dalıyla birlikte foramen ischiadicum majus'tan geçtiği gözlandı. Arka bacakta femur'un caudoproximal kısmı düzeyinde nervus ischiadicus ilk belirgin dalı olan rami musculares'in ortak kökünü verdi. Bu kökü verdikten sonra, nervus ischiadicus ventral'e doğru seyrederek yaklaşık olarak uyluğun ortası düzeyinde nervus cutaneus surae caudalis, nervus tibialis, ve nervus peroneus communis isimli 3 sinire ayrıldı.

Hasmer koyun ırkında yapılan bu anatomik çalışmanın, nervus ischiadicus'un arka bacakta dallanma şéklinin anlaşılmasına katkı sağlayacağına inanılmaktadır.

Anahtar Kelimeler: Hasmer koyunu, Nervus ischiadicus, Anatomi.

DISTRIBUTION OF THE NERVUS ISCHIADICUS IN HASMER SHEEP BREED

ABSTRACT

Hasmer is a sheep breed, developed as a result of crossbreeding studies at Bahri Dagdas International Agricultural Research Institute in order to create the new meat type sheep in Turkey. According to the statement written in the 2973rd issue of Turkish Official Newspaper (Statement number: 2014/50), Hasmer sheep type is approved as official indigenous animal breed of Turkey (Resmi gazete 2014).

This study was aimed to determine the macroanatomical arrangement of the branches of the nervus ischiadicus, in Hasmer sheep breed. 5 Hasmer sheep were used for this purpose. After opening the body cavities of the cadavers, they were fixed in formaldehyde solution. The branches of the nervus ischiadicus were dissected separately and photographed. In Hasmer sheep, we observed that nervus ischiadicus passed through the foramen ischiadicum majus together with its branch, nervus gluteus caudalis. At the level of the caudoproximal part of the femur, nervus ischiadicus gave off its first prominent branch in hind limb, the common root of the rami musculares. After branching the common root of the rami musculares, nervus ischiadicus coursed ventrally; and approximately in the middle of the thigh, it was divided into three nerves: nervus cutaneus surae caudalis, nervus tibialis, and nervus peroneus communis. I believe that this anatomical study in the Hasmer sheep breed will make a contribution to understanding the branching pattern of nervus ischiadicus in hind limb.

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Keywords: Hasmer sheep, Nervus ischiadicus, Anatomy.

THE USE OF BACTERIOPHAGES FOR DECONTAMINATION OF EXPERIMENTALLY CONTAMINATED CHICKEN BREAST MEAT

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Introduction

Enteric *Salmonella* infection is a global problem both in human and animals, and has been attributed to be the most important bacterial etiology for enteric infections worldwide with massive outbreaks occurring in recent years. Poultry products are considered one of the major sources of *Salmonella* infections. In many cases multiresistant bacteria infecting humans have been directly linked to resistant organisms in animals. Existence of such pathogens is problematic because of possible transmission of antibiotic resistant bacteria from animals to humans through the food supply. The development of alternative anti-microbial remedies has become one of the highest priorities of modern medicine and biotechnology. One of such alternatives might be bacteriophages as a prospective biocontrol method against contaminations caused by antimicrobial resistant pathogens.

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Aim

This work was conducted to study the efficacy of bacteriophage cocktail for reduction of contamination in chicken breast meat, on the model of artificial contamination with *S. typhimurium*.

Materials and Methods

Chicken breasts fillet were aseptically cut into 10 ± 0.5 g sample size. The sliced samples were transferred into sterile containers. A total of 45 random samples were enrolled in our work. The samples were divided into three groups (A, B and C). Samples from A and B groups were inoculated with $100 \mu\text{L}$ (2.2×10^4 CFU/mL) of the bacterial suspension and incubated at room temperature for 10 min to allow bacterial attachment to the meat surface.

Then, 1 ml phage cocktail (combination of three phages in an equal ratio) at 10⁵ PFU/ml and 10⁸ PFU/ml were separately pipetted onto the samples from the A and C groups. B group - chicken breast samples only treated with *S. typhimurium* at levels of 10⁴ CFU/ml without phage treatment were used as positive controls and C group - samples not inoculated with *S. typhimurium* and only inoculated with phage cocktail were used as negative controls, respectively. The prepared samples were stored at 25°C for 1 h and 24 h. At each sampling time, the samples were taken and stomached for 2 min after the addition of 20 mL of phosphate buffer. After the dilutions were prepared, the samples were analysed to determine viable bacterial counts (CFU/ml). Bacterial counts were determined by triplicate plating.

Results

After bacteriophage cocktail treatment of the chicken meat, experimentally contaminated with *S. typhimurium*, a significant reduction of contamination was observed. Overall, phage application at 10⁸ PFU/ml reduced *Salmonella* by 3.8 log CFU/ml (control = 6.8 log CFU/ml, 10⁸ PFU/ml = 3 log CFU/ml) after 1 h and 4 log CFU/ml reduction of *Salmonella* was after 24 h (control = 8 log CFU/ml, 10⁸ PFU/ml = 4 log CFU/ml), whereas, applications at 10⁵ PFU/ml reduced 0.6 log CFU/ml (control = 5.2 log CFU/ml, 10⁵ PFU/ml = 4.6 log CFU/ml) after 1 hand 2,2 log CFU/ml (control = 6 log CFU/ml, 10⁵ PFU/ml = 3.8 log CFU/m) after 24 h, respectively.

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Conclusion

These data suggest that bacteriophages can be successfully used to reduce food-borne pathogen contamination in food chain.

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YAŞAM MEMNUNİYETİ ÖLÇÜTLERİNİN İSTATİSTİKSEL OLARAK SINIFLANDIRILMASI1

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ÖZET

Yapılan araştırmalarda istenen değişkenlerin elde edilmesinin yanı sıra bu değişkenlerle ilişkili çok sayıda değişkenle karşılaşılmaktadır. Bütün değişkenlerin değerlendirmeye alınması, geçerli ve güvenilir sonuçların elde edilmesi bakımından önemlidir. Dolayısıyla yorumlanması güç, birbirile ilişkili çok sayıda değişkenden, en az bilgi kaybı ile bağımsız ve kavramsal açıdan anlamlı olan ve daha az sayıda yeni değişken yapısını içeren gözlemlerin analizi için çok değişkenli istatistiksel yöntemlerin kullanılması gerekmektedir. Bu durumların analizinde kullanılan istatistiksel yöntem Karışıklı model yaklaşımıdır.

Bu çalışmada, Türkiye İstatistik Kurumu tarafından il düzeyinde yapılan, "Yaşam Memnuniyeti Araştırması" sonuçları alınmıştır. İllere göre mutluluk düzeyi ölçütleri kullanılarak, illerin homojen kaç alt grupta toplandığı normal karışıklı model ile bulunmuştur. Karışım modelinde alt grup sayısını belirlemek ve her bir gözlemin sınıflandırmasını doğru yapmak için Akaiki Bilgi Kriteri (AIC), Bayesian Bilgi Kriteri (BIC) ve entropy bilgi kriterleri kullanılmıştır.

AIC ve BIC uyum ölçütleri sonuçlara göre, illere göre mutluluk kaynağı olacak değişkenler kullanılarak Türkiye'deki illerin kendi içerisinde homojen ve kendi aralarında ise heterojen olmak üzere gruplara ayrılmıştır. Ayrıca karışıklı modellemede, veri setinin dağılacağı uygun modeli saptamak için entropy ölçütü kullanılmıştır. Entropy ölçütü bakımında en yüksek doğru sınıflandırma oranı % 96.8, % 89.3 olarak elde edilmiştir.

Sürekli verilerin sınıflandırılmasında, karışıklı modellerin daha iyi sonuçlar verdiği saptanmıştır. Karışıklı model, veri setini kendi içerisinde homojen alt gruplara ayrılabilmesi ve elde edilen her bir alt grup için parametre tahminlerinin yapılabilmesi bakımından avantajlı bir yöntem olduğu sonucuna ulaşılmıştır.

Anahtar kelimeler: Karışıklı model yaklaşımı, Akaiki Bilgi Kriteri, Bayesian Bilgi Kriteri, entropy

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STATISTICAL CLASSIFICATION OF LIFE SATISFACTION CRITERIA

ABSTRACT

In addition to obtaining the desired variables, many variables related to these variables are encountered in the researches. Taking all variables into consideration is important in terms of obtaining valid and reliable results. Therefore, multivariate statistical methods should be used for the analysis of observations that are difficult to interpret, which are independent and conceptually meaningful with the least loss of information from a large number of interrelated variables, and that contain fewer new variable structures. The statistical method used in the analysis of such situations is the mixed model approach.

In the study, The Life Satisfaction Survey results which was conducted at the provincial level for the first time by Turkish Statistical Institute (TUIK). Using the criteria of happiness level according to the provinces, the number of the homogeneous subgroups in the provinces were found with the normal mixture model. Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and entropy information criteria were used to determine the number of subgroups, and to make classification of each observation correctly in the mixture model. According to the results of the AIC and BIC criteria, the provinces were divided into groups as homogeneous and heterogeneous within itself using variables that are a source of happiness according to provinces. In addition, in mixture modeling, the entropy criterion was used to determine the appropriate model to distribute the data set. In terms of entropy criteria, the highest correct classification rate was obtained as 96.8%, 89.3%.

It has been determined that mixture models give better results in the classification of continuous data. It has been concluded that the mixture model is an advantageous method in terms of separating the data set into homogeneous subgroups and making parameter estimates for each subgroup obtained.

Keywords: Mixture model approach, Akaike Information Criterion, Bayesian Information Criterion, entropy

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ÖĞRENCİLERİN SINAV BAŞARISININ LOG-DOĞRUSAL MODEL KULLANILARAK ANALİZ EDİLMESİ

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ÖZET

Sayıma dayalı olarak elde edilen veriler normal dağılım göstermediklerinden dolayı parametrik testler kullanılamaz. Sayıma dayalı olarak elde edilen, binary, nominal ve ordinal gibi kategorik değişkenler olarak tanımlanan değişkenler için parametrik olmayan testlerin kullanılması daha uygundur. Kategorik değişkenler arasındaki ilişkiyi incelemeye iki yönlü çapraz sınıflandırılmış tablolar sıkılıkla kullanılmaktadır. Bu tip düzenlenen tabloların bağımsızlık analizinde genellikle Pearson ki-kare Testi kullanılmaktadır. Ayrıca iki yönlü tablolarda daha geniş yorumlara ulaşmak için log-doğrusal modeller kullanılmaktadır. Tablolardaki hücrelerdeki gözlemler sayılarak elde edildiğinden Poisson dağılımını gösterir ve modeli doğrusallaştırmak için log dönüşümü uygulanır.

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Yapılan çalışmada, Türkiye'de 81 ilde 2010-2013 yılları arasında ÖSYM'nin düzenlediği Yüksek Öğrenime Giriş Sınavına (YGS) giren; 180 ve üzeri puan alarak ikinci basamak sınavı olan Lisans Yerleştirme Sınavına (LYS) girmeye hak kazanan öğrencilerden Lisans, Açık Öğretim Fakültesi ve Meslek Yüksek Okuluna yerleşen öğrencilerin ve hiçbir bölüme yerleşmemeyen öğrencilere ilişkin bilgiler TUİK (Türkiye İstatistik Kurumu)'ten ve ÖSYM (Öğrenci seçme ve Yerleştirme Merkezi) arşivinden değişkenlerle ilgili veriler toplanmıştır. YGS'de, öğrencilerin 180 ve üstü puan alıp fakat herhangi bir programa yerleşmemeye bakımdan; Güneydoğu Anadolu'daki öğrencilerin relativ riskinin en fazla olduğu bölge Marmara (1.316 kat daha fazla), en az olduğu bölge ise Doğu Anadolu (1.046 kat daha fazla) olmuştur ve bunların tamamı istatistiksel olarak önemli bulunmuştur ($p<0.01$). Elde edilen sonuçlara göre, Poisson log-doğrusal regresyonu, iki yönlü çapraz sınıflandırılmış tabloları analizinde oldukça etkili bir yöntem olduğu bulunmuştur.

Anahtar kelimeler: Ki kare testi, Poisson log-doğrusal regresyonu, Poisson regresyonu, Relatif risk.

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ANALYSIS OF STUDENTS' EXAM SUCCESS USING THE LOG-LINEAR MODEL

ABSTRACT

Parametric tests cannot be used since the data obtained based on counts do not show normal distribution. It is more appropriate to use nonparametric tests for variables that are derived based on count and defined as categorical variables such as binary, nominal, and ordinal. Bidirectional cross-classified tables are frequently used to examine the relationship between categorical variables. Pearson's chi-square test is generally used in the independence analysis of such tables. In addition, log-linear models are used to reach broader interpretations in bidirectional cross-classified tables. Since the observations in the cells in the tables are obtained by counting, it shows the Poisson distribution and log transformation is applied to linearize the model.

In the study, among students taking a score of 180 point and above who were entitled to take the Undergraduate Placement Exam (LYS), which is the second-level exam, information related to students who settled in License, Open University Faculty and Vocational High School and information related to students who cannot settle in any part of faculty were collected from the archive of TUIK (Turkey Statistics Institute) and ÖSYM ((Student Selection and Placement Center). In terms of getting students who scored 180 points and above in YGS exam but could not be placed in any program, the region with the highest relative risk of students was Marmara (1.316 times more), while the region with the lowest was Eastern Anatolia (1.046 times more), all of which were found statistically significant ($p < .01$).

As a result, Poisson log-linear regression is a highly effective method in the analysis of bidirectional cross-classified tables.

Keywords: Chi square test, Poisson log-linear regression, Poisson regression, Relative risk.

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TRIBALS IN KERALA: INTERRELATIONSHIPS WITH INDIGENOUS PLANTS

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ABSTRACT

Ethnobotany is the branch of science that deals with the inter-dependence of human population with plants that incorporates the indigenous knowledge. Richard Evans Schultes is considered as the Father of ethnobotany and the term was introduced by J.W. Harshberger. Many of the modern drugs are rooted on the traditional indigenous information and formulations. The state Kerala, located in the south west coast of India, is well known for its biodiversity and ethnic culture related to their indigenous tribal settlements. The state harbours one of the hot spots in biodiversity viz. the Western Ghats. Plants are inevitable part of ethnic life, used as food, fodder, medicine, religious practices etc. Crude extracts of plants and plant based medicinal formulations are commonly used to cure a myriad of ailments.

Most of the treatment methods are unique to the tribal communities. Some of them are explored by the modern scientific community, but a lion part of these indigenous information are locked in the communities itself. Among the tribal communities most of the indigenous information are confined to the elder groups. Plants are also an inescapable part of their religious practices; most of them have magico-religious beliefs. Some of the medicinal formulations rooted on plants, which is practiced by the tribal communities is the corner stone to the development of new drugs. Hence it is a need of the hour to protect the indigenous culture of the tribal communities and to record the available ethnobotanical information for better future and fight against superbugs.

RESEARCH ON THE DIVERSITY AND DISTRIBUTION OF FRESHWATER OLIGOCHAETA OF SUSURLUK BASIN (NORTHWESTERN-TURKEY)

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ABSTRACT

Susurluk Basin is one of the freshwater catchments among the 25 Basins in Turkey, covering an area of 24.332 km² and corresponding to 3.11% of the surface area of Turkey. Among major surface water bodies of the basin are Nilüfer Stream, Mustafakemalpaşa Stream, Simav Stream, Kocaçay Stream, Uluabat Lake, and Manyas Lake. In this study, field studies were carried out on the 25 preselected sampling stations in the Susurluk Basin between May, August, and October months in 2017 using a standard multi-habitat sampling procedure to obtain benthic macroinvertebrates. According to data of the present study, 30 taxa were identified of the Oligochaeta subclass from the sampling stations of the basin. Distributional data and some of the population parameters (dominance % and frequency %) of the Oligochaeta taxa were also determined. In this study, one of the species, *Embocephalus velutinus*, obtained from the basin is firstly recorded for Turkish freshwater fauna.

Key Words: Oligochaeta, Susurluk Basin, *Embocephalus velutinus*, Turkey.

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SOME BIOMETRIC IDENTIFICATION METHODS USED IN ANIMALS

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ABSTRACT

As with most foods offered for human consumption, consumers are concerned about food safety in foods of animal origin. In order to eliminate these concerns, consumers want to be informed about the food sources and the processes that the food has gone through until they are offered for consumption. Therefore, it is important to follow up the processes in the production stages of animal origin food products offered for consumption (Aydın, 2007; Yalçın and Baykan, 2013).

These requests encouraged countries to study food traceability. The first effective study on traceability was conducted by the European Union for Bovine Spongiform Encephalopathy (BSE) disease in Bovine. The spread danger of infectious diseases other than BSE has made it necessary to establish a traceability system for the follow-up of serious diseases such as chicken fever, foot and mouth disease, scrapie in sheep and goats (Aydın, 2007; Skaggs and Crawford, 2007; Yalçın and Baykan, 2013).

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Necessary measures were adopted to meet the conditions under the EU common animal market regulation, which entered into force in 1987, and routine animal health checks between the borders of the member states were abolished as of 1993. This situation has increased the importance of the need for an effective identification and traceability system. As a result of these developments, the law to monitor a food, feed, animal product or substances intended to enter a food or feed at every stage of production, processing and distribution, according to the Regulation of the European Parliament and the Council, entered into force. In line with this law, most European Union countries have designed applications within the scope of animal movements and traceability system laws and regulations (Aydın, 2007).

Until today, many different methods have been used for the identification of animals. Some of these methods later became a problem because they damaged animal welfare and their applicability decreased (Mori et al., 2000).

Marking animals with traditional methods can continuously create contact with animals, affect the results of studies and affect animal behavior (Bugge et al., 2011; Lu et al., 2014). Animal recognition system

reveals the biometric characteristics of animals by highlighting the morphological images, biometric features and phenotypic views of different species or individual animals (Santosh Kumar et al., 2017).

