EURASIAN JOURNAL OF EDUCATIONAL RESEARCH

Bimontly Peer-Reviewed Journal, Year: 19 Issue: 84 / 2019
İki Ayda Bir Yayımlanan Hakemli Dergi, Yıl: 19 Sayı: 84 / 2019

FOUNDING EDITOR / *Kurucu Editör*
Veysel Sönmez, *Hacettepe University, Ankara, TURKEY*

EDITOR IN CHIEF / *Baş Editör*
Şakir Çınkır, *Ankara University, Ankara, TURKEY*

EDITORS / *Editörler*
Ali Ersoy, *Anadolu University, Eskişehir, TURKEY*
Andrey A. Kiselnikov, *Lomonosov Moscow State University, Moscow, RUSSIA*
Antonio E. Puente, *University of North Carolina Wilmington, Washington, USA*
Arda Arıkan, *Akdeniz University, Antalya, TURKEY*
Ayşe Çiftçi, *Purdue University, IN, USA*
Cevriye Ergül, *Ankara University, Ankara, TURKEY*
Deha Doğan, *Ankara University, Ankara, TURKEY*
Funda Nayır, *Pamukkale University, Denizli, TURKEY*
Engin Karahan, *Eskişehir Osmangazi University, Eskişehir, TURKEY*
Gökhan Atik, *Ankara University, Ankara, TURKEY*
Gülseren Karagöz Akar, *Boğaziçi University, İstanbul, TURKEY*
Hakan Atılgan, *Ege University, İzmir, TURKEY*
Işıl Kabakçı Yurdakul, *Anadolu University, Eskişehir, TURKEY*
Jale Çakıroğlu, *Middle East Technical University, Ankara, TURKEY*
Joe O'Hara, *Dublin City University, Dublin, IRELAND*
Kürşat Erbaş, *Middle East Technical University, Ankara, TURKEY*
Laura M. Reid Marks, *University of Memphis, USA*
Martin Brown, *Dublin City University, Dublin, IRELAND*
Mehmet Bekdemir, *Erzincan Binali Yıldırım University, Erzincan, TURKEY*
Meral Hakverdi Can, *Hacettepe University, Ankara, TURKEY*
Refika Olgan, *Middle East Technical University, Ankara, TURKEY*
Sedef Canbazoğlu Bilici, *Aksaray University, Aksaray, TURKEY*
Şenel Poyrazlı, *Penn State University, PA, USA*
Taner Altun, *Trabzon University, Trabzon, TURKEY*
Vesile Alkan, *Pamukkale University, Denizli, TURKEY*

INTERNATIONAL EDITORIAL BOARD / *Uluslararası Editörler Kurulu*
Anita Pipere, *Daugavpils University, LATVIA*
Ann-Katrin Sward, *Göteborg University, Göteborg, SWEDEN*
Anthony Onwuegbuzie, *Sam Houston State University, USA*
Aslı Özgün Koca, *Wayne State University, USA*
Beatrice Adeara, *West Chester University, USA*
Birgit Pepin, *Sor-Trondelag University College, NORWAY*
Burke Johnson, *University of South Alabama, USA*
Corrine Glesne, *University of Vermont, USA*
Danny Wyffels, *KATHO University, Kortrijk, BELGIUM*
David Bridges, *Cambridge University, UK*
David L. Haury, *National Science Foundation, USA*
Ekber Tomul, *Mehmet Akif Ersoy University, Burdur, TURKEY*
Erdinç Duru, *Pamukkale University, Denizli, TURKEY*
Fatma Hazır Bıkmaz, *Ankara University, TURKEY*
Gerry McNamara, *Dublin City University, IRELAND*
Hasan Hüseyin Aksoy, *Ankara University, Ankara, TURKEY*
Iordanescu Eugen, *Lucian Blaga University of Sibiu, ROMANIA*
Okan Bulut, *Alberta University, Alberta, CANADA*
Sven Persson, *Malmö University, Malmö, SWEDEN*
Theo Wubbels, *University of Utrecht, NETHERLAND*

EURASIAN JOURNAL OF EDUCATIONAL RESEARCH

Bimontly Peer-Reviewed Journal, Year: 19 Issue: 84 / 2019
İki Ayda Bir Yayımlanan Hakemli Dergi, Yıl: 19 Sayı: 84 / 2019

PUBLISHING MANAGER / *Sahibi ve Sorumlu Yazı İşleri Müdürü*
Anı Publishing Education and Consultancy Advertisement Stationary Industry Trade Co. Ltd. in the name of
Anı Yayıncılık Eğitim ve Danışmanlık Reklam Kırtasiye Sanayi Ticaret Ltd. Şti. adına
Özer DAŞCAN

EDITORIAL PRODUCTION ADMINISTRATOR / *Yayın Yönetim*
Özgür GÜLER

HEADQUARTER / *Yönetim Merkezi*
Anı Yayıncılık, Kızılırmak Sokak 10/A
06640 Bakanlıklar Ankara, TURKEY
ejer.editor@gmail.com
Tel: +90 312 425 81 50 pbx Fax: +90 312 425 81 11

Printing Date / *Basım Tarihi:* 30.11.2019
Printing Address / *Matbaa Adresi:* Vadi Grafik Tasarım Ltd. Şti.
İvedik Org. San. Bölgesi 88 Oto 3. Bölge 2284. Sok. No: 101 Yenimahalle/ANKARA
P: +90 312 395 85 71
Broadcast Type / *Yayın Türü:* Local Broadcast / *Yerel Süreli Yayın*
Cover Design / *Kapak Tasarımı:* Anı Publishing / *Anı Yayıncılık*
Composition / *Dizgi*: Göksel ÇAKIR

The ideas published in the journal belong to the authors.
Dergide yayınlanan yazıların tüm sorumluluğu yazarlarına aittir.

Eurasian Journal of Educational Research (Print ISSN 1302-597X, e-ISSN: 2528-8911) is a bimonthly (6 issues per year) peer-reviewed journal published by Anı Yayıncılık.
© 2019 ANI Publishing. All rights reserved.
© 2019 ANI Yayıncılık. Tüm hakları saklıdır.

Eurasian Journal of Educational Research/**EJER** is abstracted and indexed in;

ESCI, *Emerging Sources Citation Index*
ERIC, *The Education Resources Information Center*
HERDC, *Higher Education Research Data Collection*
ERA, *Educational Research Abstracts*
SCOPUS *database*
EBSCO Host *database*
ULAKBİM *national index*
Social SciSearch
Journal Citation Reports / Social Sciences Edition

CONTENTS
İçindekiler

The Relationship between Primary School Teachers' Organizational Citizenship Behaviors and Counter-productive Work Behaviors
Burcu AKKAYA *1-28*

The Effect of Mobbing Levels Experienced by Music Teachers on Organizational Commitment and Job Satisfaction
Ayda ARAS *29-56*

Rasch-Based Objective Standard Setting for University Placement Test
Ado Abdu BICHI, Rohaya TALIB, Rahimah EMBONG, Hasnah Binti MOHAMED, Mohd Sani ISMAIL, Abdallah IBRAHIM *57-70*

Foundation University Students' Consumer Orientation and Learner Identity Levels and Their Correlations with Academic Performance
Betul ISCAN, Aydin BALYER *71-92*

Early Childhood Preservice Teachers' Experiences with Reflective Journal Writing
Figen SAHIN, Muge SEN, Caglayan DINCER *93-114*

Comparison of Results Obtained from Logistic Regression, CHAID Analysis and Decision Tree Methods
Gokhan AKSU, Cigdem REYHANLIOGLU KECEOGLU *115-134*

The Mediator Roles of Mothers in Father-Child Communications and Family Relationships*
Hilal CELIK *135-158*

Narcissism, Life Satisfaction, and Harmony: The Mediating Role of Self-Esteem and Self-Compassion
Ibrahim DEMIRCI, Halil EKSI, Fusun EKSI *159-178*

Problem-Posing Skills for Mathematical Literacy: The sample of Teachers and Pre-Service Teachers
Kemal OZGEN *179-214*

The Impacts of a University's Organizational Reputation and Organizational Attraction on Students' Intention to Pursue
Soner POLAT, Gizem GUNCAVDI, Yaser ARSLAN ... *215-240*

REVIEWERS of the 84th ISSUE
84. Sayı Hakemleri

Abdurrahman Abdurrahman
Celal Uğurlu
Cevat Elma
Demet Girgin
Durmuş Özbaşı
Ergül Demir
Fadime Ulusoy
Feyza Erden
Funda Nalbantoğlu Yılmaz
Gökhan Atik
Gökhan Malkoç
Kürşat Erbaş
Lokman Akbay
Mehmet Sincar
Merih Dogan
Murat Genç
Mustafa Bayrakçı
Nesrin Işıkoğlu Erdoğan
Oğuzcan Çığ
Oğuzhan Kırdök
Refika Olgan
Seher Yalçın
Sevda Çetin
Sedef Canbazoğlu
Şenel Poyrazlı
Tufan Aytaç
Vesile Alkan

Eurasian Journal of Educational Research 84 (2019) 1-28

Eurasian Journal of Educational Research

www.ejer.com.tr

The Relationship between Primary School Teachers' Organizational Citizenship Behaviors and Counter-productive Work Behaviors*

Burcu AKKAYA[1]

ARTICLE INFO

Article History:

Received: 18 Jun., 2019

Received in revised form: 22 Sept. 2019

Accepted: 14 Oct. 2019

DOI: 10.14689/ejer.2019.84.1

Keywords

Counter-productive work behaviors, organizational citizenship, extra-role behavior.

ABSTRACT

Purpose: The present study aims to investigate the level of teachers' organizational citizenship behaviors and counter-productive work behaviors (CWBs) based on public primary school administrators' and teachers' perceptions and the relationship between these two variables.

Research Methods: This study was conducted in a correlational survey model. The sample of this study was formed in the 2018-2019 academic year, consisted of public primary school administrators and teachers who worked in nine different districts of Ankara. This study employed the stratified sampling method. The data were collected using the Counter-productive Work Behavior Scale and Organizational Citizenship Behavior Scale. In the data analysis, arithmetic means, standard deviation and multilinear regression analysis were used.

Findings: The findings showed that teachers rarely exhibited counter-productive work behaviors. The most frequently exhibited behaviors were identified as 'withdrawal' and 'abuse toward others', and the least frequently exhibited behavior was identified as 'theft'. The most important predictor of the sub-dimensions of CWBs was the courtesy sub-dimension of Organizational Citizenship Behaviors (OCBs).

Implications for Research and Practice: The results revealed that teachers who exhibit CWBs also show passive behaviors more frequently and avoid active aggressive behaviors that require one-to-one interaction. The behaviors included that the courtesy dimension had a preventing or reducing effect on CWBs. Thus, teachers should be encouraged to follow the rules of courtesy, and the teachers who deliver successful performance should be rewarded to highlight the issue.

© 2019 Ani Publishing Ltd. All rights reserved

* This article has been produced from the PhD thesis supervised by Professor Dr. Yasemin Kepenekçi at the Department of Education Management and Policy, Faculty of Educational Sciences, Ankara University.

[1] PhD Candidate, Ankara University, akkaya.eyt@gmail.com TURKEY ORCID: https://orcid.org/0000-0002-4571-9065

Introduction

The behaviors exhibited by the employee in the organization can affect both the other employees, thus the whole organization. Formal role behaviors exhibited by employees have a key role in organizations' viability (Barksdale & Werner, 2001). These behaviors are defined as the set of behaviors identified by the administration, included in the punishment and rewards system (Barksdale & Werner, 2001) and required to be performed by employees (Van Dyne & LePine, 1998). Podsakoff and MacKenzie (1997) emphasized that while employees' behaviors are considered in the context of formal role behavior in some cases, they may also be considered as extra-role behaviors (Van Dyne, Cummings, & Parks, 1995). All kinds of volitional behaviors that are not required to be exhibited by employees are defined as extra-role behavior. Extra-role behavior consists of two dimensions, including counter-productive work behavior and organizational citizenship behavior (Miles, Borman, Spector & Fox, 2002).

Counter-productive Work Behaviors (CWBs)

Counter-productive Work Behaviors (henceforth referred to as CWBs) consist of acts that are engaged by employees to abuse the organization or its members due to negative situations experienced within the organization (Spector & Fox, 2010). Volitional behaviors which are exhibited with the intention to harm (Dalal, 2005), jeopardize the well-being of the organization and employees, reduce job performance, violate organizational norms through acts as aggression/theft/not performing at work (Gualandri, 2012) are defined as CWBs. In the literature, CWBs were discussed as behaviors related to aggression, abusing production, sabotage, theft, withdrawal and retaliation (Ozdevecioglu, 2003; Skarlicki & Folger, 1997; Spector, 2011). The aggressiveness of the employee or a reaction to unfair practices experienced within an organization forms the basis of these behaviors (Spector, Fox, & Domagalski, 2006; Spector, Fox, Penney, et al., 2006).

Several research studies reported that CWBs result in consequences that pose direct or indirect threats to the viability of an organization. These threats include the abuse of organizational structure, resources and employees (Spector & Fox, 2002), deviation from organizational purposes (Mount, Ilies, & Johnson, 2006), decrease in organizational activity, financial loss of the organization (Dunlop & Lee, 2004) and deterioration of organizational ethical climate (Kidwell Jr & Kochanowski, 2005).

CWBs Dimensions

In the literature, CWBs were categorized in different ways. Buss (1961) analyzed CWBs in the context of three main dimensions, including 'physical-verbal', 'active-passive' and 'direct-indirect', and of eight sub-dimensions that were built by crossing these main dimensions. Baron and Neuman (1996) accepted the categorization of Buss and expanded them by adding the effect/danger ratio and overt/covert dimensions. Gruys (1999) assessed counter-productive work behavior under 11 categories without any forming any categories: (1) Theft and related behavior; (2) destruction of property; (3) misuse of information; (4) misuse of time and resources; (5) unsafe behavior; (6)

poor attendance; (7) poor quality work; (8) alcohol use; (9) drug use; (10) inappropriate verbal actions; and (11) inappropriate physical actions. Although the way of categorization varied, CWBs can be elucidated in the scope of two main dimensions of 'individual- targeted' and 'organization-targeted'. Thus, the model of Spector, Fox, Penney, et al. (2006), which analyzed CWBs within these two dimensions, has been widely accepted in the literature. The model of Spector et al. also formed the basis of this study.

Spector et al. (2006) addressed CWBs within two main groups: 'individual-targeted' and 'organization-targeted'. In this context, the researchers argued that CWBs could be explored under two main dimensions and five sub-dimensions, including (i) abuse toward others, (ii) production deviance, (iii) sabotage, (iv) theft and (v) withdrawal.

Behaviors that aim the direct abuse of the employee/employees present CWBs that are 'individual- targeted'. This main dimension consists of **"abuse toward others"**. According to Spector, Fox, Penney, et al. (2006), behaviors examined under this dimension include threatening words and actions, insulting, ignoring and using physical violence. On the other hand, behaviors that aim the direct abuse of the organization present CWBs that are 'organization-targeted'. The direct target of such kind of behaviors is the organization, yet employees CWBs behaviors targeted toward individuals also make a direct and negative effect on the organization. This main dimension includes the sub-dimensions of production deviance, sabotage, theft, and withdrawal.

Production deviance is defined as deliberate failure or mistake of the employee to harm the organization (Spector, Fox, Penney et al., 2006). In other words, production deviance is described as a negative impact on the quality of a provided product/service due to employee's neglect of duty.

The concept of **sabotage** implies deliberate defacement or destruction of physical property belonging to the organization (Spector, Fox, Penney et al., 2006). This dimension includes volitional behaviors exhibited by the employee to damage an organization's property, equipment, image and reputation (Giacalone & Rosenfeld, 1987). **Theft** is the act of stealing by employees. Employees may engage in this behavior to harm the organization due to financial needs, lack of work satisfaction, or low perception of organizational justice (Spector, Fox, Penney, et al., 2006). **Withdrawal** is the inadequate active participation of the employee in the activities of an organization (Shore & Shore, 1995). Withdrawal behaviors include being absent from work, arriving late, or leaving early and taking longer breaks (Spector, Fox, Penney, et al., 2006).

Relevant studies reported that such kinds of behaviors cause pecuniary and non-pecuniary damages for individuals and organizations. For instance, Fox and Stallworth (2004) found that 74.8% of the participants had severe intentions to leave employment, and 66% of them suffered from headaches, stomachache and chest pain for five years. The findings demonstrated that CWBs caused both psychological and physiological damage to individuals. However, the psychological impacts of CWBs

are not limited to those noted above. The findings in the literature have shown that in organizations where such behaviors are exhibited by employees, it is possible to observe experiencing low self-esteem and self-efficacy (Duffy, Ganster, & Pagon, 2002; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006; Low, Radhakrishnan, Schneider, & Rounds, 2007), extreme anger (Aquino, Douglas, & Martinko, 2004; Spector, Fox, & Domagalski, 2006), depression and high levels of anxiety (Berry, Carpenter, & Barratt, 2012; Duffy et al., 2006) and stress (Berry et al., 2012).

CWBs in Schools

CWBs can also be exhibited by teachers and administrators in educational institutions, such as schools. As Dogruoz and Ozdemir (2018) assumed, the existing findings in the literature have shown that teachers and administrators exhibit CWBs, such as damaging the property of the school, harassment, psychological mobbing and absence from work, and these behaviors have become more common in schools. According to Unal (2012), CWBs exhibited by teachers in schools include threatening, being disrespectful, sending off students out of the classroom, threatening students with expelling from school, misinforming parents and being impolite, being late to the lecture, violation of rules and consumption of alcohol at work.

Organizational Citizenship Behaviors (OCBs)

The concept of Organizational Citizenship Behaviors (henceforth referred to as OCBs) was mentioned by Bateman and Organ (1983) for the first time. The researchers assumed that it is appropriate to include the type of extra-role behaviors that do not harm an organization in the context of OCBs. Organ (1988) emphasized that the scope of organizational citizenship consisted of behaviors that are 'beyond extra-role behaviors' and defined organizational citizenship behavior as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization". OCBs consist of volitional behaviors of the employee that directly support the efficient functioning of an organization (Podsakoff & MacKenzie, 1994).

Dimensions of OCBs

The study conducted by Smith, Organ, and Near (1983) categorized organizational citizenship for the first time. The researchers categorized OCBs into two main dimensions: altruism (generosity) and general compliance. Altruism includes direct and intentional behaviors that are exhibited to help others in the case of face-to-face situations, such as providing guidance or assistance. The general compliance dimension consists of impersonal behaviors that make an indirect impact on employees or employers and these behaviors are related to the concept of conscientiousness.