In animal biometrics, identification of cattle based on biometric properties has been one of the current and future research frontiers for modern livestock registration, monitoring and breeding associations.

Animal biometrics-based recognition system develops quantitative and efficient recognition methodologies for representing extracted visual features, detecting distinctive features to determine the phenotypic appearance of the species, or analyzing individual animal behaviors based on the morphological image model and animal biometric characteristics. Plastic / metal tags, RFID (Radio Frequency Identification) or rumen boluses have been used frequently for identification purposes in recent years. Care should be taken in RFID and rumen boluses as they may endanger animal health (Bugge et al., 2011; Lu et al., 2014). In order to reduce the risks in these methods, biometric identification methods are used in addition to the existing identification methods.

Methods used for biometric identification

Biometric identification is used to measure and record a large number of biological data. The purpose of using these methods is to provide evidence in identifying the creature and to prevent events such as loss and theft (Kumar and Singh, 2014).

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Different methods are used to prevent the negative aspects of identification methods in animals. The most used of these; visual patterns, nose impression, iris and retina patterns, facial recognition, ear vein patterns, bite marks, saliva samples and movement patterns.

-Nose prints

This method, which is economical and simple, has been developed to prevent fraud in cattle (Stahl et al., 2008; Bugge et al., 2011; Awad et al., 2013). In a study, it is stated that nasal prints are the equivalent of fingerprints in humans (Yalçın and Baykan, 2013). Preserving the nose structure for a long time shows that this method can be used safely.

-Face recognition

This method used in sheep was designed using the algorithm used in humans. Although it has a limited usage area, it provides successful results (Stahl et al., 2008; Bugge et al., 2011; Lahiri et al., 2011; Kumar and Singh, 2014; Zhou, 2014).

-Visual patterns

This method, which is evaluated by looking at the phenotypes of animals, is also easier to identify some species than others (Skaggs and Crawford, 2007; Bugge et al., 2011; Lahiri et al., 2011; Kumar and Singh, 2014). As an example, the patterns on butterfly wings can be given. In this method, color patterns, shapes, rings and lines on animals can be evaluated. The method is economical and easy to apply. An advantage of the method is that there is no contact with animals, and there is no situation that could stress the animals (Bugge et al., 2011).

We used this method in my thesis named "Investigation of yield relationship with preferred bedding materials in dairy cows". We constantly recorded the same animals from several different cameras. Then we matched the animal photos we took from different angles according to phenotypic features (Erzurum and Yılmaz, 2019).

-Retinal patterns

The basis of this method is based on the branching patterns of retinal vessels that do not change from the beginning to the end of life (Aydın, 2007; Burghardt, 2008; Stahl et al., 2008; Lu et al., 2014). It is a method that should be done by experienced experts.

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-DNA Analysis

Each cell of animals has a specific map (Burghardt, 2008). It is seen as a disadvantage that DNA, which is the most precise method to be used in the identification of the individual, is expensive and requires a long time. For DNA analysis, samples can be taken from any source such as blood, hair, nails, and saliva (Skaggs and Crawford, 2007; Bugge et al., 2011; Yalçın and Baykan, 2013; Lu et al., 2014).

Apart from these methods, bite marks, vascular patterns in the ear and animal behavior can also be used.

Advantages of biometric techniques

Traditional methods used to mark animals can potentially affect and harm their behavior, leading to erroneous research results and poor animal welfare.

Using any method to mark animals can be stressful to animals. In addition, it can cause pain can lead to tissue damage in the majority of the markings. Marking the animal; it can change the animal's appearance, social interaction, other behavior. An ideal method should identify individuals reliably and permanently with no adverse effects on animals.

Therefore, biometric methods have been developed to recognize animals according to physical characteristics or behavioral signs. Some of these methods have been used reliably in humans for a long time.

Biometric methods are non-invasive, do not cause pain and do not change the animal's appearance. Therefore, these methods will have no effect on the behavior and survival of animals, except where repeated capture or processing is required (Bugge et al., 2011).

Result

Biometric recognition systems are constantly evolving with technology. The methods used for this purpose should be compared with each other in terms of cost, convenience and reliability, and the most appropriate one should be selected. The margin of error can be minimized by using several methods together according to the needs.

It is very important to create a database for the control and follow-up of animal movements, prevention and monitoring of diseases. Biometric identification is needed to systematically monitor animal movements from birth to death.

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ELMA SİRKESİNİN KALİTESİ ÜZERİNDE ELMA CİNSİNİN ETKİSİNİN UV SPEKTROSKOPİ METODU İLE İNCELENMESİ

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ÖZET

İnsanlık tarihinin en eski gıdalarından biri olan sirkeler karbonhidrat değeri yüksek gıdaların fermantasyonu sonucu oluşur. Geleneksel yöntemle üretilen (ev yapımı) organik sirkelerin oluşumunda etilalkol ve asetik asit ikili fermantasyonu oldukça önemlidir. İnsan sağlığı üzerinde olumlu etkileri olduğu bilinen sirkelerin kalitesinin belirlenmesinde fermantasyon süreçleri kadar karbonhidratça zengin meyvelerin niteliği de büyük önem taşımaktadır. Günümüze kadar birçok meyve, sebze ve tahlılin sirkesi üretilmiş lakin elma sirkesi her zaman en çok tercih edilen sirke olmuştur. Bu çalışmada insanlar tarafından en çok tercih edilen sirke olan elma sirkesinin kalitesi üzerinde elma cinsinin etkisi UV Spektroskopı tekniği kullanılarak analiz edildi. Amasya, golden ve starking cinsi elmalar tam olgunluk döneminde toplanarak küçük parçalar halinde kesildi. Her bir elma cinsinden 1 kg alınarak 2 litrelilik cam kaplarda % 50 si su (kaynak suyu) olacak şekilde hazırlandı. Etil alkol fermantasyonunu tamamlayan numunelerin asetik asit fermantasyonu başlatmak için yüksek kaliteli elma sirkesi ilave edildi. Bu süreçte oksijen akışını sağlamak için cam kapların ağızları şeffaf bir bezle kapatıldı ve 27 °C sıcaklığı olan bir odada 6 ay boyunca muhafaza edildi. Sirke oluşumu tamamlayan numunelerin kalite analizleri için oda sıcaklığında 190 nm ile 780 nm dalga boyu aralığında UV spektrum ölçümleri gerçekleştirildi. En yüksek ve en düşük absorbans değerlerinin sırasıyla amasya ve starking cinsi elma sirkelerine ait olduğu görüldü. Elma sirkesinin en yüksek absorbans değerlerine sahip olması organik asit derişiminin diğerlerinden daha yüksek olmasının bir sonucu olarak belirlendi. Elma sirkelerinin UV spektrumlarına ait verilerden amasya elmasının sirkesinin en kaliteli sirke olduğu sonucuna varıldı.

Anahtar Kelimeler: Elma Sirkesi, UV Spektrum, Organik Asit, Asetik Asit, Sirke Kalitesi

INVESTIGATION OF THE EFFECT OF APPLE TYPE ON THE QUALITY OF APPLE VINEGAR BY UV SPECTROSCOPY METHOD

ABSTRACT

Vinegars, one of the oldest foods in human history, are formed as a result of the fermentation of foods with high carbohydrate value. Dual fermentation of ethyl alcohol and acetic acid is very important in the formation of organic vinegars produced by traditional method. The qualification of the fruits rich in carbohydrates is as important as the fermentation processes on the quality of vinegars, which are known to have positive effects on human health. Until today, vinegar of many fruits, vegetables and cereals has been produced, but apple vinegar has always been the most preferred vinegar. In this study, the effect of apple type on the quality of apple vinegar, which is the most preferred vinegar by humans, was analysed using UV Spectroscopy technique. Amasya, golden and starking apples were harvested at full maturity and cut into small pieces. 1 kg of each type of apple was prepared in 2 L glass containers with 50% spring water. High quality apple vinegar was added to initiate the acetic acid fermentation of the samples that completed the ethyl alcohol fermentation. In this process, the mouths of the glass containers were covered with a transparent cloth to ensure oxygen flow and they were kept in a room at 27 ° C for 6 months. UV spectra measurements were performed in the wavelength range of 190 nm to 780 nm at room temperature for the quality analysis of the samples that completed the vinegar formation. It was seen that the highest and lowest absorbance values belonged to Amasya and Starking type apple vinegars, respectively. The highest absorbance values of apple vinegar were determined as a result of the higher organic acids concentration than the others. From the UV spectra data of apple vinegars, it was concluded that amasya apple samples was the best quality vinegar.

Keywords: Apple Vinegar, UV Spectrum, Organic Acid, Acetic Acid, Vinegar Quality

DEPRESYON VE ÇALIŞMA ORTAMI İLİŞKİSİNDE BİR UYGULAMA SAHASI OLARAK İŞYERİNDE SOSYAL HİZMET

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*“Ben ruhsal acıdan söz ediyorum!
İnsanların yeteneklerinin ve çalışmalarının boşça gittiğini görmelerinden...”*

Bunun için değişim özgürlüktür!”

Ursula K. Le Guin

ÖZET

Bu çalışmada işyeri kaynaklı sorunların yol açtığı problemler depresyon özelinde incelenerek bu sorunun bir kaynağı olarak çalışma ortamının etkisi ve sorunla baş etmede sosyal hizmetin üstlenebileceği misyonun tartışılmaması amaçlanmıştır. Depresyonun çok boyutlu olarak ele alınması gerekliliği bu sorunla baş etmede de bütüncül bir bakış açısını gerekli kılmaktadır. Çalışma ortamının neden olduğu sorunlarla mücadelede bireyi çevresiyle birlikte ele alarak psikososyal tedaviyi uygulayan sosyal hizmet mesleği işyerinde sosyal hizmet uygulama modellerine başvurulmaktadır. Türkiye'de henüz gerçekleşmeyen bu uygulamanın tarihsel arka planını ABD'de geliştirilen çalışan odaklı sistemler oluşturmaktadır. İşyerinde sosyal hizmet uygulaması çalışan hizmet yaklaşımı modeli bakımından depresyon tanısı olan çalışanlara yönelik uygulanabilir bir modeldir. Bu düşüneneden hareketle çalışmada depresyonun nedenleri ve çalışma yaşamındaki sorunların depresyona etkisi incelenerek bu sorunun çözümü için işyerinde sosyal hizmet uygulaması tartışılmaktadır.

Anahtar kelimeler: Depresyon, Çalışma Ortamı, İş Yerinde Sosyal Hizmet.

OCCUPATIONAL SOCIAL WORK AS A FIELD OF PRACTICE IN THE RELATIONSHIP OF DEPRESSION AND WORKPLACE

ABSTRACT

In this study, it was aimed to discuss the effects of the workplace as a source of this problem and the mission that social work can undertake in coping with the problem by examining the problems caused by workplace-related problems. The necessity of handling depression in a multidimensional way requires a holistic perspective in dealing with this problem. In the struggle with the problems caused by the workplace, social work practices are used in the workplace of the social work profession, which deals with the individual with his environment and applies psychosocial treatment. The historical background of this application yet taken place in Turkey constitutes an employee-oriented system developed in the United States.

Social work practices in the workplace is an applicable model for employees with a diagnosis of depression in terms of the employee-oriented service approach model. Based on this idea, the study examines the causes of depression and the effect of problems in working life on depression and discusses the use of social work in the workplace to solve this problem.

Keywords: Depression, Workplace, Occupational Social Work.

GİRİŞ

Sanayi devrimi sonrası yaşanan süreçte çalışma yaşamındaki insanın psikososyal gelişimi büyük oranda göz ardı edilmiş ve sanayi kollarının temel hedefi sistemin sürdürülebilirliği çerçevesinde şekillenmiştir. Kapitalist ve liberal ekonomi politikalarının yaygınlaşmasıyla insanlar meslek hastalıkları ve iş kazalarının sıkça yaşandığı, mobbing, ayrımcılık ve baskının olduğu, yaşamsal olaylar nedeniyle insanların dezavantajlı konuma düşürüldüğü ortamlarda çalışmaya zorlanmışlardır. Bunlarla birlikte düşük ücretle çalıştırılma, ücretten mahrum bırakılma, düzensiz çalışma, çalışma ortamının kötü fiziksel koşulları gibi şartlar da iş hayatıyla ilgili yaşanan diğer problemler olmuştur

Çalışma hayatındaki bu zorluklar bireylerin üretkenlik ve verimliliğini olumsuz yönde etkilemeye ancak daha da önemli çalışanların psikolojik yapısına yıkıcı boyutta zarar vermektedir. Çalışma ortamının yıkıcı yapısı, çalışanların stresli bir yaşam sürdürmelerine neden olmakta, bu stresli ortamda yaşayan kişiler depresyon'a sürüklenemeye ve sorunlarla baş etmeye zorlanabilmektedir.

Bu noktada sosyal hizmet hayatın pek çok alanında insanların iyilik halini artırmayı hedefleyen bir disiplin olduğu gibi daha özelde çalışma hayatı sebebiyle yaşanan problemleri ortadan kaldırılmaya veya en aza indirmeye aday profiliyle ön plana çıkmaktadır. Bu bağlamda bu çalışmada işyeri kaynaklı sorunların yol açtığı problemler depresyon özelinde incelenerek sosyal hizmetin üstlenebileceği misyonun tartışılmaması amaçlanmaktadır. Türkiye'de işyerinde sosyal hizmet uygulamalarının olmaması ve bu misyonun ilk olarak ABD'de ortaya çıkması nedeniyle metnin depresyon ve işyerinde sosyal hizmet odağı coğrafi olarak Amerika örnekleriyle açıklanmıştır. Bu doğrultuda öncelikle depresyonun ne'sliği, işyerinde depresyonun nedenleri ve sosyal hizmetin bu sorunların çözümündeki fonksiyonel işlevi üzerinde durulacaktır.

Depresyonun Bir Kaynağı Olarak Çalışma Ortamı

Depresyon, yetişkinlerde görülen kaygı durum bozukluğundan sonraki ikinci en yaygın psikiyatrik bozukluktur. Klinik boyuttaki bir depresyon ya da duyu durum bozukluğu yaşamın zorluklarına normal tepki göstermeyen belirti ve semptomlar dizisidir. Duygu durum bozuklukları duygusal, bilişsel, davranışsal ve somatik boyutta rahatsızlıklara neden olurken depresyon, daha fazla yaşamı tehdit eden duygusal bir hastaliktır ve psikiyatri servislerinde yatarak tedavi olan bireylerin yaklaşık %75'i depresyon belirtileri göstermektedir(Chima,2005). Depresif bozukluklar semptomların sayısı, şiddeti ve sürekliliklerindeki farklılıklar ile çeşitli formlarda görülmektedir.

Depresyon kelimesi etimolojik olarak Latince çukur anlamına gelen *depressio* kelimesine dayanmaktadır ve “çöküntü, bastırmak” anımlarını taşımaktadır. Günümüzde her beş kişiden birinin hayatının bir döneminde depresyon geçirdiği ve kadınların erkeklerden iki kat daha fazla depresyon için yardım istediği saptanmıştır (Mete, 2008). Dünya genelinde %13-20 aralığında insanda görülen depresyon, Türkiye'de %10 civarında kişide görülmektedir. Ülkemizde özellikle boşanmış, düşük gelire sahip ve düşük eğitim düzeyinde ve işsiz bireylerde depresyona daha sık rastlanmaktadır (Sönmez, 2017; Bayram, 2016).

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Eski çağlardan beri araştırılan depresyonun kaynağını Hipokrat kara safra miktarındaki artışa bağlamışken depresyonun bugün oldukça karmaşık bir şekilde çok yönlü nedenleri olduğu bilinmektedir. Biyopsikososyal yönyle yaşamsal olaylar, kişilik yapısı, beyindeki kimyasal değişiklikler, kalıtım, hastalıklar, madde kullanımı, düşünme biçimini bu sebeplerden bazlıdır. Depresyonu tetikleyebilecek diğer olası yaşam olayları arasında ise ev değiştirmeye, sevilen birinin kaybı, önemli bir ilişkinin sona ermesi, aile içi çatışmalar, çocuk doğumumu, çocukların evden ayrılması, yalnızlık duygusu, iş kaybı, işten memnuniyetsizlik ve tükenmişlik yer almaktadır (Türkçapar, 2018). Depresyonun doğasında bireyin kendini degersiz hissetmesi, çaresizlik, umutsuzluk ve karamsarlığa kapılma, suçluluk duygusu ve obsesif düşüncelere sahip olma, dikkat dağınlığı ve konuşma bozukluğunun başlaması, anksiyete, intihar düşüncesi, halsizlik, istah sorunları, uyku bozuklukları vardır (Bayram, 2016).

Depresyonun tanısında Amerikan Psikiyatri Derneği (APA) tarafından ortaya koyulan dünya genelinde psikiyatrik hastalıklar tanı ölçütleri el kitabı olarak kabul gören DSM sınıflandırmaları dikkate alınmaktadır. DSM-5'te *yıkıcı duygudurumu düzenleyememe bozukluğu, Yeğin(majör) depresyon, distimi (siüregiden depresyon), premenstriuel disfori bozukluğu, madde ya da ilacın yol açtığı depresyon ve diğer sağlık sorunlarına bağlı depresyon*

bozuklukları olmak üzere farklı tanılama kategorileri bulunmaktadır (Amerikan Psikiyatri Birliği, 2013). Depresyon tedavi gerektiren en yaygın mental bozukluklardan biri olsa da bu durumdan etkilenen bireylerin birçoğu tedavi arayışında değildir. Ayrıca araştırmalara göre tedavi görmekte olan depresif kişilerin %60'ı başka sorunlardan muzdarip olan ancak yanlış teşhis konulmuş kişilerdir (Chima, 2005). ABD'de antidepresan ilaç kullanan bireylerin %30 ile %50'sinin ilaç sayesinde depresyona neden olan sorunları çözebildiği tespit edilmiştir. Potansiyel depresyon tehlikesi ağır depresyon yaşayan bireylerin intihar için yüksek risk seviyesinde bulunmasını ifade eder. Buna ilişkin ABD'deki çalışmalarдан elde edilen veriler intiharların yaklaşık %80'inin depresif bozukluklara sahip bireyler tarafından gerçekleştirildiğini göstermektedir (Chima, 2005).