Farh, Earley and Lin (1997) revealed that organizational citizenship behavior consists of identification, protecting company resources, altruism toward colleagues, interpersonal harmony and conscientiousness. Podsakoff et al. (2000) analyzed organizational citizenship behavior under seven dimensions as follows: (i) altruism,

(ii) sportsmanship, (iii) organizational loyalty, (iv) organizational compliance (v) individual initiative, (vi) civic virtue and (vii) self-improvement.

The categorization of Organ (1988) has been widely accepted in the literature given that the researcher defined the concept of organizational citizenship for the first time. The researcher analyzed organizational citizenship behavior under five dimensions: altruism, courtesy, conscientiousness, civic courtesy and sportsmanship. This study is also based on the categorization of Organ (1988), and these dimensions are explained below.

Altruism

In general terms, altruism, which means generosity, is defined as "deliberate, conscious, well-intended and voluntary helping behavior of the employee directed toward other employees concerning work-related issues." Smith, Organ ve Near'a (1983).

Courtesy

The courtesy dimension implies being thoughtful and controlled before exhibiting a behavior (Allison, Voss, & Dryer, 2001). This dimension includes interpersonal behaviors of employees in an organization, such as establishing healthy communication, informing and reminding colleagues, and showing respect.

Conscientiousness

The conscientiousness dimension consists of volitional behaviors of employees that go beyond the designated tasks (Podsakoff et al., 2000). Continuing to be engaged at work, using the work time efficiently and following the rules of the organization are among the behaviors included in this dimension (Barksdale & Werner, 2001), such as going beyond the minimum role requirement in one's work

Civic Virtue

According to Organ (1988), civic virtue is the employee's interest in the activities of the organization and active and responsible involvement in organizational processes. According to Podsakoff and MacKenzie (1994), such kind of involvement encompasses the employee's behaviors, such as feeling responsible for the problems that occur within the organization, actively participating in solution processes and attending meetings and decision making processes.

Sportsmanship

Sportsmanship consists of the employee's efforts to develop positive attitudes toward the organization under difficult circumstances (Sezgin, 2005), willingness to solve the problems that are occurring within the organization (MacKenzie, Podsakoff, & Fetter, 1993) and avoiding behaviors that will give rise to distress (Organ, 1988).

In the context of schools, OCBs can be addressed as behaviors that make positive contributions to the functioning of the school and the education process. DiPaola and

Hoy (2005) listed the OCBs that teachers exhibit to contribute to the success of students and the school as follows:

- helping new colleagues,
- making innovative suggestions regarding the functioning of the school,
- volunteering to attend extracurricular activities,
- sparing time for students on their own time,
- staying after school to continue working,
- taking care of students voluntarily,
- attending work consistently,
- making efficient use of their time while at school,
- working productively with their colleagues,
- showing performance beyond requirements.

In light of this conceptual framework, it can be asserted that OCBs may bring about the opposite of impacts made by CWBs.

The primary aim of this paper is to explore the relationship between teachers' OCBs and CWBs based on public primary school administrators' and teachers' perceptions. In line with this general objective, this study sought to answer the following specific research questions:

1. What is the extent of perceptions of administrators and teachers on teachers' CWBs concerning the dimensions;

    a) Abuse toward others

    b) Abuse toward administrative functioning

    c) Sabotage

    d) Theft

    e) Withdrawal

    f) Abuse toward school image

    g) Abuse toward schooling

2. What is the extent of perceptions of administrators and teachers on teachers' organizational citizenship behavior concerning the dimensions;

    a) Altruism,

    b) Conscientiousness,

    c) Sportsmanship,

    d) Courtesy,

    e) Civic Virtue.

3. Are the sub-dimensions of the organizational citizenship behavior significant predictors of CWBs based on administrators' and teachers' perceptions?

Method

Research Design

The main objective of this study was to establish the level of OCBs and CWBs based on public primary school administrators' and teachers' perceptions, and the relationship between these two variables. Therefore, this study was conducted in a correlational survey model. The correlational survey is a research model to determine the existence of covariance or its level between two or more variables (Karasar, 2015, 81).

Research Sample

The sample of this study was formed in the 2018-2019 academic year, consisted of public primary school administrators and teachers who worked in nine different districts of Ankara. This study employed the stratified sampling method to take samples from this population. Each of the administrators and teachers who worked in the primary schools located in these nine districts was considered as a sub-population, and samples were taken from these groups. The sample size of this study was calculated using Cochran's formula (1962, cited in Balci, 2004, 95), and the tolerance level was accepted as 0.05, and confidence level was accepted as 1.96. All in all, 360 school administrators and 430 teachers participated in this study.

Research Instruments and Procedure

The research data were collected using the "Counter-productive Work Behavior Scale (CWB-S)" developed by the researcher and "Organizational Citizenship Behavior Scale (OCB-S)" developed by Basim and Sesen (2006).

CWB Scale

A pre-implementation was performed to examine the construct validity and reliability of the CWB Scale. The pre-implementation data were collected from 413 participants, including 331 teachers and 82 administrators who worked in official primary and secondary schools located in Ankara province. The exploratory factor analysis method (EFA) was used to control the construct validity of the scale. Also, the Kaiser-Meyer-Olkin (KMO) test was performed to control the appropriateness of the data structure concerning sample size for the factor analysis. The KMO value was found as 0.96, and the sample size was found highly appropriate for exploratory factor analysis. The chi-square value obtained from Bartlett's test for sphericity yielded a significant result, and it was reported that the data were produced by a multivariate normal distribution ($X2(1711) = 21800.176$; $p<0.01$).

To identify the number of factors in the exploratory factor analysis process, the variance ratios explained by eigenvalues were considered, varimax rotation technique was applied, and the acceptance level for factor load values was found as 0.45. As a result of the exploratory factor analysis, a total of 59 items were distributed among seven sub-dimensions, and these seven dimensions explained the 67.92% of the total variance. The categorizations included in the literature were considered while naming the sub-dimensions. The dimensions of CWBs were analyzed under seven sub-dimensions: (i) abuse toward others, (ii) abuse toward administrative functioning, (iii) sabotage, (iv) theft, (v) withdrawal, vi) abuse toward school image and vii) abuse toward schooling.

The total item correlation values and Chronbach's Alpha values were calculated for the reliability analysis of the items. The total correlation values were found above 0.50 for all items, and Cronbach's Alpha values changed between 0.86 and 0.95.

OCB Scale

The Organizational Citizenship Behavior Scale, which was adapted to Turkish by Basim ve Sesen (2006), was used to identify participants' perceptions towards organizational citizenship behavior. The scale consists of five dimensions as follows: Altruism, Courtesy, Conscientiousness, Sportsmanship, and Civic Virtue. A first-level confirmatory factor analysis was performed to control whether the structure of the scale was maintained for teachers and administrators who work in educational institutions. In the examination of analysis findings, t-values, error variances, p significance values, chi-square/ degrees of freedom, (X^2/df) ratio and RMSEA values and the fit indices, including GFI, AGFI, RMR, NNFI, CFI were assessed, and the findings provided below were reached.

The findings showed that each of the t-values of the observed variables was above 2.58, between 9.96 and 22.51, and were significant at $p<0.01$. The error variances included in the standardized solution part showed that most of the items produced considerably low results between 0.20 - 0.40 and were at the acceptance level. The indicators were decided to be kept in the model.

The ratio of the Chi/square (X^2) value (538.50), which is one of the most common cohesion criteria for confirmatory factor analysis, to the degree of freedom (140) was found as 3.85. The value of this ratio between 3 and 5 corresponds to a medium level cohesion (Sumer, 2000). RMSEA value was found as 0.076 and indicated a good fit (Cokluk, Sekercioglu, Buyukozturk, 2010). The GFI value was reported as 0.88, and AGFI value was reported as 0.84, and it was found at the adequate cohesion level. The standardized RMR value was found as 0.037. This value indicates a perfect fit under 0.05 (Brown 2006, cited in Cokluk, Sekercioglu, Buyukozturk, 2010). Therefore, it can be seen that the RMR value showed a perfect fit. Both of the NNFI and CFI values were found as 0.98. NNFI and CFI indexes above 0.95 indicate a perfect fit (Sumer, 2000). In this framework, the level of fit indices of the confirmatory factor analysis can be assumed at an adequate level.

Within the scope of the reliability analysis, the item-total correlation values of the scale were found above 0.40 for all items, and the Cronbach's Alpha values varied between 0.87 and 0.89.

Data Analysis

The SPSS and Lisrel package programs were used in the data analysis. Descriptive statistics, including arithmetic, mean and standard deviation, and parametric statistics technique, linear regression analysis, were employed in the data analysis process. In multilinear regression analysis, multivariate normality, linearity and multicollinearity conditions were controlled. Thus, histogram, scatter plot, the relationship between the independent variables, tolerance and VIF values were examined. The findings demonstrated that histograms showed a normal distribution curve for all variables; in the scatter plot the dots gathered around the zero lines to a large extent (Cokluk, Sekercioglu, & Buyukozturk, 2010, p. 18), and the conditions of normality and linearity of the relationship were met.