Depresif bir bozukluğun ortaya çıkmasında sadece tek bir faktör değil biyolojik, psikolojik, davranışsal ve çevresel kaynaklı birçok faktör neden olabilmektedir. Örneğin, bir yakının veya eşyanın kaybı, ilişkisel olaylar (boşanma, şiddet, terk vd.), ekonomik sorunlar (gelir kaybı, işsizlik, çalışma ortamı) veya yaşamörntülerindeki değişimler depresif bir atağı tetikleyebilmektedir. Ekonomik bağlamda pek çok insan fazla mesai ile düşük ücret alma baskısı altında çalışmakta, denetçiler veya iş arkadaşlarıyla çatışabilmektedir. Kadınlar ve azınlık grubundaki çalışanlar, terfilerde ve fırsatlarda sürekli ayrımcılıklara maruz kalabilmektedir. Kadınlar *cam tavan*¹'a ulaşıklarında kariyerlerinin engellendiğini fark ederek depresyona girebilmektedir (Johnson ve Invik, 1997). Bunların yanı sıra işyerindeki hızlı değişimler, uzun çalışma saatleri, teknolojik gelişmeler, kötü yönetim ve maddi bekentiler çalışanların işyerinden kaynaklı depresyona sahip olma nedenleri arasında görülmektedir.

İşyerinde depresyonun bir diğer nedeni çalışanların uğradığı psikolojik şiddet ve mobbing²dir. Uluslararası araştırmalar çalışma yaşamlarının bir döneminde çalışanların % 25-50 arasındaki bölümünün mobbingle karşılaştığını göstermektedir (Chima, 2002). Çalışanların yöneticiyi kabullenememesi, eski yöneticiye duyulan bağlılık, kıskançlık, eşit koşullar içinde bulunan çalışanların çekememezliği, rekabet, çıkar çatışması, kişisel hoşnutsuzluklar, üstlerin sahip oldukları kurumsal gücü, astlarını ezerek, onları kurumun dışına iterek kullanması mobbing davranışları arasında yer almaktadır. Mobbingin uygulama biçimi, süresi ve şiddetine bağlı

¹ Glass Ceiling Sendromu olarak bilinen cam tavan sendromu, devlet ve şirketlerde, eğitim kurumlarında veya kâr amacı gütmeyen kuruluşlarda yüksek pozisyonlara gelmeyi arzulayan ve bunun için çabalayan kadınların karşılaşıkları engeller" olarak tanımlanmıştır (Lockwood, 2004).

² Mobbing terimi ilk olarak hayvan davranışlarını inceleyen Konrad Lorenz tarafından 1960'lı yıllarda kullanılmıştır. Mobbing, Latince "mobile vulgus" sözcüğünden gelmekte; kararsız kalabalık, şiddete yönelik topluluk gibi anlamlar taşımaktadır (İşyerinde Psikolojik Taciz (Mobbing) ve Çözüm Önerileri Komisyon Raporu, 2011).

olarak mobbinge uğrayan çalışanlarda psikososyal sorunlar görülebilmektedir. Bunlar ilk aşamada genellikle nedensiz ağlama, uyku bozuklukları, sinirlenme ve konsantrasyon güçlüğü şeklinde görülürken ikinci aşamada yüksek tansiyon, mide şikayetleri, işyerine gitmek istememe, işe geç kalma gibi belirtiler görülmektedir. Üçüncü aşamada ise depresyonun şiddeti artmakta, panik atak ve endişe durumu ortaya çıkmaktadır. Kazalar ve intihara yönelme, daha çok mobbing sürecinin üçüncü aşamasında görülmektedir (Namie, 2000; Davenport vd., 2003).

İşyerinde depresyonun belirtileri şunlardır:

- Dikkat dağınlığı, kendini işe verememe, düşünceleri toparlayamama
- Üretkenlik ve verimliliğin azalması
- Küçük ve kolay işlerde bile zorlanma hissi
- Kurumun beklediği kural ve davranış biçimlerine uyumsuzluk ve aykırılık
- Ekip çalışmasından kopukluk, çalışma arkadaşlarıyla işbirliği yapmama
- Sürekli olarak gergin ve sinirli olma
- Sık kaza geçirme ve güvenlik önlemlerini almama
- Sık sık işe gelmemeye veya geç gelme
- Aşırı miktarda alkol ve sigara kullanımı (Zorlu, 2015).

Bireylerin yaşadıkları stres ve gerilime bağlı olarak işyerinde hatalı davranışlar, tehlikenin fark edilememesi, üzüntü kaynaklı dikkatsizlik, çabuk yorulma, genel dikkat dağınlığı ve tecrübesızlık sonrasında ciddi kazalar yaşanabilmektedir. Meslek hastalıkları ve iş kazaları da çalışan bireylerde oldukça hayatı bir etkiye sahiptir. Yaşanabilecek herhangi bir yaralanma, sakatlanma, ölüm gibi durumda kazaya uğrayan kişi ve yakınlarında bazı sorunlar görülebilmektedir. Bunların başında akut stres bozukluğu, travma sonrası stres bozukluğu ve depresyon gibi sorunlar bulunmaktadır. Bu sorunların çözümü noktasında ise bütüncül bir perspektifle, klinik boyuttan sosyal çevrenin değişimine kadar uzanan sorunun ekolojik arka planında profesyonel uygulamalar yürütülmelidir. Bu bağlamda sosyal hizmet mesleğinin fonksiyonu yadsınamaz bir gerçekdir.

Bireylerin çalışma ortamına bağlı olarak yaşadıkları sorunların bir sonucu olarak ortaya çıkan depresyonun ve bu sorunu tetikleyen sosyal ve ekonomik çevrenin dahilinde psikososyal değerlendirmelerde bulunan sosyal hizmet uzmanları işyerinde mesleki uygulamalarla önemli bir profesyonel konuma sahiptir. İş yerinde sosyal hizmet çalışanlarının sosyal refahına yönelik ihtiyaçlarının tespiti ve bu ihtiyaçlara çözüm yollarını sunmak üzere sosyal hizmet uzmanları tarafından gerçekleştirilen mesleki uygulamalardır.

İşyerinde Sosyal Hizmet: Tarihsel Bilgi ve Kapsam

Sosyal hizmet mesleği geleneksel olarak çalışan meseleleri ve istihdam koşulları ile ilgilidir. İşyerinde ilk sosyal hizmet uygulamaları Amerika Birleşik Devletleri'nde erken sanayileşme

dönemine kadar izlenebilmektedir (Maiden, 2003). Endüstrileşmenin ve iş gücünün 1800'lerin sonrasında hızlı bir şekilde genişlemesi işletmelere bir dizi işgücü zorlukları getirmiştir. İşletmelerin artan büyülüğu emek ve yönetim arasındaki kişisel ilişkiyi engellemiştir. Sendikalaşma önceleri yönetim programlarının genel karakteristiği olan paternalizme, müdahaleciliğe ve otokratik stile karşı mücadele etmek için daha yaygın ve etkin hale gelmiştir. Amerika'da 1800'lerde kadınlar ve göçmenlerden oluşan gruplar işgücü oranını artırmış, hastalıklar, kötü muameleler ve sabotaj işçilerin sorunlarını ortaya koyan örgütlere olan eğilimi artırmıştır. Bu sorunların üstesinden gelmek için işletmeler *refah hareketi* olarak bilinen politikaları ve programları başlatmıştır (Chima, 2005).

Refah hareketi sırasında, çalışanlara işe ilgili konularda ve evlilik çatışmaları gibi kişisel veya yerel sorunlara yardımcı olacak programlar ve hizmetler geliştirilmiştir. Bu hareket kararlı bir şekilde 1920'lere kadar zenginleşmiştir. Öyle ki 1926'ya gelindiğinde Amerika Birleşik Devletleri'ndeki 1500 büyük işletme kuruluşunun %80'i çalışanları için en az bir refah programını uygulamaya başlamıştır (Zastrow, 2013). Bu programlar *toplum sorumlusu*, *refah sorumlusu* veya *sosyal refah sorumlusu* olarak bilinen profesyoneller tarafından yapılandırılmıştır. Bu programlar bilimsel çalışmalar ışığında çeşitli yöntem ve teknikler geliştirmiştir (Clark, 1996).

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Çalışanların iyilik halini artırmak için geliştirilen tekniklerden bir diğeri *grup çalışmaları*dır. Grup çalışmaları hem iş hem de işe ilgili olmayan alanlarda profesyonellerin geliştirdiği çalışanlara yarar sağlayan popüler bir yaklaşımdır. Örneğin sosyalleşme ya da rekreatif için oluşturulan gruplar çalışanların motivasyonunu artırmış, bu da çalışanların üretkenlik ve verimliliklerine yansımıştır. Bu profesyoneller, emeklilik ve sigorta programlarının yönetimi gibi birçok idari görevi de yerine getirmiştirlerdir. Bu dönem refah sorumlularının uygulamalarından bazılarını Straussner (1990) aşağıdaki gibi belirtmiştir:

- İşçilerin sağlık, güvenlik, temizlik ve barınma sorumlulukları dahil olmak üzere fiziksel refahını sağlamak,
- Kültürel rekreatif, kütüphane, eğitim, işyerine ve kültürel etkileşim gibi unsurları kapsayan bir refah planını yürütmek,
- İşçiler ve aileleri için vaka hizmetlerini kapsayan kişisel refahı sağlamak ve
- Emekli maaşları, istihdam kuralları ve ücret belirleme ve kredilerin yönetimini içeren ekonomik refahı sağlamak.

ABD'de 1. Dünya Savaşı dönemi boyunca refah programları refah kapitalizmi altında başlatılanlara benzer şekilde sosyal hizmet ile sanayi ve iş dünyası arasında bir ilişki kurmuştur (Rooney, 1998). Eşi görülmemiş sayıda sosyal sorun alanı sanayi ortamına girmiştir, ilk kez savaş

sırasında askerliğin farklı branşlarında profesyonel sosyal hizmet uzmanları çalışmış ve askeri personelin işleriyle ilgili olarak karşılaştıkları birçok sorunu ele almak üzere görevlendirilmiştir. 2. Dünya Savaşı sonrası 1940'larda ve 1950'lerde şirketler çalışma alanında (mesleki boyutta) alkolizm programları sunmaya başlamışlardır. 1960'lı yıllara gelindiğinde çok sayıda kadının iş yaşamına katılımıyla birlikte artan aile destegine olan ihtiyaçtan dolayı mesleki/işyerinde sosyal hizmet (occupational social work) yeniden ortaya çıkmıştır(Chima, 2002).

1970'lerin başlarında ABD'de büyük şirketler çalışanları için eğitim programları geliştirmeye başlamıştır. Bu programlardan sorumlu olanlar kursiyerlerin çögünün çocuk bakımı, kişilerarası beceriler, aile sorunları, kişisel sorunlar ve yeterli barınma ve ulaşım gibi çeşitli alanlarda yardıma ihtiyaç duyduğunu belirtmiştir. İşçilerin alkolizm başta olmak üzere genel ruh sağlığı ve alkolün işyerindeki etkisi konusunda artan toplumsal farkındalık 1970'lerde mesleki sosyal hizmet uzmanlarının ülke çapında alkolizm programları geliştirilmesinde öncü olmuşlardır. Bu programlar Çalışan Yardım Programları'na (EAP) dönüşerek endüstriyel alandaki sosyal hizmetlerinin rolüne ivme kazandırmıştır (Root, 1997).

İşyerinde sosyal hizmet mesleğinin giderek artan bir uygulama alanı olarak tanınması amacıyla Sosyal Hizmet Okulları Konseyi (CSWE) ve Ulusal Sosyal Hizmet Uzmanları Birliği (NASW) 1975 yılında alanı incelemek ve öneriler yapmak için bir komite kurmuştur (Social Work Speaks, 2000). Bu gelişme 1978'de endüstriyel sosyal hizmet uzmanları³ için ilk konferans olarak kabul edilmektedir.

Bir uygulama alanı olarak işyerinde sosyal hizmet bireylere, ailelere, gruplara ve yöneticilere örgütsel gelişim, politika formülasyonu, yönetim ve toplum örgütüne yönelik hizmetler de dahil olmak üzere çok çeşitli sosyal hizmet faaliyetlerini içermektedir (Social Work Speaks, 2000; Chima, 2002; Maiden, 2003). İşyerinde sosyal hizmet 3 kategoride tanımlanabilir:

1. Politika düzenleme, planlama, kurumsal sorumluluk birimlerindeki fonksiyonlar, eğitim, kariyer gelişimi için politikaların oluşturulması ve yönetimi,
2. Bireylerle doğrudan uygulama, ailelerle ve dezavantajlı gruplarla krize müdahale, bireysel sorunların değerlendirilmesi, tedaviye yönlendirme, bağımlılık danışmanlığı, çocuk bakımı, emeklilik danışmanlığı, tayin/sevk hizmetleri ve

³ Endüstriyel sosyal hizmet (Industrial Social Work) olarak kabul edilen kavram tarihsel bağlamda farklı anımlar kazanarak occupational social work olarak yeniden alanyazına girmiştir. Türkiye'de karşılık bulmaması nedeniyle farklı çeviri örnekleri mevcuttur. Bunlar mesleki sosyal çalışma/ işyerinde sosyal çalışma/ işyerinde sosyal hizmet olarak farklılaşmaktadır. Bu çalışmada işyerinde sosyal hizmet kavramı kabul edilmesinin nedeni işyeri ortamının teknolojik gelişmeler ve kurumsal çeşitlilik açısından geniş bir kapsamı içine almasıdır.

3. Doğrudan hizmet ve yönetim politikası uygulamasını birleştiren uygulama (Social Work Speaks, 2000; Maiden, 2003).

Ashenberg-Straussner (1990) iş yerinde sosyal hizmet uygulamalarına ilişkin çeşitli modeller ortaya koymuştur. Çalışan hizmet modeli bu modellerden biridir. Sosyal hizmet mesleğinde genelci perspektif doğrultusunda işyerindeki çalışan odaklı görünümünün bireyle çalışma yöntemiyle gerçekleştirdiğini söylemek mümkündür. Dolayısıyla bu noktadan itibaren çalışma ortamının ortaya çıkardığı sonuçlar ve sorunlardan biri olarak depresyon ve sosyal hizmet ilişkisinde çalışan hizmet yaklaşımı benimsenerek bireyle çalışma yöntemlerine yeni bir perspektif kazandırılacaktır.

İşyerinde Sosyal Hizmet'in Çalışan Hizmet Modeli

Ruh sağlığı alanındaki sosyal hizmet uygulamaları çalışma koşullarını da içine alan müracaatçının kapsamlı ve koordineli tedavi planlamasını gerekli kılmaktadır. Sosyal hizmet uzmanları müracaatçılarındaki sağlık sorunlarını ve içinde bulunduğu sosyal ağları inceleyerek sorunun kaynağına odaklanmaktadır. Kişi ve onun çevresine yaptığı vurgu ile ekosistem yaklaşımı, değerlendirme yapmak için temel ilkeler sunar. Planlı değişim sürecinde değerlendirme mümkün olduğunda geniş kapsamlı bir çerçevede gerçekleştirilmektedir. Uygulama aşamasında ise sosyal hizmet uzmanı müracaatçının sorunlarının yanı sıra güçlü yönlerini de dikkate alarak müracaatçı ile işbirliği içinde yol alır. Bu süreç işyerinde çalışan sosyal hizmet uzmanları için benzer şekilde uygulanmalıdır.

Çalışan hizmet modeli, işçinin çalıştığı kurumla bağlantılı sorunlar ve psikososyal sorunları çözmeyi odağına alan uygulamalar gerçekleştirmek için dayanak sunmaktadır. Bu sorunlar işçi ve işveren arasındaki sorunların çözümünü de içine alarak her iki tarafın faydasını sağlamaya yöneliktir.

Çalışanlarda çalışma ortamındaki ve dışındaki stres düzeyi ve çalışanlar ile yönetim arasındaki ilişkiler işyerinde gerçekleştirilen sosyal hizmet uygulamalarının psikolojik boyutunda belirleyici etmenlerdir. İşyerinde sosyal hizmet uzmanları çalışanların stres faktörlerini tespit ederek baş etme yollarına çözümler sunmak üzere danışmanlık, eğitmen, arabulucu, savunucu, kaynaklara yönlendirme, bağlantı kurucu rollerini gerçekleştirmektedir. Sosyal hizmet uzmanı iş ortamındaki çeşitli işlerde çalışanların maruz kaldığı stresin farkında olmalıdır. Stresin bireysel etkileri ve depresyona etki eden sosyal faktörler (iş arkadaşları grubunun sağlık davranışları üzerindeki etkisi, yönetimin sağlık davranışları üzerindeki etkisi, toplumun çalışma

koşulları, iş ve sağlıkla ilgili tutumları ve gruplar arası veya grup içi gerilimler) sosyal hizmet uzmanının planlı değişim sürecindeki gerçekliklerdir(Clark, 1996; Straussner, 1990).

İşyerinde sosyal hizmet uygulamasında uzmanın inceleme ve değerlendirmede izlemesi gereken adımlar şunlardır:

1. Çalışanın davranışındaki soruna ilişkin gözlemleri bir süpervizör ile tartışmak,
2. Çalışanın davranışındaki örüntüyü göstermek için farklı davranışsal olaylar arasında bağlantı kurarak psikolojik ya da duygusal bir sorunu olan çalışana davranışlarına ilişkin örnekler sunmak,
3. Çalışandan semptomların nedenlerini açıklamalarını isteyerek uygulayıcının ve çalışanın problemi tanımlarken birlikte çalışmasına olanak tanımak,
4. Davranışın olası nedenlerini yorumlamak, çalışanların harekete geçmeleri için psikolojik veya duygusal problemleri motive etmede geribildirimde bulunmak(Clark, 1996),
5. Sorunu tetikleyen faktörleri ortadan kaldıracak veya değiştirecek önerileri sunmak
6. Eğer çalışan bu noktada harekete geçmeye karar vermemişse depresyonun ilerlemesine ve herhangi bir eylem yapılmadığı takdirde olası sonuçlara dair uyarmak ve
7. Sorunu çözmek üzere süpervizör ile iş birliği içinde çalışarak sorundan dolayı yardım istediğiinde uygun müdahale kaynaklarına yönlendirme yapmaktadır (Akabas, 1995).

Bu adımları izleyen sosyal hizmet uzmanı çalışanı desteklemek, teşvik etmek ve sorunları çözmede çalışanın ilerlemesini izlemek için aktiviteler planlamaktadır. Ayrıca çalışanın uzun bir aradan sonra işe dönmesi durumunda çalışma ortamına yeniden entegrasyonuna yardımcı olan müdahale planları uygulanmaktadır. Bazı durumlarda çalışanların aileleri de sürece dahil edilerek aile üyeleri ile ayrı ayrı veya birlikte görüşmeler planlanarak bireyin tedavisi üzerine aile bilgilendirilmeli ve aile ile işbirliği yapmaktadır.

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Çalışan hizmet yaklaşımına göre bu hizmetten yararlanan kişiler şiddet veya sömürüye maruz kalan bireyler, göçmenler, yoksullukla mücadele eden gruplar, yaşlılar, bağımlılar, eski hükümlüler, engelliler ve diğer insan hakları ihlalleriyle karşı karşıya kalan dezavantajlı konumdaki kişiler olabilmektedir. Bireyin içinde bulunduğu sorunlara eklenen çalışma ortamı kökenli sorunlar (ücretten mahrum bırakılma, işyerinde tacize ve mobbinge maruz kalma, emeğin istismarı, ayrımcılığa maruz kalma, sigortasız çalışma, fiziksel ortam, haksız işten ayrılma vb.) için çalışan odaklı bir uygulama planı gerçekleştirilmektedir.

İş yerinde sosyal hizmet uzmanları bireyle çalışırken planlı değişim basamaklarını izleyerek (bağlılık kurma/tanışma, ön değerlendirme, planlama, uygulamayı gerçekleştirmeye, son değerlendirme, izleme ve takip süreci) mesleki uygulamaları gerçekleştirir. Bu uygulamaları izlerken profesyonel etik kodlar ışığında bireye özgü planlamalar yapmakta, kurum kültürü ve

stres faktörlerini merkeze alarak çalışanın iyilik (well-being) halini gerçekleştirmek öncelikli hedeftir.

Depresif bozuklukların kaynağındı tek bir faktörün olmaması, tedavisinde biyopsikososyal faktörleri içine alan bir yaklaşımı gerektirmektedir. Sosyal hizmet mesleğinin bireyi ekolojik sistemiyle birlikte değerlendirmesi, meslegen bütüncül bakan doğası ile yakından ilişkilidir. Depresyon tanısı alan bireylerle çalışırken de bu pencereden yaklaşan profesyonel sosyal hizmet uzmanları, bir uygulama sahası olarak iş yerinde çalışanların sosyal işlevsellliğini artırmak için çalışmalıdır.

SONUÇ

İşyerinde sosyal hizmet uygulaması çalışanların desteklenmesini ve sorunların çözülmesini amaçlamaktadır. Türkiye'de son yıllarda akademik bağlamda ele alınan ancak sahadaki uygulama örnekleri yok deneyecek kadar az sayıda olan bir meseledir.

Sosyal hizmet uzmanları sosyal hizmetin odağında yer alan insan hakları ve sosyal adalet ilkelerini benimseyerek sendikalaşma ve hakların savunularak çalışanların mağduriyetlerinde mücadele eden pozisyonda yer almaktadır. Ayrıca işyerinde çalışanların ailevi sorunları, dışlanma ve ayrımcılık, emekliliğe ilişkin sorunlar, hukuki sorunlar ve engellilik, stres, ruh sağlığı ve madde bağımlılığı gibi kişisel sorunlarında arabaşılık, danışmanlık, savunuculuk, eğitimci, klinisyen ve vaka yöneticisi rollerini üstlenmektedir.

Çalışma yaşamının yorucu ve yıpratıcı etkenleri ile mücadele ederken bireylerin uğradığı mobbing, tükenmişlik, işe yabancılılaşma, meslek hastalıkları, iş kazaları gibi konularda müräacaatçıların mesleki yaşamının yeniden düzenlenmesi için gerekli müdahale planlarını hazırlar. Uygulama aşamasında bireyin içinde bulunduğu koşullarını çok boyutlu olarak ele alarak planlı bir değişim sürecini yürütmektedir.

İşyerinde görülen sorunların depresyonla ilişkisi göz önünde bulundurulduğunda bireylerin bu konuda yardım alabilecekleri bir sisteme ihtiyaç olduğu anlaşılmaktadır. Bunun için Amerika'da ilk olarak Employee Assistance Programs (EAP) geliştirilmiş ve uygulanmıştır. İlerleyen süreçte ise daha kapsamlı olarak sosyal destek birimleri kurulmuş ancak her kuruluşta uygulanmamıştır. Bugün Türkiye'de işyerinde depresyonla çok yönlü ve sistematik mücadele bağlamında herhangi bir sistem bulunmamakta, yalnızca çeşitli danışmanlık şirketleri aracılığıyla psikolojik destek sunumu gerçekleştirmektedir.

Sosyal hizmet mesleğinin temelinde insanların durumunu değerlendirebilmek yatkınlıkta. Mesleki sosyal hizmet müdafalesinin hedefleri arasında, çalışanların sahip olduğu depresyonun yaygınlığı, ciddiyeti ve etkisine dair farkındalığı artırmaktır. Mesleki sosyal hizmet uzmanı,

çalışanın psikososyal boyuttaki sorunların çözümü için onları anlamaya çalışmaktadır. Depresyonun yaygınlığı göz önünde bulundurulduğunda işverenler, hükümet ve hastaneler nezdinde mesleki sosyal hizmet uzmanları ortak çalışma yapabilmektedir.

İşyerinde sosyal hizmet programlarını yürüten sosyal hizmet uzmanları bireylerin içinde bulunduğu depresyon haline yönelik çalışanların sağlık kuruluşları ve yönetimle olan bağlantısını kurarak gerekli yönlendirmeleri yapar. Tedavi planında çalışanın çevresel koşullarının iyileştirilmesi, aile sorunlarının çözülmesi ve tedavinin sağlıklı şekilde yürütülmesinde ekip çalışmaları yapar. Aynı soruna sahip olan çalışanlara yönelik grup çalışmaları düzenleyebilir. Emeklilik veya işten ayrılma sonrasında gerekli kaynaklara ulaşarak bireyin depresyon durumu hakkında işbirliği yaparak takibini yapabilir.

İşyerinde depresyon kaynaklı sorunların tedavisinde klinik sosyal hizmet uzmanlarıyla birlikte psikoterapi uygulamalarını yürütebilmektedir. Henüz Türkiye'de bunun örneği yok denecek kadar az olsa da buna yönelik pilot çalışmaların başlatılması gerekmektedir. Şirketlerin çalışan haklarıyla ilgili birimlerinde sosyal hizmet uzmanları bu uygulamaları yürütmeli, diğer kurumlarla bağlantı kurarak çalışanların sorunlarını çözmede köprü görevini üstlenmelidir.

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BRITISH FACTOR IN AN ARABIAN REVOLT AGAINST THE OTTOMAN EMPIRE IN 1916

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Introduction

The Ottoman Empire - one of the most powerful and strong Empires of the world spanned six centuries maintaining a whole control over Muslim lands (Iran, Arab, North Africa) and also many areas of Christian Europe. The Ottoman Empire played a protector role for Islamic states from the military impact of Western countries and also paved a way for the thriving of Islam far and wide within the Empire. The Ottoman rulers also possessed the Caliphate-the highest position in the Islamic world.

But the first few decades of the 20th century brought internal tensions and external pressures to the Ottoman Empire. After signing a treaty with Germany in October 1914 the Ottoman Empire entered First World War against Entente. There were some reasons which affected the Ottoman Empire's fateful decision in entering the War. One of them was the Ottoman's objection and caution of imperial Russia's regional agenda. But the motion of war and some processes occurring within inside the Ottoman Empire gradually resulted in the downfall of the Ottoman system of centralized governance and disintegration into a series of distinct nation-states in the Middle East.

It is needless to talk much about the interests of Western imperialist states in the Middle East. All know that major states' interests in the Middle East were connected with its geographical and historical importance. This region was in the United Kingdom and France's scope of interests and they always sought the opportunity to gain strength here. The Ottoman Empire's entry to WWI after founding the German-Ottoman alliance only solidified these states' determined and sustained interests in the region. As the war developed, the main task before British and French military and political leaders was to weaken the German-Ottoman alliance. The easy way was to seek new allies among local nations for destabilizing the Ottoman Empire inside. They started their plans looking for allies within the Arab world as some Arab tribal leaders sought ways to realize their own interests.

For that period Hashemite family was one of the important and prominent families of the Arab world. The family was headed by Hussein ibn Ali who possessed a central figure in the Arab nationalist movement at that time. In 1908 the Ottomans appointed him as the Sharif and Emir of Mecca and he was responsible for the protection of Islam's shrines in the Hejaz, thus gradually he became a spiritual leader of Muslims. Exactly this family emerged as the major player in this

delicate and complex political scene of the region. Another reason for Hashemite tribal family's importance in the Arab world was connected with their being descendant of Prophet Muhammad. From the first decades of the 20th century, the Hashemite clan took advantage of other clans in the region and acted as a major political player in the Middle East. The Hashemites hold power in Syria until 1920, Saudi Arabia until 1924, Iraq until the 1950s, and currently, they remain the royal family in Jordan.

Researches and Findings

The Ottoman Empire's entry into the First World War gave an impetus to Hashemites for their major international involvement. Aware of Britain and French interests to weaken the Ottoman governance from the East and for accomplishment their intention Hashemite family began to approach British authorities. Maintaining historical legitimacy and politically ambitious family created a league with the British. But the intention didn't confine only by weakening the Ottomans inside the Empire. The balance of power was unsettled in the Arabian Peninsula, and there were many tribes competing for authority, and the situation let the Hashemites acknowledge the local political realities. Thus the relationship of Hussein the head of the Hashemite family with the United Kingdom was substantial for both leadership claims before the great Ottoman Empire and for sustaining in competition before other Arab tribes.

From July 1915 to March 1916 Hussein ibn Ali and Lieutenant Colonel Sir Henry McMahon, the British high commissioner in Egypt exchanged a series of letters (between 8-10 letters) known in history as Hussein -McMahon Correspondence. Hussein -McMahon Correspondence concerned with the determination of the political status of lands which was under the control of the Ottoman Empire. Correspondence also expressed the British involvement in the Middle East which can be considered very controversial.

Obviously, Hussein-McMahon Correspondence was a remedy for both sides to find common ground for an alliance against the Ottomans. There were two main aspects that can characterize Correspondence. One was the British intention to encourage the Arabs to rebel against the Ottoman Empire which was very important for the United Kingdom during WWI. With destabilizing Empire inside British politicians felt sure they could weaken German-Ottoman Alliance. The second was an Arab request from the British government to support Arabs for gaining independence for Arab-speaking lands. Their demand before the United Kingdom was the recognition of the independence of the Arab areas which was part of the Ottoman Empire currently known as Syria, Iraq, Jordan, Palestine, the West Bank, Gaza, and Saudi Arabia.

Representing all Arab-speaking nations Hussein claimed independence for the entire Arab lands till the east of Egypt. But there was a French factor that Mac-Mahon couldn't forget. Thus there were some areas that were under the French sphere of interest. District of Mersina and

Alexandretta, lands stretching to the west of Damascus were the exact areas included in the sphere of influence of France. It was not the sole condition of the United Kingdom. They also demanded to put Bagdad and Basra for special consideration. The offer was met with discontent by the Arabian part and the matter was postponed for discussion at a late date. If taking into account that Correspondence wasn't either a formal treaty or an agreement, although for Arabs it was formal, the existed disagreements on some point of matter remained unresolved.

In June 1916 Sheriff Hussein launched a revolt against Ottoman Empire with around 50.000 men, but 10.000 weapons. On the 10th of June Arabs attacked Jeddah city with the support of French and British naval forces maintaining control of the Red Sea. Rebellious troops could capture some coastal cities, but a direct attack on Medina city was prevented by the glorious Ottoman troops in October 1916.

Meanwhile, Sheriff Hussein proclaimed himself "King of all Arab world". But English and French representatives didn't accept this title, and proclaimed him an independent ruler, and officially accepted him as "King of Hijaz". Abdul- Aziz ibn Saud another political figure and future king of Saudi Arabia was anxious about Hussein's proclamation of himself king of all Arab world. For handing the problem the British representative in the Gulf invited Abdul-Aziz to Kuwait, promised to show him financial support, and provide him with war supplies. Instead, he was guaranteed that Hussein would not talk on behalf of Arab nations as the King of the Arab world and wouldn't interfere with Abdul-Aziz's personal matters. In exchange for this condition, Abdul-Aziz ibn Saud wouldn't have to act against Hussein. The reason why the British representatives were so tolerant to him was obvious: to prevent Abdul-Aziz to declare war against Hussein because he was an important figure who was used against the Ottomans in the Arab peninsula, Sham and Iraq.

The British government sent captain Thomas Edward Lawrence who provided Royal Naval support to rebellions in order to defend the southern oil port city Yanbu al Bahr. Lawrence could achieve to convince Arabs not to attack Medina but to sever the Hejaz Railway which was constructed with the support of the Ottoman Sultan Abdul Hamid II and considered to be a vital link through the Arab peninsula as it ran from Damascus to Medina. Severing Hejaz Railway would divert the attention of a considerable number of Turks. It enabled an easy advance of the Egyptian Expeditionary Force into Palestine and Syria which was officially the Ottoman territories.¹

¹ "Arab Revolt" A Dictionary of Contemporary World History. Jan Palmowski. Oxford University Press, 2003. Oxford Reference Online. Oxford University Press

In the first months of 1917, the number of Hashemite forces reached 70.000 and their weapons 28.000. A significant part of weapons was supplied by Britain and France. The most notable of weapons was rifles and machine guns.²

In 1917 Hashemite forces were enlarged by joining another leader of Arab nationalists Auda Abu Tayi. On the 9th of May, Lawrence took Abu Tayi's forces to Aqaba, the last port city of the Ottomans in the Red Sea and after the hard war on the 6th of June, the city was captured. Thus Britain could provide its security on the right flank.³

Occupation of Aqaba was possible only because Arabs used quite a huge number of weapons from British and French ammunition depot. The technical specialist emerged among the Arab army, their interests were realized by the British Air Forces. Besides, Arabs occasionally made some little tactic attacks in order to keep the great number of Ottoman forces scattered over the large area, and thus provided intelligence information to general Edmund Allenby, who was a soldier and British Imperial Governor.⁴

In September 1918 general Allenby charged Arabs with a special task during the Battle of Megiddo taking place in the north part of Ottoman Palestine. When Entente powers consisted of British, French, Indian, Australian, and New-Zealand forces attacked the German-Ottoman positions from the front, Arabs unexpectedly thrust back severing all three railways, depriving Turks to get aid and even to withdraw.⁵

On the 30th of September, 1918 Arab cavalry reached Damascus and they revealed that Arab nationalists among the citizenry had just raised a flag of Arab Revolt. On the following day, Australian Light Horse troops entered the city. In the late of the same year, Hussein's son Faisal replied on his father's understanding with the British and began to set up his administration here. Compelling to fight with Entente Powers from one side, and struggling against Arab revolt from 1916 the Ottoman power withdrew from the region according to the condition of the Armistice of Moundros, 1918.

The collapse of the Ottoman Empire raised hopes among Arabs that the United Kingdom would keep the promise given to Hussein to support the Arab independence as both sides agreed according to the Hussein-McMahon Correspondence. Relying on this promise Hussein ibn Ali proclaimed himself king laying claims to unify all Arab territories of former Arab provinces of the Ottoman Empire.

² Wilson Mary C. The Hashemite, the Arab Revolt and Arab Nationalism in Rashid Khalid ed., *The Origins of Arab Nationalism*. New-York: Columbia University Press.

³ David Murphy, (Illustrated by Peter Dennis), *The Arab Revolt 1916–18: Lawrence Sets Arabia Ablaze*, Osprey Publishing, 2008, p. 26

⁴ Military Intelligence and the Arab Revolt: The first modern intelligence war, Polly a. Mohs, ISBN 1-134-19254-1, Routledge, page 41.