Results

Perceptions of teachers and administrators towards CWBs were analyzed according to the arithmetic mean and standards deviation values and the findings are presented in Table 1.

Table 1.

Arithmetic Mean and Standards Deviation Values of CWB Sub-dimensions

	Teacher		**Administrator**	
Sub-dimension	$\overline{X}$	***SD***	$\overline{X}$	***SD***
Abuse toward others	1.75	0.79	1.74	0.73
Abuse toward administrative functioning	1.44	0.61	1.61	0.69
Sabotage	1.17	0.42	1.36	0.60
Theft	1.03	0.23	1.04	0.23
Withdrawal	1.76	0.72	1.94	0.89
Abuse toward school image	1.18	0.44	1.28	0.53
Abuse toward schooling	1.26	0.53	1.44	0.65

According to the CWB sub-dimensions, the perceptions of participants towards CWBs displayed in Table 1 were found considerably positive. In all sub-dimensions, the majority of the participants thought that teachers "never" exhibited the relevant CWBs. Also, according to the participants' perceptions, the most frequently exhibited CWBs occurred in the 'Withdrawal' and 'Abuse toward others' sub-dimensions. The behaviors included in these dimensions mostly emerged in the form of passive

behaviors, such as gossiping or ignoring that do not involve face-to-face interactions or reactions.

The least frequent CWBs were included in the 'Theft' sub-dimension. Besides, the teachers and administrators thought that teachers seldomly exhibit the behaviors included in the 'Theft' sub-dimension. On the other hand, the teachers and administrators believed that teachers rarely exhibit behaviors included in the 'Withdrawal' sub-dimension more than others, such as unwillingness to stay after school to continue working, avoid to take a risk and reluctance to participate in decision-making processes. On this matter, administrators' perceptions were more negative in comparison to the teachers' perceptions. Furthermore, standard deviation values that were found below 1 in all dimensions for teachers and administrators showed that both groups had a consensus and similar perceptions in all dimensions.

Perceptions of teachers and administrators toward OCBs were analyzed according to the arithmetic mean and standards deviation values and the findings are presented in Table 2.

Table 2.

Arithmetic Mean and Standards Deviation Values of OCB Sub-dimensions

	Teacher		**Administrator**	
Sub-Dimension	$\overline{X}$	***SD***	$\overline{X}$	***SD***
Altruism	4.10	0.65	4.06	0.81
Conscientiousness	3.92	0.82	3.93	0.98
Sportsmanship	3.97	0.92	3.85	0.99
Courtesy	4.40	0.70	4.25	0.79
Civic Virtue	4.03	0.78	4.02	0.88

Table 2 presented that teachers and administrators generally had positive perceptions of OCBs. In both groups, participants thought that teachers exhibited OCBs included in the 'Courtesy' sub-dimension most frequently, and behaviors included in the 'Conscientiousness' least frequently. It was observed that administrators and teachers had similar perceptions of OCBs in the school. The standard deviation values were also found below 1 and the perception did not vary extensively. According to the standard deviation values, the variability of perceptions emerged in the 'Courtesy' sub-dimension both for the teachers (*SD*=0.92) and for the administrators (*SD*=0.99).

Analysis of the Prediction Status of CWBs by OCBs

Under this title, the results and interpretation of multilinear regression analysis concerning the prediction status of teachers' CWBs by the sub-dimensions of OCBs were presented. The abbreviations given below were used to provide convenience for writing a regression equation developed as a result of the regression analysis.

ATO	: Abuse toward others	ATS	: Abuse toward schooling
ATAF	: Abuse toward administrative functioning	ALT	: Altruism
SAB	: Sabotage	CON	: Conscientiousness
TH	: Theft	SPO	: Sportsmanship
WD	: Withdrawal	COU	: Courtesy
ATSI	: Abuse toward school image	CIV	: Civic Virtue

The multilinear regression analysis results that examined the prediction status of counter-productive work behavior sub-dimension 'Abuse toward others', which is among teachers' CWBs, by the sub-dimensions of OCBs were presented in Table 3.

Table 3.

Multilinear Regression Analysis Results on the Prediction Status of 'Abuse toward Others' Sub-dimension by the Sub-dimensions of OCBs

Variable	***B***	***SH***	***β***	***t***	***p***	***Binary r***	***Partial r***
Constant	4.64	0.13		35.47	0.00		
Altruism	0.01	0.05	0.01	0.17	0.87	-0.50	0.01
Conscientiousness	0.00	0.05	-0.01	-0.09	0.93	-0.51	0.00
Sportsmanship	-0.05	0.03	-0.06	-1.64	0.10	-0.45	-0.06
Courtesy	-0.52	0.04	-0.51	-11.66	0.00	-0.63	-0.38
Civic Virtue	-0.12	0.06	-0.12	-1.83	0.07	-0.53	-0.07
R = 0.64	R^2 = 0.42		$F_{(5, 784)}$ =111.15		p = 0.00		
ATO = 4.64 + 0.01xALT + 0.00xCON – 0.05xSPO - 0.52xCOU - 0.12 xCIV							

Table 3 presents that there was a significant and medium level (*R=0.64*) relationship between the 'Abuse toward Others' sub-dimension and the sub-dimensions of OCBs. These five predictor variables explained the 42% ($R^2 = 0.42$) of the total variance in the 'Abuse toward Others' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Abuse toward Others' sub-dimension at a significant level ($F_{(5, 784)} = 111.15;\ p<0.05$), and the regression equation provided in the table was obtained. According to the t-values, the 'Courtesy' sub-dimension predicted the 'Abuse toward Others' sub-

dimension at a significant level (p<0.05). A negative and significant relationship was found between the 'Courtesy' and 'Abuse toward Others' sub-dimensions.

The multilinear regression analysis results that examined the prediction status of 'Abuse toward Administrative Functioning' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 4.

Table 4.

Multilinear Regression Analysis Results on the Prediction Status of 'Abuse toward Administrative Functioning' Sub-dimension by the Sub-dimensions of OCBs

Variable	*B*	*SH*	*β*	*t*	*p*	*Binary r*	*Partial r*
Constant	4.03	0.11		36.13	0.00		
Altruism	-0.01	0.04	-0.01	-0.14	0.89	-0.53	0.00
Conscientiousness	0.01	0.04	0.01	0.23	0.82	-0.54	0.01
Sportsmanship	-0.02	0.03	-0.03	-0.92	0.36	-0.45	-0.03
Courtesy	-0.38	0.04	-0.44	-10.07	0.00	-0.63	-0.34
Civic Virtue	-0.19	0.05	-0.24	-3.58	0.00	-0.57	-0.13
R = 0.65	R^2 = 0.42		$F_{(5, 784)}$ =115.35		p = 0.00		

ATAF = 4.03 – 0.01xALT + 0.01xCON – 0.02xSPO - 0.38xCOU - 0.19 xCIV

The data provided in Table 4 presents that there was a significant and medium level (*R=0.65*) relationship between the sub-dimensions of OCBs and 'Abuse toward Administrative Functioning' sub-dimension. These five predictor variables explained 42% ($R^2 = 0.42$) of the total variance in the 'Abuse toward Administrative Functioning' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the abuse toward administrative functioning sub-dimension at a significant level ($F_{(5, 784)} = 115.35;\ p<0.05$), and the regression equation provided in the table was obtained. According to the t-values, the 'Courtesy' and 'Civic Virtue' sub-dimensions predicted the 'Abuse toward Administrative Functioning' sub-dimension at a significant level (p<0.05). A negative, medium level and significant relationship were found between the 'Courtesy' and 'Civic Virtue' sub-dimensions and the 'Abuse toward Administrative Functioning' sub-dimension.

The multilinear regression analysis results that examined the prediction status of the 'Sabotage' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 5.

Table 5.

Multilinear Regression Analysis Results on the Prediction Status of 'Sabotage' Sub-dimension by the Sub-dimensions of OCBs

Variable	*B*	*SH*	*β*	*t*	*p*	*Binary r*	*Partial r*
Constant	2.91	0.10		29.85	0.00		
Altruism	-0.04	0.04	-0.05	-0.97	0.33	-0.45	-0.03
Conscientiousness	-0.07	0.04	-0.12	-1.88	0.06	-0.47	-0.07
Sportsmanship	-0.02	0.02	-0.04	-1.03	0.30	-0.39	-0.04
Courtesy	-0.24	0.03	-0.35	-7.20	0.00	-0.52	-0.25
Civic Virtue	-0.02	0.05	-0.03	-0.46	0.65	-0.46	-0.02
R = 0.54	R^2 = 0.30		$F_{(5, 784)}$ =65.53		p = 0.00		
SAB = 2.91 – 0.04xALT - 0.07xCON – 0.02xSPO - 0.24xCOU - 0.02xCIV							

The data provided in Table 5 present that there was a significant and medium level (*R=0.54*) relationship between the sub-dimensions of OCBs 'Sabotage' sub-dimension. These five predictor variables explained 30% ($R^2 = 0.30$) of the total variance in the 'Sabotage' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Sabotage' sub-dimension at a significant level ($F_{(5, 784)} = 65.53;\ p<0.05$), and the regression equation provided in the table was obtained. According to the t-values, the 'Courtesy' sub-dimension predicted the 'Sabotage' sub-dimension at a significant level (p<0.05). A negative and significant relationship was found between the 'Courtesy' sub-dimension and the 'Sabotage' sub-dimension.

The multilinear regression analysis results that examined the prediction status of the 'Theft' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 6.

Tablo 6.

Multilinear Regression Analysis Results on the Prediction Status of 'Theft' Sub-dimension by the Sub-dimensions of OCBs

Variable	*B*	*SH*	*β*	*t*	*p*	*Binary r*	*Partial r*
Constant	1.32	0.05		25.73	0.00		
Altruism	-0.02	0.02	-0.07	-1.13	0.26	-0.17	-0.04
Conscientiousness	-0.02	0.02	-0.06	-0.77	0.44	-0.16	-0.03
Sportsmanship	0.00	0.01	0.01	0.15	0.88	-0.12	0.01
Courtesy	-0.05	0.02	-0.15	-2.67	0.01	-0.20	-0.09
Civic Virtue	0.02	0.02	0.06	0.70	0.48	-0.15	0.03
R = 0.20	R^2 = 0.04		$F_{(5, 784)}$ =6.65		p = 0.00		
TH = 1.32 – 0.02xALT - 0.02xCON + 0.00xSPO - 0.05xCOU + 0.02xCIV							

The data provided in Table 6 presented that there was a significant yet low level (*R=0.20*) relationship between the sub-dimensions of OCBs 'Theft' sub-dimension. These five predictor variables explained 4% ($R^2 = 0.04$) of the total variance in the 'Theft' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Theft' sub-dimension at a significant level ($F_{(5, 784)} = 6.65;\ p<0.05$) and the regression equation provided in the table was obtained. According to the t-values, the 'Courtesy' sub-dimension predicted the 'Theft' sub-dimension at a significant level (p<0.05). A negative and significant relationship was found between the 'Courtesy' sub-dimension and the 'Theft' sub-dimension.

The multilinear regression analysis results that examined the prediction status of the 'Withdrawal' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 7.

Table 7.

Multilinear Regression Analysis Results on the Prediction Status of 'Withdrawal' Sub-dimension by the Sub-dimensions of OCBs

Variable	*B*	*SH*	*β*	*t*	*p*	*Binary r*	*Partial r*
Constant	4.96	0.13		38.61	0.00		
Altruism	0.08	0.05	0.07	1.46	0.15	-0.55	0.05
Conscientiousness	-0.22	0.05	-0.25	-4.46	0.00	-0.65	-0.16
Sportsmanship	-0.01	0.03	-0.01	-0.21	0.83	-0.48	-0.01
Courtesy	-0.39	0.04	-0.36	-8.83	0.00	-0.64	-0.30
Civic Virtue	-0.21	0.06	-0.21	-3.38	0.00	-0.64	-0.12
R = 0.70	$R^2 = 0.50$		$F_{(5, 784)} = 154.18$		p = 0.00		
WD = 4.96 + 0.08xALT - 0.22xCON – 0.01xSPO - 0.39xCOU - 0.21xCIV							

The data provided in Table 7 presented that there was a significant and high level (*R=0.70*) relationship between the sub-dimensions of OCBs 'Withdrawal' sub-dimension. These five predictor variables explained 50% ($R^2 = 0.50$) of the total variance in the 'Withdrawal' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Withdrawal' sub-dimension at a significant level ($F_{(5, 784)} = 154.18;\ p<0.05$) and the regression equation provided in the table was obtained. According to the t-values, the 'Conscientiousness', 'Courtesy' and 'Civic Virtue' sub-dimensions predicted the 'Withdrawal' sub-dimension at a significant level (p<0.05). A negative and significant relationship was found between the 'Conscientiousness', 'Courtesy' and 'Civic Virtue' sub-dimensions and the "Withdrawal" sub-dimension.

The multilinear regression analysis results that examined the prediction status of the 'Abuse toward School Image' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 8.

Table 8.

Multilinear Regression Analysis Results Concerning the Prediction Status of 'Abuse toward School Image' Sub-dimension by the Sub-dimensions of OCBs

Variable	*B*	*SH*	*β*	*t*	*p*	*Binary r*	*Partial r*
Constant	2.94	0.09		34.19	0.00		
Altruism	-0.01	0.03	-0.02	-0.38	0.70	-0.49	-0.01
Conscientiousness	-0.07	0.03	-0.13	-2.13	0.03	-0.52	-0.08
Sportsmanship	0.01	0.02	0.03	0.67	0.50	-0.39	0.02
Courtesy	-0.28	0.03	-0.44	-9.64	0.00	-0.59	-0.33
Civic Virtue	-0.05	0.04	-0.09	-1.26	0.21	-0.52	-0.05
R = 0.61	$R^2 = 0.37$		$F_{(5, 784)} = 93.21$		p = 0.00		
ATSI = 2.94 – 0.01xALT - 0.07xCON + 0.01xSPO - 0.28xCOU - 0.05xCIV							

The data provided in Table 8 presented that there was a significant and medium level (*R=0.61*) relationship between the sub-dimensions of OCBs 'Abuse toward School Image' sub-dimension. These five predictor variables explained 37% ($R^2 = 0.37$) of the total variance in the 'Abuse toward School Image' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Abuse toward School Image' sub-dimension at a significant level ($F_{(5, 784)} = 93.21;\ p<0.05$) and the regression equation provided in the table was obtained. According to the t-values, the 'Conscientiousness' and 'Courtesy' sub-dimensions predicted the 'Abuse toward School Image' sub-dimension at a significant level ($p<0.05$). A negative and significant relationship was found between the 'Conscientiousness' and 'Courtesy' sub-dimensions and the 'Abuse toward School Image' sub-dimension.

The multilinear regression analysis results that examined the prediction status of the 'Abuse toward Schooling' sub-dimension of CWBs by the sub-dimensions of OCBs are presented in Table 9.

Table 9.

Multilinear Regression Analysis Results on the Prediction Status of 'Abuse toward Schooling" *Sub-dimension by the Sub-dimensions of OCBs*

Variable	*B*	*SH*	*β*	*t*	*p*	***Binary r***	***Partial r***
Constant	3.62	0.10		36.02	0.00		
Altruism	-0.04	0.04	-0.05	-1.10	0.27	-0.54	-0.04
Conscientiousness	-0.12	0.04	-0.18	-2.95	0.00	-0.57	-0.10
Sportsmanship	0.02	0.02	0.03	0.80	0.42	-0.43	0.03
Courtesy	-0.34	0.03	-0.43	-9.92	0.00	-0.63	-0.33
Civic Virtue	-0.06	0.05	-0.08	-1.23	0.22	-0.57	-0.04
R = 0.66	R^2 = 0.43		$F_{(5, 784)}$ =119.82		p = 0.00		
ATS = 3.62 – 0.04xALT - 0.12xCON + 0.02xSPO - 0.34xCOU - 0.06xCIV							

The data provided in Table 9 presented that there was a significant and medium level (*R=0.66*) relationship between the sub-dimensions of OCBs 'Abuse toward Schooling' sub-dimension. These five predictor variables explained 43% ($R^2 = 0.43$) of the total variance in the 'Abuse toward Schooling' sub-dimension. Based on the status of this relationship, the findings showed that the sub-dimensions of OCBs predicted the 'Abuse toward Schooling' sub-dimension at a significant level ($F_{(5, 784)} = 119.82; p<0.05$) and the regression equation provided in the table was obtained. According to the t-values, the 'Conscientiousness' and 'Courtesy' sub-dimensions predicted the 'Abuse toward Schooling' sub-dimension at a significant level (p<0.05). A negative and significant relationship was found between the "Conscientiousness" and 'Courtesy' sub-dimensions and the 'Abuse toward Schooling' sub-dimension.

All of the regression tables displayed that, according to the standardized regression coefficients (β), the most important predictor of all sub-dimensions of CWBs was the 'Courtesy' sub-dimension of the OCBs.

Discussion, Conclusion and Recommendations

This study aims to establish the level of teachers' OCBs and CWBs based on public primary school administrators' and teachers' perceptions, and the relationship between these two variables. OCBs and CWBs constitute the two different aspects of extra-role behaviors in organizations. While the first aspect represents positive behaviors exhibited to be useful to the organization and make a contribution, the second aspect represents negative behaviors exhibited with an intention to harm the organization. OCBs may make important contributions to the functioning of the school, and on the other hand, CWBs may abuse the functioning of the school to a significant extent. From this point of view, the question of whether OCBs have an effect

on CWBs was considered as a significant question to be analyzed. This study employed the correlational survey model, and the data collected from the participants via scales were analyzed using the multilinear regression analysis method.

The research findings showed that CWBs are not frequently exhibited in schools. Although these behaviors rarely occurred, the most common behaviors included withdrawal and abuse toward others. The CWBs exhibited by teachers mostly included passive behaviors that do not require face-to-face interaction between individuals, such as not staying after school to continue working, gossiping and ignoring. Behaviors, such as theft, putting pressure on others and mocking, were not commonly observed in schools. These findings of the study are in line with Greenberg and Barling's (1999) research, while they differ from Bulbul's (2013) research. In their research on the aggressive behaviors of employees, Greenberg and Barling (1999) found that participants used psychological violence against their colleagues (82%), subordinates (74%) and superiors (76%) at least once and that the most common behavior in this type of violence was gossip. Bulbul (2013), on the other hand, stated that the most commonly observed behaviors among violent behaviors were verbal harassment behaviors. A similar finding was obtained in the study of Verona, Reed, Curtin and Pole (2007), which discussed CWBs in two dimensions: explicit and implicit. In this study, implicit behaviors were reported to be more frequent than explicit behaviors. Considering that implicit behaviors are passive behaviors, it can be said that the findings of Verona et al. (2007) are in the same line with this research findings. Teachers who exhibit CWBs mostly prefer to exhibit passive behaviors; a possible explanation for this situation might be that such kind of direct, obvious and active behaviors exhibited in organizations may constitute an offense within the regulations and there is a high probability to be penalized.