⁵ Hughes Matthew. Allenby and the British Strategy in the Middle East 1917-1919. London: Frank Cass, 1999

But each side had its different interpretations according to this agreement. In addition to disagreement within the Correspondence, the clash of interests was increased by secret negotiations between the United Kingdom and France [with the consent of the Russian Empire] which is known in history as the Sykes-Picot Agreement of 1916. Negotiations of Sykes-Picot began in November 1915. It meant that the United Kingdom simultaneously conducted ambiguous negotiations with different sides. The essence of the agreement was the dismemberment of the Ottoman Empire, thus the Ottoman territories Iraq, Syria, Palestine, and Lebanon would be divided into administrative areas between the United Kingdom and France.⁶

As noted above from 1918 Faisal ibn Hussein set up administration in Syria and thus in 1920 he proclaimed the establishment of the Greater Syrian monarchy. Syria, Palestine, Lebanon, and Transjordan were included in the territory of Greater Syria and King Faisal declared that now they were independent of foreign rulers.⁷ But it contradicted France's interests in the Middle East. The problem was solved at the Conference of San Remo, April 1920 with France's claim to formalize new Syria, and the mandate of Syria was given to France. Sparking violent unrest after the decision about French mandate at Conference of San Remo was easily defeated by French forces and Faysal was sent into exile. One of the importance of Syrian for France was the presence of the Maronite Christians who were their allies in this region.⁸

Another disagreement and even subject of academic and political conjecture on Correspondence related to Palestine matter. As it was mentioned above the recognition of the independence of Palestine along with Iraq, Syria, and Jordan by the United Kingdom was Hussein's demand before the British government while giving his assent to launch a revolt against the Ottoman Empire. After the intensification of Zionist settlement in the region, Palestine's question in McMahon and Hussein's deliberations became an issue of growing significance to all political actors having interests in the region.⁹

Arab nationalists confronted disappointment immediately after WWI ended, so they witnessed the disagreement between Mac-Mahon and Hussein about the areas which had been included among the territories to be granted independence. Later Mac-Mahon claimed he never considered Palestine to guarantee independence, but Hussein pretended Palestine was on a list of territories to be granted independence. The Correspondence itself kept in secret for a number of years. But further, with the Balfour Declaration dated to 1917, the situation became more confused. According to Balfour Declaration, the United Kingdom supported the establishment of a national

⁶ Sykes-Picot Agreement. https://ww1.lib.byu.edu/index.php/Sykes-Picot_Agreement

⁷ Hussein -McMahon Correspondence <https://www.britannica.com/topic/Husayn-McMahon-correspondence>

⁸ Kylie Baxter and Shahram Akbarzadeh. US Foreign Policy in the Middle East. The roots of anti-Americanism. London and New-York. 2008. page.11

⁹ Huneidi Sahar. A Broken Trust: Herbert Samuel, Zionism and the Palestinians. London: IB Tauris. 2001

home for Jews in the territory of Palestine, rather than the establishment of an independent Palestinian State. Exactly Balfour Declaration paved the way for unsolved and complicated problems in the region lasted to nowadays.¹⁰

After the revolt, Hussein became the king of Hijaz which was recognized only by his own tribe. But this “independence” lasted until 1925 when the British government decided to shift the support from Hussein to ibn Saud abandoning and isolating Hijaz. Hijaz was conquered by the Saud family and thus gave an impetus to the establishment of Saudi Arabia.¹¹

Conclusion

But what about Hussein's “heroism”? This issue is also open to discussion. So, some historians claimed that “Hussein wasn't an Arab nationalist, but an aspiring imperialist bent on empire building”. But in reality, he was a traitor, he betrayed the state which always valued Islam, which did all bests for thriving and expanding Islam during the centuries, valued all nations despite the nationality and even religion, and at least valued Hussein himself appointing him Sharif of Mecca. According to the investigation of the British factor in the Arab revolt against the Ottoman Empire revealed that the United Kingdom led the revolt and in some cases, could achieve its intentions in the region. The Middle East was divided between France and the United Kingdom and the mandate system was set up here. But from 1920 The British government declared that no conversation could be done about the independence of Palestine, as it was excluded from the territory considered for Arab independence. According to some interpretations as the British didn't keep its promise the United Kingdom became increasingly viewed as perfidious.

Obviously, Hussein-McMahon Correspondence was planned by the British political leaders for easy maneuver of the United Kingdom if the fortune of war changed. Decades pass, the world is developing, but imperialist states' now we call them Western states' interests can change their masks under the name of democracy, struggle against terrorism, human rights and etc. but will never bring the Middle East prosperity and flourishing, but only terror, war, poverty, violation of human rights and disasters.

¹⁰ The Balfour Declaration, 1917. <http://www.mideastweb.org/mebalfour.htm>

¹¹ Esilyurt, Nuri (2006). "Turning Point of Turkish Arab Relations: A Case Study on the Hijaz Revolt" (PDF). The Turkish Yearbook. XXXVII: 107–8

TURKEY AND THE MIDDLE EAST

HOW CAN WE EXPLAIN THE ANIMOSITY BETWEEN ANKARA AND RIYADH AND FRIENDSHIP BETWEEN ANKARA AND DOHA?

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1. Introduction

The minor event that occurred in unremarkable Tunisia turned to be devastating for several countries and leaders of the Middle East. It extended throughout the Arab World significantly changing the region. This influential event would later be called the Arab Spring. The wave of demonstrations and rebels forced several long-established autocrats to step down. The power vacuum that emerged after the Arab Spring with the weakening of traditional regional powers of Iraq, Egypt and Syria has been attempted to be filled by Qatar and Turkey. Qatar's ambitions were alarming for Saudis domination in the region. Turkey-Qatar support of Muslim Brotherhood challenged Saudi-UAE security and status in the region, which opposed the overthrow of fellow dictators (Aras and Akpinar, 2017). Eventually, in June 2017, Saudi Arabia and other GCC states imposed a blockade on Qatar. Saudi-led coalition blamed Qatar for sponsoring terrorist groups in the region, broadcasting propaganda on its popular news agency Al-Jazeera, and developing close relations with Iran, the country, which has been viewed as the biggest threat for the Gulf States since the revolution in 1979¹. However, the intended effect from the blockade has never occurred. One of the biggest factor that helped Qatar to endure crisis and stay independent is its close relationship with Turkey. Once the blockade was imposed, Turkey immediately rushed in to help its little but wealthy Gulf ally sending planes of food and establishing its military base (Baskan, 2019; Baskan and Pala, 2020). In response to Turkey's pro-Qatar policy, Saudi Arabia, Egypt and the UAE immediately undertook measures that went against the Security interests of Turkey. Namely, the countries held a meeting with YPG and PKK: the People's Protection Unit and Kurdistan Workers' Party respectively (Baskan and Pala, 2020). The growing influence of YPG in Syria threatens Turkish security and it became a primary objective for Turkey to eliminate Kurds from Northern Syria. The following military interventions to Syria were made by Turkey in 2016, 2018 and 2019, which allowed Turkey to establish control over some Syrian territories. Nevertheless, Turkey's pro-Qatari policy turned out to be politically costly and still raises many questions because, from a solely economic perspective, it would be more rational for Turkey to take at least neutral position provided that Qatar has much less resources than Saudi Arabia and UAE, whilst the latter has a bigger population and more attractive markets (Baskan and Pala,

¹ "Qatar-Gulf crisis: All the latest updates," Al Jazeera, <http://www.aljazeera.com/news/2017/06/qatar-diplomatic-crisis-latestupdates-170605105550769.html>.

2020). Thus, Turkey's straightforward support was at a minimum risky enterprise from financial and economic viewpoints.

2. Research question

The question is, then, how can we explain the animosity between Ankara and Riyadh and friendship between Ankara and Doha? Hence, the purpose of this paper is to shed light on this question.

3. Literature review

Turkey, Saudi Arabia and Qatar shall undoubtedly be considered as great powers in the region. Therefore, great power relations theory shall be examined. The most prominent and well-explained theory of international relations is realism. Therefore, current study seeks to understand why three regional powers have different relations through the realist perspective. I am particularly interested in the literature that examines why relations among great powers of the contemporary world generate different results leading to cooperation or confrontation, as it happened among three countries of interest for this study.

First of all, it is necessary to identify the realism approach, which is a dominant theory of international relations. Realists used to see the world through the prism of pessimism, arguing that the world politics is a brutal field, where every state is seeking to get advantage over other states, which means that its relationships lack trust. Thus, daily struggle for power and continuous competition to obtain the best position in the system, simultaneously preventing others to get it, is how realists picture the reality. They consider relentless security competition and inherent mutual distrust that exist among the states as something that always leave an open room for possible war. (Mearsheimer, 1994-1995; Schweller, 1997). This realists' pessimistic view is built on five main assumptions about the international system (Mearsheimer, 1994-1995). The first is an idea that international system is anarchic, which means that the international system consists of independent actors (in this context, sovereign states), which act without any other higher authority above them. In particular, calling the system anarchic, the realists imply that there is "*no government over governments*"². The second idea is that states possess certain military capabilities, which make them inherently dangerous actors, increasing the likelihood of war. The third assumption is lack of certainty about intentions of other states, which creates distrust and can lead to various problems, such as security dilemma, commitment problems or information failure (Posen, 1993;

² Inis L. Claude, Jr., *Swords Into Plowshares: The Problems and Progress of International Organization*, 4th ed. (New York: Random House, 1971), p. 14.

Fearon, 1998). The fourth assumption is that states are always in the survival mode and the fifth is that states always think strategically referring to rational calculation. Taken all of these elements together, it becomes evident that it is sometimes reasonable for states to act aggressively (Mearsheimer, 1994-1995). The realists acknowledge that states act in a self-help environment, which forces states to look for more opportunities for themselves in order to survive. Therefore, under anarchy the best way to guarantee security for states is to maximize its relative power, whereas the ultimate goal is to become a hegemon. Since not all states can become a hegemon and provided that the international arena is anarchic, it is designed to be a field of constant and relentless security competition (Mearsheimer, 2001; Toft, 2005). Since absolute hegemony is impossible, it is argued that regional hegemony is usually a unit of analysis.

For realists, cooperation among states does occur, but it is usually difficult to achieve or preserve due to two main reasons: relative-gains concern and possible cheating issues. The relative gains concern means that states tend to measure rationality of cooperation not in accordance with a possible individual gain from the cooperation, but calculating its benefits relative to other counterparts. However, balance-of-power logic requires states to create alliances and cooperate against enemies. Special attention among structural realists is paid to the topic of “balancing”, which helps to explain how the great powers cooperate. Thus, the proponents of the theory argue that states that are threatened by a dangerous power tend to balance against this power by forming alliances or increasing its military capabilities (Schweller, 2004). Various authors tried to explain balancing phenomenon. It appears that balancing occurs when several ambitious states are seeking to obtain power, which leads to the changes in status quo and subsequent configuration of power (Morgenthau, 1995). Also, Layne argued: “*Great powers balance against each other because structural constraints impel them to do so.*³” Furthermore, Mearsheimer pointed out: “*status quo powers are rarely found in world politics, because the international system creates powerful incentives for states to look for opportunities to gain power at the expense of rivals, and to take advantage of those situations when the benefits outweigh the costs.*⁴” Schweller further explained when balancing can potentially occur. He argued: “*Balancing means the creation or aggregation of military power through internal mobilization forging of alliances to prevent or deter the territorial occupation and military domination of the state by a foreign power or coalition.*⁵” Thus, balancing happens, when there is no immediate or direct threat to a state that would require this

³ Christopher Layne, "From Preponderance to Offshore Balancing: America's Future Grand Strategy," *International Security*, Vol. 22, No. 1 (Summer 1997), p. 117.

⁴ John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001), p. 21.

⁵ Randall L. Schweller, "Unanswered Threats: A Neoclassical Realist Theory of Underbalancing," *International Security*, Vol. 29, No. 2 (Fall, 2004), pp. 159-201.

state to undertake countermeasures to preserve its security. On the other hand, balancing occurs when a state pursues long-term security interests. Levy puts it in the following way: "*it would not be balancing if war is forced on the potential balancer by a direct military attack by the aggressor.*"⁶ Hence, states are balancing not because they want to change the existing order, but because they get more advantages and benefits from the status quo and pursue to preserve this (Schweller, 2004). Another concern that is necessary to resolve is to understand why states pursue more power. Realists offer two dominant explanations to this question. Classical realists claim that desire of power is a natural state of human being (Morgenthau, 1948). Since great powers are led by human beings, it is natural that the power is constantly desired. For structural realists, the factor of human nature is largely irrelevant. They explain the desire for power through the prism of necessity, arguing that the international system is designed in a way, so states seek to acquire more power to guarantee security. Structural realists usually refer to the international anarchy as a factor that forces state to obtain more power (Mearsheimer, 2007).

4. Hypothesis

Based on my literature review, I propose the following hypotheses:

Hypothesis 1. *The Arab Spring created a power vacuum, that ambitious Turkey and Qatar with common policy views attempted to fill, creating a power balance to Saudi-UAE hegemony in the region.*

Hypothesis 2. *Turkish shift in domestic attitudes due to the failure of Kemalist pro-Western policy together with deteriorated relationship with USA resulted in more ambitious Turkish politics in the Arab World, which led to the Qatar-Turkey alliance and the emergence of power balance in the region.*

Hypothesis 3. *Qatar-Turkey alliance was achieved and have been sustained because it is rationally beneficial for both sides creating substantial amount of relative gains to both countries that make this alliance profitable.*

5. Research findings

It is necessary to mention that the relationship of Turkey with the Arab states dates back to the time of Turkish ancestor, the Ottoman Empire. Therefore, Turkey position with its Arab counterparts has always been complicated. Several scholars mention negative image that Turkey

⁶ Jack Levy, "Balance and Balancing: Concepts, Propositions, and Research Design," in Vasquez and Elman, Realism and the Balancing of Power, p. 135.

bears for Arab countries, which still perceives the successor of Ottoman empire with an element of distrust. Since the Ottoman empire, Turkey's relationship with the Arab world has been soaked by "*a legacy of territorial grievances, historic resentments, political tensions and mutual suspicions that neither Turkey nor its Arab neighbors have so far overcome.*" (Jung, 2005, p.2). Also, the image of Turkey as an instrument of US policy in the region is how the Arab world views Turkey after the Kemalist political project of westernization. At times of Ataturk Turkish external policy prioritized ties with Western World over Arab states. This agenda was being followed by Ataturk's successors during the Cold War. Ottoman empire has been consistently pictured by Arab leaders as a dangerous oppressor that had been bearing a threat to the Arab world, and now this threat is continued by its successor (Foley, 2010). Furthermore, former Turkey-Israel friendly relations and cooperation contributed to this negative image. Two countries were cooperating in various fields, including military information and personnel, defense industry, economy, culture etc. (Jung, 2005; Olson, 2001; Robins, 2003). This cooperation only seeded more distrust among its Arab neighbors, which viewed the alliance profitable only to USA and Israel at the expense of the Arab world.

Nevertheless, inability of Turkey to achieve full membership in European Union due to various issues, including unresolved case with Cyprus, and growing tensions between Turkey and USA put the Ottoman successor in an unprecedented situation when the country simultaneously experienced difficulties with USA and EU (Larrabee, 2007). Specifically, US actions to fight ISIS contributed to its aggravating relations with Turkey. Syrian crisis unleashed different jihadist groups allowing them to flourish, including what is known today as ISIS. In its fight with terrorist organizations USA used PKK-affiliated PYD as a proxy in Syria to fight the terrorists. As a result, the rise of PYD in the Northern Syria alarmed Turkey, which was afraid that its own significant Kurdish population began to rebel. Finally, Turkey used this situation to intervene to Syria in 2017 and 2018 to push back the PYD from its westernmost conclave in Northern Syria. At the same time Qatar declared support for the intervention. Meantime, in 2018 Saudi Arabia contributed \$100 million to the territories that previously were under ISIS control but currently under the control of PYD⁷. Furthermore, a decision once made by Turkish government to support US military campaign created many problems for the former, which resulted in a loss of billions of dollars in

⁷ "Saudi Arabia says it's given \$100 million to Northeast Syria"; John Hudson, "Saudi Arabia transfers \$100 million to U.S. amid crisis over Khashoggi", The Washington Post, 17 October 2018, https://www.washingtonpost.com/world/national-security/saudi-arabia-transfers-100-million-to-us-amid-crisis-over-khashoggi/2018/10/17/22b23ae1-c6a4-43a4-9b7dce04603fa6ab_story.html?utm_term=.6d90d09312f6 (Accessed on 24 March 2019).

trade and escalation of Kurdish problem. Thus, US support of Kurdish de facto state in Northern Iraq went against Turkey's interest putting its security in danger (Larrabee, 2007).

Moreover, US invasion in Iraq and subsequent instability in the region created even more problems for Turkey. Turkey was against US intervention in Iraq because Saddam Hussein suppressed various dangerous forces providing at least some kind of stability. As it was expected, the intervention unleashed numerous forces that endangered Turkish security such as subsequent empowerment of Kurdish nationalism. Also, it creates a room for Iran to extent its influence in Iraq. On the top of all these events, US declined multiple Turkey requests to fight PKK's training camps in Northern Iraq. These events forced Turkey to reconsider its foreign policy, which followed by a significant domestic political shift, which transformed Turkish pro-Western foreign policy focus toward more conservative, religious and nationalist stance, which is more in line with the Arab States. The Islamist Justice and Development Party (shortly AKP) headed by Recep Tayyip Erdogan had been gaining more popularity among the population. Turkey began to cooperate with Iran and Syria, the countries, which had similar trouble with independent Kurdish state. Turkey-Iran relations have been developing due to various common interests. Tehran and Ankara signed a cooperation agreement in the field of security and recognized PKK a terrorist organization. Also, Iran is the second largest natural gas supplier after Russia, which add one more reason to develop warm relationship with each other (Coskun, 2010; Larrabee, 2007). Expansion of Kurdish influence was also an acute security issue for Syria, which strengthened its cooperation with Iran and Turkey. Moreover, the shift in Turkish attitudes towards Israel also emerged. AKP's leadership started to adhere pro-Palestinian policy. Erdogan began to frequently condemn Israel activity in Gaza and West Bank establishing closer ties with the Palestinian leadership (Larrabee, 2007).

Shift of Turkish political perspective had a positive impact on its relations with the Arab countries. Thus, 2000s are marked to be a period when Turkey and Gulf States essentially improved its attitudes toward one another (Baskan, 2019; Foley, 2010). Between 2000 and 2010 Turkey had been working to establish its friendly relations with both Qatar and Saudi Arabia. The countries' leaders have been consistently exchanging reciprocal visits. In 2010 Erdogan even received the Kingdom's highly prestigious prize for service to Islam from king Abdulaziz of Saudi Arabia. The period of warm relations among the countries also constituted reciprocal expansion in trade. Turkey's export to Saudi Arabia increased four times and import ten times for the period from 2002 to 2010, and Turkey's export with Qatar increased eleven times and import seventeen times for the same period. Foreign direct investments was also actively flowing to Turkey from the

respective Gulf States⁸. Furthermore, the notable moment that marked the highest level of Turkey-GCC states relations was marked when the Council granted Turkey the status of a strategic partner in 2008 and the countries signed mutual Memorandum of Understanding to consult on various external matters (e.g. political, economic, security, culture etc.)⁹. One of the reason that helped Turkey to improve relations with GCC states mentioned by scholars is Turkish refusal to allow Washington to use its territory to invade in Iraq (Foley, 2010). Previous time when Turkey backed USA during the war in Kuwait turned to be damageable for the former, which in exchange lost millions in trade and received unstable borders.

However, despite all these gestures the Turkey-Qatar relations and the Turkey-Saudi Arabia relations were different in many respects back in 2000s. Turkey and Qatar had much more in common having unanimous attitudes towards Muslim Brotherhood movement, Iran, Hamas and Assad regime in Syria. More specifically, both countries: a) support Muslim Brotherhood movement helping it in many respects; b) have good relations with Iran; c) recognized Hamas as a legitimate representative of Palestinian people; d) had robust relations with Assad regime in Syria. Saudi Arabia had an exactly opposite view on all these matters (Baskan and Pala, 2020). The leaders of the Kingdom viewed the Muslim Brotherhood ideology as an existential threat to the royal family. Iran was perceived as a major regional rival by Saudi Arabia, which sphere of influence was growing in Yemen, Iraq and Lebanon. And lastly, Assad was perceived as a main ally to Iran and needed to be overthrown¹⁰. However, when Assad regime began to implement severe atrocities against its population, Turkey and Qatar realized that Assad must go, which reinforced its cooperation with Saudi Arabia. Moreover, the countries have a different view on Iran's nuclear program. Turkey refuses to join USA and Saudi-led coalition and to impose sanctions on Iran. Being an important strategic partners and a very profitable market, Turkey did not have any desire to lose its relations with Iran. Besides that, Turkey's location creates an opportunity to be a transit state due to the fact that its neighbours possess more than 70 percent of all oil and gas (Coskun, 2010). And since 2001 Iran has been a significant partner that exports gas to Turkey contributing to Turkey's status of regional hub. Another essential limitation in Turkish relations with the Gulf States is economic.

⁸ The data on Foreign Direct Investments are available at <https://www.tcmb.gov.tr> (Accessed on 24 March 2019).

⁹ Mariam Al Hakeem, "GCC Names Turkey First Strategic Partner Outside the Gulf", Gulf News, 3 September 2008, <https://www.pressreader.com/uae/gulf-news/20080904/281814279662725> (Accessed on 24 March 2019).

¹⁰ Birol Baskan, Turkey and Qatar in the Tangled Geopolitics of the Middle East, New York, Palgrave MacMillan, 2016.

Despite the fact that direct investments from the Gulf had expanded since 2003, the amount of these investments are far from what Turkey receives from EU, which accounts for 48 percent of Turkey's trade (Foley, 2010).

Currently, Turkey and Qatar are the closest allies in the region having many similar interests and outlook on external matters. However, Turkey's relationship with Saudi Arabia took a different direction beginning to gradually deteriorate after the Arab Spring inception. Turkey, Qatar and Saudi Arabia had a common ground during the Syrian conflict, where the countries were uniting in its efforts to overthrow Assad's regime by sponsoring Syrian rebel groups. But Russian military intervention in Syria in 2015 made the Syrian crisis largely irrelevant for the countries. When the common objective in Syria was lost, broader geopolitical factors started to determine its relations. In other words, the differences between Turkey and Saudi Arabia, that were largely irrelevant in 2000s, came at a forefront of its relations with the Arab Spring (Baskan, 2019; Gungordu, 2015).

The differences in outlook on the Muslim Brotherhood movement had gotten a special prominence with the Arab Spring. The event that initially emerged in Tunisia eventually extended across the Middle East embracing to various degree Gulf States. Several ruthless and long-established dictators were forced to step down including old autocrats in Tunisia, Egypt and Yemen (Aras and Akpinal, 2017). Arab Spring brought prominence to Muslim Brotherhood, which was expressed in the appointment of Muhammed Morsi in Egypt, who was affiliated with the organization. The growing influence of the movement divided Qatar and Turkey with Saudi Arabia. The former was trying to get advantage from the situation in Egypt providing diplomatic, economic and financial aid to the newly elected president. Meanwhile, the ideological side of the movement threatened Saudi Arabia, which could spark a wave of resistance and insecurity within Saudis borders. Furthermore, Egypt and Saudi Arabia used to be a long-term ally and the latter could not afford to lose the mounted ties¹¹. When the military coup happened in Egypt in 2013 and Morsi was overthrown, many of the Brotherhood leaders were imprisoned and some of them managed to escape. Turkey and Qatar were accepting and even welcoming those leaders. Qatar, for example, went even further, invited representatives of the movement to criticize the coup in Egypt in Al-

¹¹ Angus McDowall, "Rise of Muslim Brotherhood frays Saudi-Egypt ties", Reuters, 1 May 2012, <https://www.reuters.com/article/us-saudi-egypt-brotherhood/rise-of-muslim-brotherhood-frays-saudi-egypt-ties-idUSBRE8400ZM20120501> (Accessed on 24 March 2019); Alain Gresh, "Gulf cools towards Muslim Brothers", Le Monde Diplomatique –English Edition, November 2012, <https://mondediplo.com/2012/11/02egypt> (Accessed on 24 March 2019).

Jazeera¹². Turkey also invited several leaders of Muslim Brotherhood to run TV channels¹³. On the other hand, Saudi Arabia did not express any condemnation on the coup in Egypt directly benefitting from it and offering financial aid to Egypt. Also, the Kingdom declared Muslim Brotherhood a terrorist organization¹⁴. These events contributed to even stronger cooperation of Turkey and Qatar and to exactly opposite effect to its relations with Saudi Arabia. The relations between Qatar and the Kingdom eventually collapsed in 2014 when UAE, Bahrain and Saudi Arabia withdrew its ambassadors from Doha. At the same time, deep conflict with Turkey is not beneficial for Saudis because it can push Turkey to cooperate with Iran more closely (Aras and Akpinar, 2017).

In general, before 1995 Qatar foreign policy was levelling with Saudis, but since Sheikh Hamad came to power, which coincided with the extreme enrichment of Qatar due to export of natural gas, Qatar began to pursue more independent foreign policy (Baskan, 2019). During the Arab Spring, Qatar began to pursue a bigger influence in the Middle East, providing finances to various opposition groups and political parties. Also, the oil-rich monarchy began to actively investing money to USA seeking to buy influence in Washington¹⁵. Frequently, Qatar's foreign policy directly contradicted to Saudi regional interests and even challenged it. At the same time, it coincided with Turkey regional interests, which pursued to expand its influence in the region and needed someone to cooperate with. The Qatar-Turkey alliance seems to be rational and mutually beneficial, provided that with the Arab Spring and subsequent rise of Muslim Brotherhood, Qatar's regional influence has been essential growing, while Turkey, which shared many identical interests with Qatar, has tremendous military capabilities and strong determination to establish itself in the region.

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6. Conclusion

To summarize, it appears that three factors can explain current relations among three countries. Firstly, Turkey's inability to become a full member of European Union and its deteriorated relationship with USA led to the Turkish domestic shift in focus from pursuance pro-Western foreign policy, that was dominant under the Kemalist rule, towards getting more influence in the

¹² "UPDATE 2- Egypt summons Qatari envoy after criticisms of crackdown", Reuters, 4 January 2014, <http://www.reuters.com/article/2014/01/04/egypt-brotherhood-qatar-idUSL6NOKE05S20140104> (Accessed on 24 March 2019).

¹³ Shaimaa Magued, "The Egyptian Muslim Brotherhood's transnational advocacy in Turkey: a new means of political participation", British Journal of Middle Eastern Studies, Vol.45, No.3, 2018, p.480-497.

¹⁴ "Saudi Arabia declares Muslim Brotherhood 'terrorist group'", BBC, 7 March 2014, <https://www.bbc.com/news/world-middle-east-26487092> (Accessed on 24 March 2019).

¹⁵ Max Fisher, "How Saudi Arabia Captured Washington," Vox (March 21, 2016).

Arab World. Secondly, the differences and similarities in the external interests of the countries determined current relations among Turkey, Qatar and Saudi Arabia. The Arab Spring only reinforced the impact of different perspectives of the countries over major regional matters. Since Turkey and Qatar had shared many common objectives in the region, the ties between the countries only strengthened with the Arab Spring, which helped Turkey to find an ally among GCC states. Paradoxically, exactly opposite regional objectives of Saudi Arabia had corresponding effect on its declining relations with Turkey and Qatar. Thirdly, Qatar-Turkey growing ambitions and influence in the region during the Arab Spring and in its aftermath challenged Saudi-UAE dominance and was perceived as a potential threat to their own regional status creating power balance in the region.

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SAĞLIK HİZMETLERİ FİNANSMANINDA ÇEŞİTLİ YÖNTEMLER VE OECD ÜLKELERİNDEKİ BAZI KAMU-ÖZEL SEKTÖR ORTAKLIĞI (KÖO) UYGULAMALARININ KARŞILAŞTIRILMASI

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ÖZET

Modern toplum yapıları ve devlet örgütlerinde Sosyal Güvenlik ve Sağlık Hizmetleri Finansmanı özel bir öneme sahiptir. Bu konu; devlet örgütlenme modelinde “Sosyal Devlet İlkesi” ve “Refah Toplumu” olma hedefine ilerlemenin gereğidir. Hükümetlerin sağlık politikaları şekillenirken modern toplum bireylerinin sahip olduğu güvence ve hakların politikalara ne ölçüde yansıyacağı dikkate alınmaktadır. Öte yandan sağlık hizmetleri ve sağlanan sosyal güvencelerin finansmanı; toplumların tarihsel birikimleri ve yapılarına göre şekillenmekte buna bağlı olarak da çeşitli ülkelerde farklı uygulama modelleri ortaya çıkmaktadır. Kita Avrupası’nda geleneksel toplum yapılarına uygun olan vergilendirme ve pirim kesintilerine dayanan modeller yaygın iken, Amerika ve bazı Uzakdoğu ülkelerinde daha çok, kişilerin tasarrufları ve çeşitli özel sektör uygulamaları gözlenmektedir. Gelişen teknoloji, artan nüfus yaşılanma oranları ve modern çağımıza özgü yeni hastalıklar; “Refah Toplumu” ve “Sosyal Devlet” olma yolundaki hükümetleri giderek artan bir finansman krizine sürüklüyor ve sağlık politikalarında daha çok karma modellerin tercih edilmesine yol açmaktadır. Aynı şekilde sağlık yatırımlarında da kamu sektörü ile özel sektörün birlikte yürütükkleri proje modelleri öne çıkmaktadır. Bu çalışmada bazı OECD ve AB ülkelerinin sağlık güvence ve sağlık hizmet sistemlerindeki farklı uygulamaları ve bu uygulamaların ne şekilde finanse edildiği araştırılmıştır. Elde edilen sonuçlara göre Türkiye'nin uygulamakta olduğu modeller ve uygulama örnekleri bu ülkelerin verileriyle karşılaştırılmıştır. Bu çalışmanın amacı, ülkemizde gerçekleşmekte olan sağlık reformlarının yakın tarihimizdeki gelişimi değerlendirlerek, mevcut sağlık güvence sistemimizin sürdürülebilirliğine katkı sağlamaktır.

Anahtar Kelimeler: Sağlık hizmetleri finansmanı, sağlıkta finansman modelleri, sosyal sağlık sigortası, sağlık reformları, Türkiye'de sosyal sağlık sigortası

JEL Sınıflandırması: JEL: I10 - JEL: I18

VARIOUS METHODS IN HEALTHCARE FINANCING AND SOME PUBLIC PRIVATE-PARTNERSHIP (PPP) SECTORS APPLICATIONS COMPARISON IN OECD COUNTRIES

ABSTRACT

Social Security and Health Services Financing has a special importance in modern social structures and State organizations. This issue; It is the necessity of progressing towards the goal of becoming a "Social State Principle" and a Welfare Society in the state organization model. While the health policies of governments are shaped, the extent to which the guarantees and rights of modern society individuals will reflect on the policies are taken into account. On the other hand, the financing of Health Services and Social Security; It is shaped according to the historical background and structures of the societies, and accordingly, different application models emerge in various countries. While models based on taxation and premium deductions, which are suitable for traditional social structures, are common in continental Europe, people's savings and various private sector practices are observed in America and some Far Eastern countries. Developing technology, increasing population aging rates and new diseases specific to our modern age; It drives the governments on the way to become "Welfare Society" and "Social State" into an increasing financing crisis and leads to the preference of more mixed models in health policies. Likewise, in Health Investments, the project models of the Public Sector and the Private Sector come to the fore. In this study, the different applications of some OECD and EU countries in Health Insurance and Service Systems and how these applications are financed were investigated. According to the obtained results that models and practices implemented by Turkey were compared with the data of these countries. The aim of this study is to evaluate the development of health reforms in our country in our recent history and to shed light on the sustainability of our health insurance system.

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Keywords: Health care financing, health financing models, social health insurance, health reform, social health insurance in Turkey

Jel Classification: JEL: I10 - JEL: I18

GİRİŞ

Modern toplumların oluşumu ile devlet örgüt yapıları daha karmaşık hale gelmiş ve bireylerin yönetim örgütlerinden beklenileri artarak diğer hizmet alanlarında olduğu gibi sağlık alanındaki beklenileri de yükselmiştir. Bu durum devlet örgütünün sağladığı hizmet türlerinin çeşitlenmesini gerekli kılarak, yeni finansman tekniklerinin bulunmasını zorunlu hale getirmiştir. Modern toplumlardan önceki toplumlarda da sağlık hizmetlerinin finansmanı için birçok örgütü çaba vardı. Bunlara; bazı küçük toplumsal

örgütlerin kendi üyelerine yardım etmelerini, bireysel anlamda çeşitli tasarrufları ve bazı dini guruplardaki çeşitli mali yardım fonlarını örnek verebiliriz.

Önceleri sadece bazı vergi sistemleri ve tasarruf fonları ile finanse edilen sağlık sistemleri, modern toplum ve devlet yapılarında artan bireysel beklentilere bağlı olarak yeniden ele alınmış ve çağdaş finansman tekniklerine dönüştürülerek pek çok ülkenin sağlık politikalarında farklı biçimlerde uygulamaya konulmuştur.

Sağlık hizmetinden yararlanmak isteyen kimselerin kendi ödemelerini yapmak suretiyle bu hizmeti satın almalarını ayrı tutarsak, sağlık hizmetlerinde kullanılan finansman metotlarının hemen hepsi bir tür risk-sigorta anlayışı ile planlanmaktadır. Bunun sebebi sağlık sorunlarının ve tedaviye ulaşma koşullarının kişiler için genel anlamda bir finansman riski olması ve bu süreçlerin risk yönetimi olarak ele alınmasıdır. Kişiler bir sağlık sorunu ile karşılaşlıklarında tedavi olmak istedikleri sağlık merkezlerine diğer bireylerle eşit koşullarda ulaşmalı ve tedavi süreçlerini son teknolojiye göre donatılmış tesislerde yaptırıbilmelidirler. Refah toplumu olma yolundaki tüm ülkelerin ortak sorunu olan bu durum, sosyal eşitsizliklere sebep olmakta ve halen pek çok ülkede hükümetlerin sağlık politikalarını doğrudan etkilemektedir.

Bu politikalardaki risk yaklaşımı; hem bireylerin ihtiyaç duyduğu sağlık hizmetlerinin finansmanını sağlayarak sosyal devlet olmanın gereklendirmesini yerine getirmeyi sağlaması açısından hem de sağlık alanında yapılacak tesis yatırımlarının niteliğini belirlemesi ve yaygınlaşmasını sağlaması açısından önem taşımaktadır. Risk yönetimi; bireyler açısından sağlık finansmanına ihtiyaç duydukları anda bu kaynaklara diğer bireylerle eşit koşullarda erişebilmeleri, sağlık yatırımları açısından da ülkelerin coğrafi bölgelerinin tamamında eşit bir tesis dağılımının varlığı anlamına gelmektedir. Sınırlı devlet kaynaklarıyla bu nasıl gerçekleştirilecektir? Hükümetler bu noktada çeşitli sağlık politikaları geliştirmekte, sosyal ve demografik yapılarına göre farklı yaklaşım sergilemektedirler. Sağlık harcamaları açısından bazı AB ülkelerinde sağlık giderleri artışına nüfus demografik yapısının sebep olduğu kabul edilmektedir (Mendelson ve Schwartz, 1993:123).

Modern toplumlarda devlet örgütünden beklentilere göre şekillenen sağlık sistemleri; bu toplumlara özgü geleneksel yapıların, özgün yaşam biçimlerinin ve politik sistemlerinin bir tezahürü olmaktadır. Hükümetlerin sağlık politikaları incelendiğinde genellikle değişmeyen bir sağlık hizmeti modelinin benimsenmediği ve farklı sağlık politikalarının uygulandığı görülmektedir. (Berie ve Fink, 2000:27). Literatürde bu çeşitli politika uygulamaları için Roemer (1993:61); sağlık finans teknikleri ile ilgili olarak devlet müdahalesinin temel alan dört faktör model halinde bir yaklaşım geliştirmiştir (Tatar, 2011:110-111;). Bu guruplandırma Ulusal Sağlık Hizmeti Modeli (Beveridge), İşgücü kaynaklı gelirlerden alınan Prim

Modeli (Bismarck), Ulusal Sağlık Sigortası Modeli ve Kişilerin alacağı hizmetlerin kendi ceplerinden ödedikleri ve temelini özel sigortaların oluşturduğu ABD modelidir.