OCBs were frequently exhibited in schools. In the study of Yaylaci (2004), teachers and administrators stated that their colleagues generally exhibited OCBs. Also, in many studies about organizational citizenship behaviors, this kind of behavior of employees was examined. For example, in the research conducted by Işbaşi (2001) in the field of tourism, Loga (2003), in the military field and Unal (2003) in the field of education, the findings showed that the employees exhibited high levels of OCBs. Therefore, it is possible to say that the findings of this study are consistent with the above-mentioned studies. In addition, the results of this research support many studies conducted in the field of education. For example, Bas and Sentürk (2011), Bogler and Somech (2005), Cetin, Yesilbag and Akdag Cetin, Yesilbag, and Akdag (2003), Karaman, Yucel and Donder (2008), Nguni, Sleegers and Denessen (2006) found that these behaviors were frequently exhibited by teachers in schools.

Research shows that female teachers in Turkey, compared to men, exhibit more OCBs. On the other hand, Aytac, Elma, and Cinkir (2019) have conducted a meta-analysis of the research on teachers' OCB and found that gender caused a minor difference in teachers' perceptions. These researchers have stated that not using the gender variable in future studies may be on the agenda.

According to the results of the research, most common behaviors, such as respecting the rights of others and not causing problems, are the most common OCBs. Courtesy behaviors, such as showing respect to others and avoiding problems were among the most common behaviors. Similarly, while OCBs were frequently exhibited in schools, conscientiousness behaviors, such as spending extra time and helping others, were relatively rare. Podsakoff and MacKenzie (1994) defined courtesy as foresightful gestures that express kindness towards others. The focus of the courtesy behaviors is not the organization but the employees. Therefore, Turnipseed and Murkison (2000) indicated that such kinds of behaviors have a direct impact on employees and indirect impact on the organization. According to the researchers, the positive impact on the employees affects the organizational climate, and accordingly, this situation positively affects the organizational outcome and productivity. In this respect, courtesy behaviors that are exhibited frequently can make positive contributions to the school climate.

The findings showed that OCBs under the courtesy dimension significantly predicted the CVBs sub-dimension 'Abuse toward others'. The 'Courtesy' sub-dimension mostly consists of proactive behaviors, such as showing respect to others (Schnake, Cochran, & Dumler, 1995), protecting one's rights (Cilla, 2011) and warning others toward hazards (Deluga, 1994). In other words, behaviors related to taking precautions exhibited to avoid problems in the workplace are associated with courtesy. An employee who exhibits such kinds of behaviors is highly-likely to avoid behaviors of abusing others. The findings of the study also show similarities with the study conducted by Dunlop and Lee (2004). The researchers examined CWBs under two dimensions: 'individual-targeted' and 'organization-targeted'. In other words, they named the 'abuse toward others' dimension as 'CWB toward an individual'. The relevant study reported a negative and significant relationship between CWB toward an individual and OCBs.

The findings showed that there was a negative and significant relationship between the 'Courtesy' sub-dimension and 'Abuse toward Administrative Functioning' sub-dimension. 'Courtesy' represented the most important predictor of this sub-dimension. As mentioned previously, courtesy is associated with behaviors of preventing/avoiding problems, and therefore, it was expected to find a negative relationship with abuse toward administrative functioning behaviors. Civic virtue includes behaviors, such as being interested/sensitive towards experiences that occur within organizational processes and active participation in these processes (Organ, 1988). Examples of these behaviors include participation in problem-solving processes, work-related meetings, and administrative decision-making processes (Podsakoff & MacKenzie, 1994). It can be seen that 'Civic Virtue' sub-dimension includes active participation in administrative processes, and in a way, these behaviors can also be described as supporting administrative functioning behaviors. Therefore, it can be assumed that an employee who exhibits civic virtue behaviors would avoid abuse toward administrative functioning behaviors. In this context, the findings of this study are consistent with the literature.

The findings of the study showed that the 'Courtesy' sub-dimension significantly predicted the 'Sabotage' sub-dimension. This finding indicated that the tendency of an employee -who exhibits courtesy behaviors, that include controlled (Allison et al., 2001) and proactive behaviors to avoid problems in the workplace (Cilla, 2011) to exhibit sabotage behaviors would be low, and this finding was also in line with the literature. Moreover, the findings of this study are consistent with Hafidz, Hoesni and Fatimah's (2012) findings to a certain extent. The aforementioned researchers also reported a negative and significant relationship between the sabotage sub-dimension and OCBs. The same study revealed that there was a negative and significant relationship between courtesy sub-dimension and CWBs.

The most important predictor of the 'Theft' sub-dimension was also the 'Courtesy' sub-dimension. This suggests that an employee who exhibits proactive behaviors to make positive contributions to the organization would also avoid 'Theft' behaviors targeted at the organization and employees. The findings of this study are in agreement with the findings of Hafidz et al. (2012). The researchers showed that there was a negative and significant relationship between both 'Theft' and OCBs and between 'Courtesy' and CWBs.

The findings showed that 'Conscientiousness', 'Courtesy' and 'Civic Virtue' dimensions significantly predicted the 'Withdrawal' sub-dimension. These results indicate that withdrawal behaviors will decrease with an increase in conscientiousness, courtesy and civic virtue behaviors. Conscientiousness is associated with avoiding violation of established rules in an organization and acting in compliance with work ethics. The examples of behaviors in this sub-dimension include complying with the work schedule, using the work time properly and effectively, and continuing to work (Barksdale & Werner, 2001). As presented, these behaviors are situated in the negative direction to the behaviors included in the 'Withdrawal' sub-dimension of CWBs, such as absence in work, non-compliance with working time and spending time for other activities during working. The same situation is also relevant for 'Courtesy' and 'Civic Virtue' sub-dimensions. Thus an employee who puts an effort to prevent problems and avoid creating problems is expected to have a low tendency to exhibit withdrawal behaviors. It can be argued that civic virtue behavior that includes active participation in the organization is the opposite of the withdrawal behavior that indicates self-isolation behaviors. Thus, it is possible to conclude that the findings of the study are consistent with the literature.

The conscientiousness and courtesy sub-dimensions significantly predicted the 'Abuse toward School Image' sub-dimension. The findings showed that an increase in conscientiousness and courtesy behaviors lead to a decrease in abuse toward school image sub-dimension behaviors. The 'Conscientiousness' sub-dimension represents the behaviors that are exhibited to protect and improve the pecuniary and non-pecuniary assets of the organization. Therefore a teacher who exhibits such behaviors is expected to avoid behaviors that may abuse the school image. Furthermore, courtesy is a sub-dimension that includes the controlled behavior of employees. A self-controlled employee is also expected to avoid exhibiting behaviors that may abuse the school image.

The 'Conscientiousness' and 'Courtesy' sub-dimensions were important predictors of the 'Abuse toward Schooling' sub-dimension. The 'Abuse toward Schooling' sub-dimension includes adverse behaviors, such as establishing negative communication with parents, refusing to cooperate with parents and informing them about the performance of the student. Thus, a teacher who exhibits conscientiousness and courtesy sub-dimensions is also expected to avoid 'Abuse toward Schooling' behaviors.

Although CWBs are not observed in schools very frequently, enhancing control mechanisms and disincentives would assist in improving the current situation. Furthermore, given the negative impacts of courtesy behaviors on CWBs, employees should be encouraged to follow the rules of courtesy in interpersonal relationships, and the issue should be highlighted by rewarding teachers who show successful performance.

Future studies on the current topic are needed to explore the relationship between CWBs in schools and various variables, including organizational commitment, organizational climate, personality types and leadership styles adopted by administrators. By this means, theoretical foundations towards preventing CWBs in schools will be enhanced and provide guidance to practitioners.

References

Allison, B. J., Voss, R. S., & Dryer, S. (2001). Student classroom and career success: The role of organizational citizenship behavior. *Journal of Education for Business, 76*(5), 282-288.

Aquino, K., Douglas, S., & Martinko, M. J. (2004). Overt anger in response to victimization: Attributional style and organizational norms as moderators. *Journal of Occupational Health Psychology, 9*(2), 152-164.

Aytac, T., Elma, C., & Cinkir, S. (2019). Effect of gender on teachers' organizational citizenship behavior: A meta-analysis. *Educational Policy Analysis and Strategic Research, 14*(3).

Balci, A. (2004). *Sosyal bilimlerde araştırma: Yöntem, teknik ve ilkeler*. Ankara: PegemA Yayıncılık.

Barksdale, K., & Werner, J. M. (2001). Managerial ratings of in-role behaviors, organizational citizenship behaviors, and overall performance: Testing different models of their relationship. *Journal of Business Research, 51*(2), 145-155.

Baron, R. A., & Neuman, J. H. (1996). Workplace violence and workplace aggression: Evidence on their relative frequency and potential causes. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression, 22*(3), 161-173.