Bu çalışmada, OECD ve bazı AB üyesi ülkelerin sahip olduğu farklı sağlık finans hizmet modelleri araştırılmış; ve bu modeller ile gerçekleştirilen sağlık tesisi yatırımlarının işletme türleri incelenerek Türkiye'de uygulanmakta olan çeşitli yönetim biçimlerine yer verilmiştir.

1. SAĞLIK HİZMETLERİ FİNANSMAN YÖNTEMLERİ

1.1. Tarihsel Gelişim ve Kavramlar

Sosyal güvenlik ve sağlık hizmetleri finansman yöntemlerinin tarihsel gelişimi eski çağlara dayanmaktadır. Yunanistan'da esnaf örgütlerinin ve hastalar için çeşitli yardım derneklerinin bulunduğu bilinmektedir. Eski Roma İmparatorluğu'nda ise sağlık hizmetlerinin finansmanı, hastalık sandığı birlikleri (*collegia tenuiorum*) ile ölüm sandığı birliklerinin (*collegia funeraticia*) kurularak finanse edilmesi şeklinde literatüre geçmiştir (Vercoutter J. 2008: 11).

Almanya'da Sanayi Devrimi'nden sonraki dönemde, ihtiyaç sahibi kişilerin beslenme ve bakımları kanunla belirlenen hükümlere göre, bazı meslekî teşekkürükler (loncalar) ve belediyeler aracılığıyla gerçekleştirilmektedir. İngiltere'de ise 1900 lü yıllarda yürürlüğe giren bir kanunla 70 yaşının üstündeki İngiliz vatandaşları herhangi bir prim ödemeden yaşıllık aylığı almaya hak kazanmışlardır. Meslek hastalıklarının tedavilerine yönelik ilk kanunun 1925 yılında Almanya'da yürürlüğe girmesi benzer kanunların diğer Avrupa ülkelerinde de yaygınlaşmasına sebep olmuştur (Börsch-Supan A, Schnabel R. 1998; 88(2): 173-8).

1.2. Sağlık Hizmetlerinin Finansmanını Belirleyen Modeller

Günümüzün modern toplumlarda hükümetler; toplumdaki bireylerin sağlığını korumak ve ihtiyaç duyukları anda tedavisini yapabilmek ve bu sağlık hizmetlerinin finansmanını kontrol altında tutmak amacıyla çeşitli sağlık politikaları geliştirmiştir. Bu yöntemlerin temelini; sağlık hizmetlerinin hangi kaynaklarla yapılacağı, kaynakların nasıl yönetileceği, bu hizmetlerin nasıl sunulacağı ve ne şekilde finanse edileceği konusundaki politikalar belirlemektedir (Culyer ve Newhouse, 2000:13-19).

Uygulamalarda kesin bir sınıflandırmadan bahsedemesek de birçok Avrupa ülkesinde Roemer'in devletin müdahalesinde dayanan dört faktör model üzerine geliştirdiği sistem benimsenmiştir.

1.2.1. Beveridge Modeli (Ulusal Sağlık Hizmeti Modeli)

II. Dünya Savaşı yıllarda Churchill tarafından Ticaret Kurulu'na katılmaya davet edilerek işsizlik ve yoksullukla mücadele etmesi ve Ulusal Sigorta sisteminin uygulanmasını organize etmesi istenen William Beveridge'in tasarladığı yönteme göre, sağlık hizmetlerini devlet sağlamak ve gelirini de vergilerle finanse etmektedir. Temelde finansmanın vergilerle sağlanması amacı taşıyan bu model; sağlık

hizmetlerini; ulusal askeri hizmetler, karayolları ve çeşitli altyapı yatırımları çerçevesinde ele almaktır ve bir kamu hizmeti olarak görmektedir. Bu sistemin uygulayıcısı olan İngiltere'de klinik ve hastanelerin birçoğu devlete aittir. Devlet sağlık örgütlerinde çalışan doktorlara da özel doktorlara da ücretleri devlet tarafından ödenmektedir. Sağlık hizmetleri ve ödeme tutarlarının dağılımı devlet tarafından belirlendiği için toplumdaki bireylerin sağlık harcamaları düşük olmaktadır. Bu finans modeli, Birleşik Krallık, İspanya, İskandinav ülkeleri ve Yeni Zelanda'da uygulanmaktadır (Immergut, 1992:5).

1.2.2. Bismarck Modeli (Çalışan Prim Modeli)

Daha önce Almanya'nın Rus İmparatorluğu büyükelçisi ve Fransa büyükelçisi olarak hizmet eden daha sonra 1862 yılında Alman Temsilciler Meclisi'nin tavsiyesi üzerine Dışişleri Bakanı olarak atanın Otto Von Bismarck tarafından geliştirilmiş modeldir. Refah devleti tanımı geliştirerek kıta Avrupası'nda Alman İmparatorluğu'nun yaratılmasını planlayan Bismarck; bu yöntemle bir sigorta fonu oluşturmuş, bu fonun gelirini de işçi ve işverenden bir miktar kesinti yaparak sağlamıştır (Barnighausen ve Sauerborn, 2002:1560).

Bu yöntem birçok ülkede benimsenmiş ve uygulanmaktadır. Almanya, Fransa, Hollanda, Belçika, Japonya, İsviçre ve bazı Güney Amerika ülkeleri bu yöntemi tercih etmiştir (Tatar, 2011:110).

1.2.3. Ulusal Sağlık Sigortası Modeli

Literatürde karma model olarak ta adlandırılan ulusal sağlık sigortası modeli Romer'in devlet müdahalesi etrafında şekillendirmiş olduğu ancak farklı modellerin özelliklerini birleştiren bir sistemdir. Bu model hükümetlerce finanse edilmekte, gelir için vatandaşlardan vergi ve prim toplanmaktadır. Devlet tek ödeyicidir. Pazarlamaya gerek duymamakta ve kâr amacı gütmemektedir. Kanada, Güney Kore ve Tayvan'da tercih edilen bir sistemdir (Woolhandler, Campbell vd., 2003:773).

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1.2.4. ABD Modeli

Amerika Birleşik Devletleri'nin genel sağlık sisteminin temeli özel sigortaların oluşturduğu bir model görünümündedir. Ülkenin çeşitli bölgelerinde geçerli olan sağlık uygulamalarında bir uyumdan bahsedilmemekle birlikte 1960'lı yıllarda itibaren kamu kaynaklı bazı örgütlenme modellerine rastlanılmaktadır (Oral, 2002:90).

1.2.5. Türkiye Modeli (Genel Sağlık Sigortası)

Anayasa'miza göre ülkemizdeki sağlık hizmetleri zorunlu kamu hizmeti niteliğinde olup Sağlık Bakanlığı'nın görev alanı içindedir. Sağlık hizmetleri kamu sektörü, yarı kamu, özel sektör ve kâr amacı gütmeyen bazı vakıflarca sağlanır. Finansman ise vergiler, sosyal güvenlik primleri (SGK), özel sigorta primleri ve cepten ödeme ile gerçekleştirilmektedir (Pekten, 2006:2).

Ülkemizde 2003 yılında Dünya Sağlık Örgütü ile ortaklaşa ‘Sağlıkta Dönüşüm’ adıyla bir dönüşüm programı başlatılmış, bu programla sağlık sistemimiz revize edilerek Genel Sağlık Sigortası sistemi uygulanmaya başlanılmıştır. Bu sistem ile birlikte toplumdaki tüm bireylerin sağlık hizmetlerine erişimleri için eşit koşullar oluşturulmuş ve sağlık harcamalarına yönelik gelir düzeyi düşüktoplum gurupları yararına birçok iyileştirmeler sağlanmıştır.

1.3. Sağlık Hizmetlerinin Finansmanı

Sağlık finansmanı geniş kapsamlı bir kavram olup, modern toplumların sahip oldukları siyasi politikalara göre şekillenen bir kavramdır. Sağlık hizmetlerinin finansmanında yaygın olarak üç temel prensip kabul edilmektedir. Bunlar: Gelir toplama, gerektiğinde kullanılmak üzere bir kaynak oluşturma ve sağlık hizmetini sunanlara ödeme yapmadır (Mossialos E., Dixon A. ve dig. 2002; 1-3). Türkiye ve diğer bazı ülkelerin tercih ettiği modellerde kaynakları toplayarak fon oluşturan ve ödeme yapan kurumlar genellikle aynıdır.

Gelir toplama ve toplanan kaynaklardan fon oluşturma yöntemlerinde olduğu gibi, sağlık hizmetini sağlayan kişi ve kurumlara yapılan ödeme yöntemlerinde de farklılıklar vardır. Hizmet sağlayanlara yapılan ödeme biçimleri; alınan sağlık hizmeti sayısına göre ödeme, sağlık hizmetinin alındığı gün adedince ödeme, hastalık vakalarının sayısına göre ödeme, sağlık hizmeti alan kişilerin sayısı kadar ödeme, toplam bir bütçe tahsisi ile doktor ve sağlık personeline yapılan ücret ödemeleri gibi ödemeler örnek verilebilir.

Sağlık hizmetlerinin finansman yöntemleri, genel olarak özel finansman kaynakları ve kamusal finansman kaynakları şeklinde ikiye ayrılmakla birlikte kendi aralarında da ayırmaktadır. Bunlar; Özel Finansman Kaynakları için; cepten ödemeler, doğrudan ödemeler, özel sağlık sigortaları ve tıbbî tasarruf hizmetleri olmak üzere dört kısımdır. Kamusal Finansman Kaynakları için ise; sosyal sağlık sigortacılığı, vergilerle finansman, kaynaklardan fon oluşturma ve hizmet sunucularına yapılan ödemeler olmak üzere yine dört kısımdır.

1.3.1. Özel finansman yöntemleri:

- a. **Cepten ödemeler:** Kişilerin doğrudan kendi ceplerinden ödeyerek yaptıkları sağlık harcamalardır (Mossialos E., Dixon A. ve dig. 2002; 1-3).
- b. **Doğrudan ödemeler:** Sağlık sistemi kapsamasında olmayan bazı sağlık hizmet türleri için dış hekimleri ve çeşitli tahlil laboratuarları gibi özel sektör işletmelerine yapılan ödemelerdir.
- c. **Özel sağlık sigortaları:** Amerika Birleşik Devletleri (ABD)'nde, Avustralya'da ve İsviçre'de tercih edilmekte ve özel sağlık sigorta sistemini temel almaktadır (Thorpe KE, Florence CS, ve dig. 2005; 24 (4): 317-25).

d. **Tıbbi tasarruf hesapları:** Modern toplumlardaki bireylerin, kendi istekleri ile veya zorunlu olarak önceden tasarrufta bulunarak fon oluşturmaları ve sağlıklarını için gerektiğinde kullanmaları şeklindedir (Deber RB, Forget EL, ve diğ. 2004; 70 (1): 49-66).

1.3.2 Kamusal nitelikli finansman kaynakları:

a. **Sosyal Sağlık Sigortacılığı:** İlk kez 1880'li yıllarda Bismarck ile Almanya'da kanun yöntemiyle uygulamaya konmuştur. Sisteme üye olmak zorunludur ve finansman işçi ve işverenlerden zorunlu olarak yapılan kesintilerle gerçekleşmektedir (Barnighausen ve Sauerborn, 2002:1560).

b. **Vergilerle Finansman:** Sağlık hizmetlerinin toplanan vergilerle finanse edilmesine 1920'li yıllarda başlanılmıştır. Bazı ülkeler bu sistemi toplumun büyük kesimlerine yaymayı başarmışlardır. 1938 yılında Sovyetler Birliği, 1948 yılında da İngiltere bu uygulamaları gerçekleştirebilmiş Avrupa ülkesi olmuştur. Bu sistemi tercih eden ülkeler, İskandinav ülkeleri, Kanada ve Japonya'dır (Broadbent J. Ve diğ. 2003; 16(3): 442-45).

Günümüzde 36 OECD üyesinin 14'ünde sağlık hizmetleri finansmanı genellikle toplumdan toplanan vergilerle yapılmaktadır.

c. **Kaynaklardan Fon Oluşturma:** Sağlık hizmetleri giderleri için fon havuzunun oluşturulması, sağlık güvencesinin tüm bireyleri kapsaması açısından en uygun sistemdir.

d. **Hizmet Sunucularına Ödeme Yapma:** Sağlık hizmetlerini sağlayan kurumlara yapılan ödemeler konusunda bazı uygulama biçimleri; hizmet başına ödeme, gün başına ödeme, vaka başına ödeme, kişi başına ödeme gibi farklı yöntemler olabilmektedir

(Alma-Ata Deklerasyonu http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf.)

1.4. Sağlık Hizmetlerinin Finansmanının Türkiye'deki durumu

Türkiye'de yapılmış olan son düzenleme, sağlık uygulamaları arasındaki çeşitli farklılıklar ortadan kaldırmayı ve nüfusumuzun tamamını kapsar nitelikte bir sağlık güvencesi oluşturmayı amaçlayan 31.05.2006 tarih ve 5510 sayılı "Sosyal Sigortalar ve Genel Sağlık Sigortası Kanunu'nun kabul edilmesidir. Hem sosyal güvenlik hem de sağlık hizmetleri alanında yapısal değişikliklerle var olan farklı sosyal güvenlik uygulamalarını tek bir kurum altında toplayarak, Genel Sağlık Sigortası (GSS) sistemini getirmiştir. Sistem 16 Mayıs 2006 tarih ve 5502 sayılı "Sosyal Güvenlik Kurumu Kanunu" ile yürürlüğe girmiştir.

2. SAĞLIK HARCAMALARI KARŞILAŞTIRMASI

Sağlık harcamaları OECD ülkeleri için önemli bir bütçe gideridir. Bu ülkeler dünya nüfusunun % 20'den fazlasını oluşturmaktakta ve 2010 yılında 6,5 trilyon doları geçen sağlık harcamalarıyla dünya toplam sağlık harcamalarının % 84'ünü oluşturmaktadırlar (OECD, 2013:1).

OECD ülkelerinin sahip olduğu bu sağlık harcama tutarının sebepleri incelenirken bazı göstergeler öne çıkmaktadır. Literatür taramasında OECD ülkelerinde var olan nüfusun giderek yaşlanmakta olduğu, tanı ve tedavi teknolojilerindeki gelişmeler ve ilaç üretimindeki çeşitliliğe bağlı olarak artan sağlık harcamalarının bu yüksek miktarların sebebi olduğu yönünde bulgulara rastlanmıştır.

2.1. Kişi Başı Sağlık Harcamaları

Bazı OECD ülkelerinin kişi başı sağlık harcamaları; satın alma gücü paritesi ABD doları cinsinden Tablo 2'de gösterilmiştir.

Tablo 1. OECD Kişi Başı Sağlık Harcamaları (ABD \$)

Ülke	1990	1995	2000	2005	2010	2012
Almanya	1793	2270	2677	3363	4349	4811
ABD	2851	3788	4791	6735	8247	8745
Hollanda	1410	1791	2340	3820	5028	5099
İspanya	868	1188	1538	2270	3016	2998
İtalya	1352	1495	2028	2473	3019	3209
Fransa	1440	2093	2544	3254	4016	4288
Türkiye	157	178	453	620	1039	984
Ortalama	1182	1467	1885	2573	3340	3500

Kaynak: OECD, Health Data, 2014.

OECD 2014 verilerine göre sağlık hizmetleri finansmanı modellerinden Bismarck ve Ulusal Sağlık Sigortası sağlık modelini uygulamakta olan ülkelerin; kişi başı sağlık harcamalarının Beveridge modelini uygulamakta olan ülkelere göre daha yüksek olduğu görülmektedir. Bismarck modelini uygulamakta önemli roller üstlenen Almanya, Hollanda ve İsviçre gibi ülkelerin 1990 -2012 yılları arasında ki kişi başı sağlık harcamaları bu yıllar arasındaki diğer OECD ülkelerinin sağlık harcamaları arasında ilk 10 sırayı paylaşmışlardır.

Türkiye'de ise 980 dolar seviyesinde olan son yılların kişi başı sağlık harcama tutarı, \$3500 olan 2012 yılındaki OECD ortalama tutarının oldukça gerisinde kalmıştır. Bu veriler göstermektedir ki; Türkiye gerçekleştirmiş olduğu sağlıkta dönüşümlere rağmen ilerleme kaydetmekte ancak kişi başı sağlık harcamaları miktarı henüz OECD ülkelerinin gerisinde kalmaktadır.

2.2. Toplam Sağlık Harcamalarının GSYİH'ndaki Payı (%)

Sağlık harcamalarının ülkelerin GSYİH'nındaki yüzdelik payı Tablo 2'de belirtilmiştir.

Tablo 2. *Toplam Sağlık Harcamalarının GSYİH'daki Payı (%)*

Ülke	1990	1995	2000	2005	2010	2012
Almanya	8,3	10,1	10,4	10,8	11,5	11,3
Fransa	8,4	10,4	10,1	11,0	11,7	11,6
Hollanda	8,0	8,3	8,0	10,9	12,1	11,8
İspanya	6,5	7,4	7,2	8,3	9,6	9,3
İtalya	7,7	7,1	7,9	8,7	9,4	9,2
ABD	12,4	13,7	13,7	15,8	17,7	16,9
Türkiye	2,7	2,5	4,9	5,4	6,7	5,4
Ortalama	6,9	7,5	7,8	8,7	9,5	9,3

Kaynak: OECD, Health Data, 2014.

Beveridge yöntemini kullanan Avrupa ülkelerinin 1990'lı yillardaki toplam sağlık harcamaları en yüksek ülkeler arasında iken, zamanla Almanya, Fransa, Hollanda ve İsviçre gibi Bismarck modelini uygulamakta olan ülkelerin sağlık harcamalarında yükselme olmuş ve sağlık harcamalarına daha fazla kaynak ayırır hale gelmişlerdir.