Bas, G., & Senturk, C. (2011). İlköğretim okulu öğretmenlerinin örgütsel adalet, örgütsel vatandaşlık ve örgütsel güven algıları. *Kuram ve Uygulamada Eğitim Yönetimi, 17*(1), 29-62.

Basim, H. N., & Sesen, H. (2006). Örgütsel vatandaşlık davranışı ölçeği uyarlama ve karşılaştırma çalışması. *Ankara Üniversitesi SBF Dergisi, 61*(4), 83-101.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". *Academy of management journal, 26*(4), 587-595.

Berry, C. M., Carpenter, N. C., & Barratt, C. L. (2012). Do other-reports of counterproductive work behavior provide an incremental contribution over self-reports? A meta-analytic comparison. *Journal of Applied Psychology, 97*(3), 613-636.

Bogler, R., & Somech, A. (2005). Organizational citizenship behavior in school: How does it relate to participation in decision making? *Journal of Educational Administration, 43*(5), 420-438.

Bulbul, G. (2013). *Havayolu taşımacılığında üretkenlik karşıtı davranışlar ve kabin görevlilerinin algısı üzerine bir araştırma.* (Yayımlanmamış yüksek lisans tezi). Anadolu Üniversitesi Sosyal Bilimler Enstitüsü, Eskişehir.

Buss, A. H. (1961). *The psychology of aggression*. NewYork: Wiley.

Cetin, M., Yesilbag, Y., & Akdag, B. (2003). Öğretmenlerin örgütsel vatandaşlık davranışı. *M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 17*, 39-54.

Cilla, M. J. (2011). *Exploring the relationship between organizational citizenship behavior and organizational climates for creativity.* (Master's thesis). San José State University The Faculty of the Department of Psychology, San Jose.

Cokluk, O., Sekercioglu, G., & Buyukozturk, S. (2010). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları*. Ankara: Pegem Akademi Yayıncılık.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*(6), 1241-1255.

Deluga, R. J. (1994). Supervisor trust building, leader-member exchange and organizational citizenship behaviour. *Journal of occupational and Organizational Psychology, 67*(4), 315-326.

DiPaola, M. F., & Hoy, W. K. (2005). Organizational citizenship of faculty and achievement of high school students. *The high school journal, 88*(3), 35-44.

Dogruoz, E., & Ozdemir, M. (2018). Eğitim örgütlerinde üretim karşıtı iş davranışları ve örgütsel bağlılık İlişkisi. *İlköğretim Online, 17*(1), 396-413.

Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining in the workplace. *Academy of management journal, 45*(2), 331-351.

Duffy, M. K., Ganster, D. C., Shaw, J. D., Johnson, J. L., & Pagon, M. (2006). The social context of undermining behavior at work. *Organizational behavior and human decision processes, 101*(1), 105-126.

Dunlop, P. D., & Lee, K. (2004). Workplace deviance, organizational citizenship behavior, and business unit performance: The bad apples do spoil the whole barrel. *Journal of Organizational Behavior, 25*, 67-80.

Farh, J.-L., Earley, P. C., & Lin, S.-C. (1997). Impetus for action: A cultural analysis of justice and organizational citizenship behavior in Chinese society. *Administrative science quarterly, 42*(3), 421-444.

Fox, S., & Stallworth, L. E. (2004). Racial/ethnic bullying: Exploring links between bullying and racism in the US workplace. *Journal of vocational behavior, 66*(3), 438-456.

Giacalone, R. A., & Rosenfeld, P. (1987). Reasons for employee sabotage in the workplace. *Journal of Business and Psychology, 1*(4), 367-378.

Greenberg, L., & Barling, J. (1999). Predicting employee aggression against coworkers, subordinates and supervisors: The roles of person behaviors and perceived workplace factors. *Journal of Organizational Behavior, 20*, 897-913.

Gruys, M. L. (1999). *The dimensionality of deviant employee behavior in the workplace.* (Unpublished doctoral dissertation). Minnesota University Industrial Relations Center, Minneapolis.

Gualandri, M. (2012). *Counterproductive work behaviors and moral disengagement.* (Unpublished doctoral dissertation). Sapienza University of Rome, Roma.

Hafidz, S. W. M., Hoesni, S. M., & Fatimah, O. (2012). The relationship between organizational citizenship behavior and counterproductive work behavior. *Asian Social Science, 8*(9), 32-37.

Isbaşi, J. O. (2001). Çalisanlarin yöneticilerine duyduklari güvenin ve örgütsel adalete iliskin algilamalarinin vatandaslik davranisinin olusumundaki rolü. *Yönetim Araştırmaları Dergisi, 1*(1), 51-73.

Karaman, K., Yucel, C., & Donder, H. (2008). Öğretmen görüşlerine göre, okullardaki bürokrasi ile örgütsel vatandaşlık arasındaki ilişki. *Kuram ve Uygulamada Eğitim Yönetimi, 53*, 49-74.

Kidwell Jr, R. E., & Kochanowski, S. M. (2005). The morality of employee theft: Teaching about ethics and deviant behavior in the workplace. *Journal of management education, 29*(1), 135-152.

Loga, A. (2003). *Çalışanların demografik özelliklerinin örgütsel özdeşim, örgütsel bağlılık ve örgütsel vatandaşlık davranışına etkileri: Askeri birimlerde bir araştırma.* (Yayımlanmamış Yüksek Lisans Tezi). Başkent Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Low, K. D., Radhakrishnan, P., Schneider, K. T., & Rounds, J. (2007). The experiences of bystanders of workplace ethnic harassment. *Journal of Applied Social Psychology, 37*(10), 2261-2297.

MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1993). The impact of organizational citizenship behavior on evaluations of salesperson performance. *Journal of marketing, 57*(1), 70-80.

Miles, D. E., Borman, W. E., Spector, P. E., & Fox, S. (2002). Building an integrative model of extra role work behaviors: A comparison of counterproductive work behavior with organizational citizenship behavior. *International Journal of Selection and Assessment, 10*(1-2), 51-57.

Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology, 59*(3), 591-622.

Nguni, S., Sleegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School effectiveness and school improvement, 17*(2), 145-177.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington-MA, England: Lexington Books.

Ozdevecioglu, M. (2003). Algılanan örgütsel adaletin bireylerarası saldırgan davranışlar üzerindeki etkilerinin belirlenmesine yönelik bir araştırma. *Erciyes üniversitesi iktisadi ve idari bilimler fakültesi dergisi, 21*, 77-96.

Podsakoff, P. M., & MacKenzie, S. B. (1994). Organizational citizenship behaviors and sales unit effectiveness. *Journal of marketing research, 31*(3), 351-363.

Podsakoff, P. M., & MacKenzie, S. B. (1997). Impact of organizational citizenship behavior on organizational performance: A review and suggestion for future research. *Human performance, 10*(2), 133-151.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of management, 26*(3), 513-563.

Schnake, M., Cochran, D., & Dumler, M. (1995). Encouraging organizational citizenship: The effects of job satisfaction, perceived equity and leadership. *Journal of Managerial Issues, 7*(2), 209-221.

Sezgin, F. (2005). Örgütsel vatandaşlık davranışları: Kavramsal bir çözümleme ve okul açısından bazı çıkarımlar. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, 25*(1), 317-339.

Shore, L. M., & Shore, T. H. (1995). Perceived organizational support and organizational justice. *Organizational politics, justice, and support: Managing the social climate of the workplace, 149*, 164.

Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology, 82*(3), 434-443.

Smith, C., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68*(4), 653-663.

Spector, P. E. (2011). The relationship of personality to counterproductive work behavior (CWB): An integration of perspectives. *Human Resource Management Review, 21*(4), 342-352.

Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review, 12*, 1-24.

Spector, P. E., & Fox, S. (2010). Counterproductive work behavior and organisational citizenship behavior: Are they opposite forms of active behavior? *Applied Psychology: An International Review, 59*(1), 21-39.

Spector, P. E., Fox, S., & Domagalski, T. (2006). Emotions, violence and counterproductive work behavior. In E. K. Kelloway, J. Barling, & J. Hurrell (Eds.), *Handbook of workplace violence* (pp. 29-46). Thousand Oaks, CA: Sage Publication.

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of vocational behavior, 68*(3), 446-460.

Sumer, N. (2000). Yapisal eşitlik modelleri: Temel kavramlar ve örnek uygulamalar. *Turk Psikoloji Yazilari, 3*(6), 49-74.

Turnipseed, D., & Murkison, G. (2000). Good soldiers and their syndrome: Organizational citizenship behavior and the work environment. *North American Journal of Psychology, 2*(2), 281-302.

Unal, A. (2012). Deviant teacher behaviors and their influence on school rules and interpersonal relationships at school. *Eurasian Journal of Educational Research, 49*, 1-20.

Unal, Z. (2003). *Öğretmenlerde iş doyumu ve örgütsel vatandaşlık.* (Yayımlanmamış yüksek lisans tezi). Afyon Kocatepe Üniversitesi Sosyal Bilimler Enstitüsü, Afyon.

Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity (a bridge over muddied waters). *Research in Organizational Behavior: An Annual Series of Analytical Essays and Critical Reviews, 17*, 215-285.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of management journal*, *41*(1), 108-119.

Verona, E., Reed, A., Curtin, J. J., & Pole, M. (2007). Gender differences in emotional and overt/covert aggressive responses to stress. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *33*(3), 261-271.