2.3. Kamu ve Özel Sağlık Harcamalarının Toplam Sağlık Harcamalarındaki Payı

Sağlık hizmetleri ve finansman giderleri modellerine bakıldığından birçok ülkenin genellikle karma sistemleri tercih ettiğini görülmektedir. Bu finans sistemlerinde sağlık hizmetlerinin sağlayıcılarının kimler olacağı, bu finansmanın sağlanması şekli ve hizmet sunanlar ile bu hizmetlerden yararlananlar arasında risk dağılımının nasıl olacağı önem kazanmaktadır. Toplam sağlık harcamalarında kamu harcamalarının paylarına Tablo 3'te yer verilmiştir.

Tablo 3. *Toplam Sağlık Harcamalarında Kamu Harcamalarının Payı (%)*

Ülke	1990	1995	2000	2005	2010	2012
Almanya	76,2	81,4	79,5	76,6	76,7	76,7
Fransa	76,6	79,7	79,4	77,7	76,9	77,4
Hollanda	71,2	75,4	66,4	69,7	86,1	85,8
İspanya	78,7	72,2	71,6	70,9	74,2	73,0
İtalya	79,5	72,8	74,2	77,9	78,5	77,3
ABD	39,4	45,1	43,0	44,2	47,6	47,6
Türkiye	61,0	70,3	62,9	67,8	74,7	76,8
Ortalama	72,9	71,6	71,5	71,1	71,9	72,3

Kaynak: OECD, Health Data, 2014.

Tablo 3 incelendiğinde; zamanla bazı değişiklikler olsa da Beveridge yöntemini tercih etmiş ülkelerindeki toplam sağlık harcamalarının içindeki kamu payının, Bismarck modelini tercih eden ülkelerin sağlık harcamaları payına göre genelde daha fazla olduğu görülecektir.

OECD ülkelerindeki kişilerin cepten yaptıkları sağlık harcamalarının toplam sağlık harcamaları içindeki payı Tablo 4'te verilmiştir.

Tablo 4. *Cepten Yapılan Sağlık Harcamalarının Toplam Sağlık Harcamalarındaki Payı*

Ülke	1990	1995	2000	2005	2010	2012
Almanya	11,1	10,0	11,4	13,5	13,1	13,0
Fransa	11,4	7,6	7,1	7,0	7,4	7,5
Hollanda	-	9,6	8,9	8,1	5,7	6,0
İspanya	-	23,5	23,6	22,1	19,8	20,7
İtalya	17,1	24,7	23,1	19,0	17,5	18,8
ABD	19,5	14,5	14,9	13,2	11,7	12,0
Türkiye	-	29,7	27,6	22,7	16,2	15,4
Ortalama	18,8	20,6	20,7	19,9	19,7	19,0

Kaynak: OECD, Health Data, 2014.

Tablo 5 de, Beveridge, Bismarck ve Ulusal Sağlık Sigortası modelini uygulamakta olan bazı OECD ülkelerin ve Türkiye'nin başarıları; sağlık harcamaları başarılarını ölçmekte kullanılan bazı değerlerle birlikte gösterilmektedir.

Tablo 5. *Sağlık Sistemlerinin Sağlık Harcamaları ve Bazı Sağlık Göstergeleriyle Kıyaslaması*

Ülke	Kişi Başı Sağlık Harcaması (\$)	Sağlık Harcaması (GSYİH %)	Ortalama Ömür Süresi	Bebek Ölüm Oranı	Aynı Gün Randevu Alamama (%)	Maliyetten Dolayı Hizmet Alamama (%)
Beveridge Ülkeleri	3401	9,5	79,9	3,2	48,5	9,5
Bismarck Ülkeleri	3345	9,1	80,7	3,4	44,0	15,5
Ulusal Sağlık Sigortası Ülkeleri	3827	10,1	80,1	4,7	77,0	25,0
ABD	8505	17,7	78,6	6,0	70,0	33,0
Türkiye	984	5,4	74,6	7,4	-	-

Kaynak: OECD, Health Data, 2014.

Bismarck modelini uygulamakta olan bazı OECD üyesi ülkelerin kişi başı sağlık harcamaları ve bu sağlık harcamalarının GSYİH içindeki payları Beveridge ülkeleri ve Ulusal Sağlık Sigortası modeline sahip ülkelerinkinden daha düşüktür. Tablo 5 de görüldüğü gibi ülkelerin sağlık harcamaları arttıkça genel olarak bebek ölüm hızları düşmektede, beklenen yaşam süreleri ise artmaktadır.

3. KAMU ÖZEL SEKTÖR ORTAKLIĞI (KÖO) YATIRIM TÜRLERİ VE SAĞLIK

YATIRIMI UYGULAMALARI

3.1. Kamu Özel Ortaklıği (KÖO) Kavramı

Kamu hizmetlerinin asıl nedeni toplumun ortak gereksinimlerinin yeterli bir şekilde yerine getirilmesi ve tüm yurttaşların yaşam kalitesinin artırılmasıdır. Bu kapsamda, 2016 yılından itibaren 15 yıl içerisinde

olmak üzere enerji, haberleşme, içme suyu ve ulaştırma sektörlerine 60 trilyon dolar kaynak ayrılacağı belirtilmiştir (Acartürk ve Keskin, 2012: 28).

3.2. Kamu Özel Ortaklıği Tarihsel Gelişimi

IMF, (2006:1)'e göre kamu özel ortaklığı; şimdije kadar kamu eliyle gerçekleştirilen alt yapı çalışmalarının ve bu yöndeki hizmetlerin, artık özel sektör tarafından gerçekleştirilmektedir. EIB, (2007:2)'e göre ise; özel sektör potansiyelinin kamuya hizmet amacıyla değerlendirilmesi ve bu yöndeki kamu özel sektör arasında gerçekleştirilen işbirliğidir.

Kamu özel sektör ortaklısı modeli ile ilgili olarak ilk tanımlama, Devlet Planlama Teşkilatı'nın (DPT) 2007 yılındaki çerçeve kanun taslak çalışmasında belirtilmiştir. Bu çalışmaya göre; bir sözleşme kapsamında olmak üzere, gerçekleştirilecek olan yatırımların maliyet, risk ve getirilerinin, her iki taraf arasında paylaştırılmasını içeren anlaşmalar biçiminde yapılandırılmaktadır.

Kamu-özel ortaklık projelerinin finansmanı metodu, yatırıminın gerçekleştirilmesi, tesisin işletilmesi ve projenin sahipliği olmak üzere dört ana unsuru bulunmaktadır. Devlet borç geri ödeme, satın alma ve çeşitli girdilerin temini gibi bazı konularda garanti vermekte, ücretin bir kısmını bu hizmetleri gerçekleştirenlere ödemekte, yürütülen projenin kalitesini, gözetimini ve denetimini yapmaktadır (Emek, 2009: 7-10).

3.3. Kamu-Özel Ortaklık Modelinin Yapısı ve İşleyışı

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Bu proje ortaklıklarında şirketin ana sahibi finansmanı sağlayan kuruluş veya alt yüklenicilerdir. Kamu otoritesi (idare) işletme görevini bazen profesyonel yönetim şirketlerine devredebilmekte bazen de imtiyaz sahibi firma kendi yönetim organlarını oluşturabilmektedir. Taraflar arasında yapılan sözleşmelerin niteliği, özel sektör temsilcisi ile imtiyaz sözleşmeleri şeklinde olmakta iken, diğer paydaşlar ile de satın alma, mühendislik ve proje evrelerine yönelik kontratlar şeklinde olmaktadır.

Proje finansmanının büyük kısmı çeşitli kamu ve özel bankalar aracılığıyla sağlanmaktadır. Ödemeler tahsilat hesabında toplanmakta ve sözleşmelerinde risk faktörü özel sektörde yüklenmektedir. Buna karşılık kamu sektörü de özel sektörün kârlılığını olumsuz yönde etkileyebilecek çeşitli koşulların (doğal afet, savaş, yasal altyapı vb.) sorumluluğunu ve risklerini üstlenmektedir (Çekirge, 2006: 7).

Çeşitli ihtiyaçlar kamu-özel ortaklık projeleri için bölgelere göre politik kararlarla belirlenmekte, gerekli kaynak arayışları sonrasında proje tanımlamaları yapılarak kamu-özel ortaklık sözleşmesinin ana çerçevesi belirlenmektedir. İhalenin tüm aşamaları dökümante edilerek detaylandırılmaktadır (World Bank Group, 2018).

3.4. Türkiye'de Uygulanan Kamu-Özel Ortaklık Modeli Türleri

3.4.1. İmtiyaz Modeli

İmtiyazın, herhangi bir kamusal hizmetin bir başka kişi aracılığı ile gerçekleştirilmesinin sağlanması konusunda çok eski bir yöntem olduğu belirtilmektedir. Bu yöntemde; idare şartları kendisi belirlemekte, zarar, kar, yetki ve menfaatleri paylaştırmakta, nihayet bir sözleşme ile düşündüğü yatırımların özel hukuk kişileri tarafından gerçekleştirilmesini sağlamaktadır (Akyılmaz vd, 2015: 487).

3.4.2. Yap-İşlet Modeli

Bu modelde, bir elektrik santrali, özel sektör eliyle inşa edilmekte, işletilmekte ve idare ile özel sektör arasındaki sözleşmedeki süre sonunda söz konusu elektrik santrali özel sektör tarafına bırakılmaktadır. Bu yöntem ülkemizde 4283 sayılı ve 1997 tarihli kanun ve bu kanun kapsamında çıkarılmış olan yönetmelik çerçevesinde gerçekleştirilmiştir (Sarısu, 2009: 117).

3.4.3 Yap-İşlet-Devret Modeli

Yap-işlet-devret modeli, Türkiye'de en çok kullanılan ortaklık modelidir. Yap-işlet-devret modeli finansmanın proje yüklenicisi tarafından üstlenilmesi, elde edilen belli bir kâr miktarından sonra yatırımın kamuya bedelsiz olarak iade edildiği modeldir (Duran, 1991: 150).

3.4.4. Yap-Kirala-İşlet-Devret Modeli

Bu modelde, herhangi bir yatırım özel sektör tarafından finanse edilmekte, idareye kiralanmakta ve taraflar arasında oluşturulan sözleşme süresi boyunca, idarenin belirlediği yönetim hizmetleri, tıbbi hizmetler vb. bazı hizmetler bir bedel karşılığında olmak üzere özel sektör tarafından sunulmaktadır (Çınar, Türkoğlu ve Tütünsatar, 2017: 221).

3.4.5. İşletme Hakkı Devri Modeli

Bu modelde, mülkiyet hakkı idarede kalmak üzere kamu ve özel sektör arasında bir sözleşme gerçekleştirilmekte, idare eliyle gerçekleştirilen hizmetlerin bir bölümünün işletme hakkı özel sektör'e aktarılmaktadır. Bu model ülkemizde, örneğin marinalar, limanlar, araç muayene istasyonları, maden sahaları gibi bazı alanlarda uygulanmaktadır (Keşli, 2012).

3.4.6. Restore Et-İşlet-Devret Modeli

Bu modelde, idarenin elinde bulunan örneğin tarihi bir yapı, taraflar arasında gerçekleştirilen bir sözleşme aracılığı ile özel sektöré bırakılmakta, bu kapsamında söz konusu yapı özel sektör tarafından restore edilerek yenilenmeye ve sözleşme süresi sonlanınca idareye devredilmektedir.

3.5. Türkiye'deki Sağlık Yatırımlarında Bazı Kamu-Özel Ortaklık Modelleri

2019-2020 itibarıyle 13'ü hizmete giren, bazlarının da inşaatlarının devam ettiği Şehir Hastaneleri, 2011 yılı genel seçimleri öncesinde siyasi literatürümüzé girmiştir. Şehir hastanelerinin oluşturulabilmesi

amacıyla 2005 yılında çıkarılan Sağlık Hizmetleri Temel Kanunu ile yasal süreç başlatılmıştır. Bu yasa ile idare elinde bulunan arazilerin belirli bir süreliğine özel sektöré bırakılması, bu arazilere özel sektör tarafından hastanelerin yapımının sağlanması ve idare tarafından kiralarının ödenmesi yolu açılmıştır (Çınar, Türkoğlu ve Tütünsatar, 2017: 221).

Şehir hastaneleri ile ilgili olarak gerçekleştirilen sözleşmeler çerçevesinde hizmet bedeli ödemeleri iki ayrı başlık altında ele alınmaktadır. Bunlardan ilki; laboratuar, görüntüleme ve fizik tedavi ve rehabilitasyon hizmetleri gibi hizmetleri içeren miktara bağlı olan hizmetlerdir. İdare yıllık % 70 doluluk oranına göre ödeme garantisi vermektedir. Miktara bağlı olmayan hizmetler ise; bina ve arazi hizmetleri, olağanüstü bakım ve onarım hizmeti, otopark ve temizlik hizmetleri vb. gibi hizmetlerdir.

SONUÇ

Bu çalışmada, OECD ve bazı AB üyesi ülkelerinin sahip oldukları çeşitli sağlık politikaları, sağlık hizmeti finansman modelleri ve sağlık alanında uyguladıkları bazı yatırım türleri amprik olarak incelenmiştir. Literatür taraması sonucu ulaşılan OECD Ülkeleri Sağlık Verileri ile Türkiye'deki mevcut durum verileri ve uygulama biçimleri karşılaştırılarak, ülkemizde son yıllarda gerçekleşen "Sağlıkta Dönüşüm Süreci"nin pratik sonuçları araştırılmış ve OECD ülkeleri arasındaki konumu sorgulanmıştır. Elde edilen bulgular göstermiştir ki; uygulanan modeller her toplumda pek çok sosyal eşitsizliğe sebep olmaktadır. Devlet örgütleri bu konu ile mücadele ederken sağlık politikalarını kendi toplum yapılarına özgü geleneksel değerleri ele alarak oluşturmaktır, yapacakları yatırımları da bu özgün biçimlere göre gerçekleştirmektedirler. Refah toplumu olma yolundaki bazı ülkelerde sağlık politikaları bir kamu görevi olarak görülmekte iken, bazı hükümet sistemlerinde ise bireylerin sahip olduğu sosyal güvence ve sağlık koruması hakları sigorta ve risk yönetimi çerçevesinde, özel sermaye gruplarına veya toplumu oluşturan bireylere devredilmektedir.

Sağlık hizmetlerinin finansmanı tüm ülkeler için giderek zorlaşan bir süreç olmaktadır. Gelişen teknoloji, demografik olarak artan yaşlı nüfus ve bunlara ek olarak modern çağ'a özgü sağlık sorunları; giderek kamu örgütlerini finansman açısından daha yetersiz hale getirmektedir. Bu noktada hükümetler kendi sorumluluk alanlarındaki sosyal güvenlik hizmetleri, sağlık güvencesi sistemleri, çeşitli altyapı ve sağlık yatırımları gibi birçok kamu görevini özel sektör sermaye sahipleriyle ya da onlarla ortak olarak kurdukları işletme modelleriyle gerçekleştirmektedirler.

Çalışmamızın yazın araştırmasında bazı OECD ve AB ülkelerinde uygulanan sağlık finansman hizmetleri ve sağlık tesisi yatırımlarıyla ilgili olarak ülkelere göre bazı farklılıkların olduğu görülmüştür. Berie, Fink ve Emek gibi bazı araştırmacıların çalışmaları ullaştığımız bulguları destekler niteliktedir.

Bu çalışmalarda; sağlık hizmetleri finansmanında: Ulusal Sağlık Hizmeti Modeli (Beveridge), İşgücü kaynaklı gelirlerden alınan Prim Modeli (Bismarck), Ulusal Sağlık Sigortası Modeli ve kişilerin kendi ceplerinden ödeme yöntemlerinden oluşan ABD modeli gibi farklı modellerin uygulanmakta oldukları açıklanmıştır (Berie ve Fink, 2000: 27),

Sağlık yatırımlarında ise; projelerin finansman metodu, yatırımların gerçekleştirilmesi, tesislerin işletilmesi ve projelerin sahipliği gibi dört ana unsurun bulunduğu ve devletin borç geri ödeme, satın alma ve çeşitli girdilerin temini konularında proje yüklenicilerine garanti verdiği, yürütülen projelerin gözetimlerinin ve denetimlerinin ise kamu tarafından yapılacağı belirtilmiştir (Emek, 2009: 7-10).

Modern toplumlarda devlet örgütü içinde politikalar gereği hangi sağlık sistemi tercih edilirse edilsin bir sağlık sisteminin en temel görevi, toplumun tüm kesimlerini kapsaması, sağlık ihtiyaçlarını, herkes için sosyal eşitlik ve erişilebilirlik koşullarında ve kabul edilebilir bir kalitede sağlamak olmalıdır (Tartar M. 2011-1; 132-30).

Bu makalede yapılan çalışma ile “Sağlık Sistemi” ve “Şehir Hastaneleri” özelinde gerçekleştirilen “Sağlık Yatırımları” incelenerek literatüre katkı sağlanması amaçlanmıştır.

Çalışmamızın, Türkiye’nin “Refah Devleti” olma yolundaki mücadelede sağlık hizmetleri finansmanı yöntemlerinin sürdürülebilir olmasına ve sosyal eşitliği sağlama hedefine katkı sağlayarak hizmet etmesini arzulamaktayız. Gelecek dönemlerde yapılacak çalışmalarla ülkemizde uygulanmakta olan sağlık sistemi modellerinin daha detaylı incelenerek, bireylerin sahada karşılaşıkları günlük pratiklerin çeşitli sosyal bilimler ölçekleri ile ölçülmesi ve daha çok nicel çalışmaların yapılması yararlı olacaktır.

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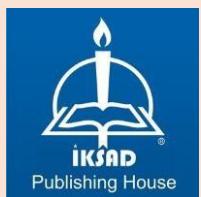
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