Yaylaci, A. F. (2004). *İlköğretim okulları yönetici ve öğretmenlerinin örgütsel yurttaşlık davranışları.* (Doktora tezi). Ankara Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

İlkokul Öğretmenlerinin Örgütsel Vatandaşlık Davranışları ile Üretkenlik Karşıtı İş Davranışları Arasındaki İlişki

Atıf:

Akkaya, B. (2019). The relationship between primary school teachers' organizational citizenship behaviors and counter-productive work behaviors. *Eurasian Journal of Educational Research*, *84, 1-28,* DOI: 10.14689/ejer.2019.84.1

Özet

Problem Durumu: Örgütsel vatandaşlık davranışları ve üretkenlik karşıtı iş davranışları örgütlerde rol fazlası davranışların iki farklı yönünü oluşturmaktadır. Üretkenlik karşıtı iş davranışı (ÜKİD) işgörenlerin örgüt içinde yaşadıkları olumsuz durumlar nedeniyle örgüte ve üyelerine zarar verme amacıyla yaptıkları davranışlar olarak tanımlanmaktadır (Spector & Fox, 2010). Örgütün ve işgörenlerin sağlığını tehlikeye atan, iş performansını düşüren, saldırganlık/hırsızlık/iş yapmama gibi örgütsel normları ihlal edici nitelikteki (Gualandri, 2012) ve zarar verme niyeti içeren (Dalal, 2005) gönüllü davranışlar ÜKİD olarak isimlendirilmektedir. Spector ve diğerleri (2006) ÜKİD kapsamına giren davranışların bireye yönelik ve örgüte yönelik üretkenlik karşıtı iş davranışları olmak üzere iki ana boyut altında (i) başkalarına zarar verme, (ii) üretime zarar verme, (iii) kundaklama, (iv) çalma ve (v) geri çekilme olmak üzere beş alt boyutta incelenebileceğini belirtmişlerdir. Eğitim örgütleri olan okullarda da öğretmenler ve yöneticiler arasında ÜKİD sergilenebilmektedir. Doğruöz ve Özdemir'in (2018) de belirttiği gibi, alanyazında öğretmen ve yöneticilerin okulun sahip olduğu maddi varlıklara zarar verme, taciz, hırsızlık, psikolojik yıldırma, işe devamsızlık gibi üretkenlik karşıtı iş davranışları sergilediklerine ve bu davranışların okullarda giderek yaygınlaştığına dair bulgulara rastlamak mümkündür. Örgütsel vatandaşlık davranışları ise "rol davranışlarından öte" davranışlardan oluşmakta ve "resmi ödül sistemi tarafından doğrudan veya açıkça tanımlanmayan ve örgütün etkin işleyişini teşvik eden isteğe bağlı bireysel davranışlar" olarak tanımlanaktadır (Organ, 1988). Örgütsel vatandaşlık davranışları, işgörenin örgütün etkin işleyişini doğrudan

destekleyici nitelik taşıyan isteğe bağlı davranışlarından oluşmaktadır (Podsakoff & MacKenzie, 1994). Organ (1988) örgütsel vatandaşlık davranışını diğergamlık, nezaket, vicdanlılık, sivil erdem ve centilmenlik olarak beş boyutta incelemiştir. Bu araştırmada Organ'ın (1988) boyutlandırması temel alınmıştır. Okullarda örgütsel vatandaşlık davranışlarının okulun işleyişine nitelikli katkılar sunarken, üretkenlik karşıtı iş davranışlarının ciddi boyutta zararlar verebileceği düşünülmektedir. Buradan hareketle örgütsel vatandaşlık davranışlarının üretkenlik karşıtı iş davranışları üzerinde etkisinin olup olmadığı araştırılmaya değer bir konu olarak görülmüştür.

Araştırmanın Amacı: Bu araştırmanın amacı, kamu ilkokullarında görev yapan yönetici ve öğretmenlerin algılarına göre, öğretmenlerin sergiledikleri örgütsel vatandaşlık davranışları ile üretkenlik karşıtı iş davranışları arasındaki ilişkiyi ortaya koymaktır. Bu genel amaç doğrultusunda aşağıdaki sorulara yanıt aranmıştır:

1) Okul yöneticilerinin ve sınıf öğretmenlerinin, öğretmenlerin sergilediği üretkenlik karşıtı iş davranışlarına ilişkin algıları; (i) başkalarına zarar verme, (ii) yönetsel işleyişe zarar verme, (iii) kundaklama, (iv) çalma, (v) geri çekilme, (vi) okulun imajına zarar verme ve (vii) eğitim-öğretime zarar verme boyutlarında ne düzeydedir?
2) Okul yöneticilerinin ve sınıf öğretmenlerinin, öğretmenlerin sergilediği örgütsel vatandaşlık davranışlarına ilişkin algıları; (i) diğergamlık, (ii) vicdanlılık, (iii) centilmenlik, (iv) nezaket ve (v) sivil erdem boyutlarında ne düzeydedir?
3) Okul yöneticilerinin ve sınıf öğretmenlerinin algılarına göre örgütsel vatandaşlık davranışının alt boyutları üretkenlik karşıtı iş davranışlarının anlamlı bir yordayıcısı mıdır?

Araştırmanın Yöntemi: Araştırma, ilişkisel tarama modelindedir. Araştırmanın örneklemi 2018-2019 eğitim-öğretim yılında Ankara'nın dokuz ilçesindeki kamu ilkokullarında görev yapan okul yöneticileri ve öğretmenlerden tabakalı örnekleme yöntemiyle alınmış ve buna bağlı olarak araştırmaya 360 okul yöneticisi ve 430 öğretmen katılmıştır. Veriler, araştırmacı tarafından geliştirilen Üretkenlik Karşıtı İş Davranışı Ölçeği ve Basım ve Şeşen (2006) tarafından geliştirilen Örgütsel Vatandaşlık Davranışları Ölçeği ile toplanmıştır. ÜKİD Ölçeği'nin geliştirilmesi için ön uygulama yapılmıştır. Ön uygulama verileri Ankara ilinde resmi ilkokul ve ortaokullarda görev yapan 331'i öğretmen ve 82'si yönetici olmak üzere toplam 413 katılımcıdan toplanmıştır. Ölçeğin yapı geçerliğinin kontrolü için Açımlayıcı Faktör Analizi (AFA) yapılmıştır. Örgütsel Vatandaşlık Davranışları Ölçeğinin yapısını eğitim kurumlarında çalışan öğretmen ve yöneticilerde de koruyup korumadığını test etmek amacıyla birinci düzey doğrulayıcı faktör analizi yapılmış ve uyum indekslerinin yeterli düzeyde olduğu görülmüştür. Verilerin analizinde aritmetik ortalama, standart sapma ve çoklu doğrusal regresyon analizi kullanılmıştır.

Araştırmanın Bulguları: Katılımcı algılarına göre okullarda öğretmenler, üretkenlik karşıtı iş davranışlarını neredeyse hiç sergilememektedir. Nadiren yaşanan durumlarda ise en çok geri çekilme ve başkalarına zarar verme, en az ise çalma boyutundaki davranışlar sergilenmektedir. Örgütsel vatandaşlık davranışlarının

okullarda sıklıkla sergilendiği, bunların içinde en sık sergilenen davranışların ise nezaket alt boyutundakiler olduğu belirlenmiştir. Örgütsel vatandaşlığın nezaket alt boyutu ÜKİD'in tüm alt boyutlarının anlamlı bir yordayıcısıdır. Bunun yanında ÖVD'nin vicdanlılık boyutu, ÜKİD'in kundaklama, geri çekilme, okulun imajına zarar verme ve eğitim öğretime zarar verme boyutlarının; sivil erdem boyutu ise yönetsel işleyişe zarar verme ve geri çekilme boyutlarının anlamlı birer yordayıcısıdır. ÜKİD'in en önemli yordayıcısı ÖVD'nın nezaket alt boyutu olmuştur.

Araştırmanın Sonuçları ve Önerileri: Araştırma bulgularına dayalı olarak okullarda üretkenlik karşıtı iş davranışlarının çok yaygın olmadığı sonucuna varılmıştır. Bu davranışlar seyrek olarak yaşanmakla birlikte, görece en sık, geri çekilme ve başkalarına zarar verme davranışları ile karşılaşılmaktadır. ÜKİD sergileyen öğretmenler ağırlıklı olarak kişilerle yüz yüze etkileşimi gerektirmeyen okulda mesai dışında zaman geçirmeme, dedikodu, yok sayma gibi pasif davranışlar sergilemektedir. Okullarda çalma, baskı uygulama, alay etme gibi somut ve birebir etkileşimi gerektiren davranışlarla pek karşılaşılmamaktadır. Okullarda örgütsel vatandaşlık davranışları oldukça yaygın olarak yaşanmaktadır. Bu davranışlar arasında başkalarının haklarına saygı duyma, sorun çıkarmama gibi nezaket davranışları en yaygın davranışlardır. Yine yaygın olarak yaşanmakla birlikte okul için ekstra zaman harcama, başkalarının işlerine yardım etme gibi vicdanlılık davranışları görece seyrek yaşanmaktadır. Okullarda nezaket, vicdanlılık ve sivil erdem boyutunda yer alan örgütsel vatandaşlık davranışlarının ÜKİD davranışlarını önleyici veya azaltıcı etki yaptığı söylenebilir. Bu nedenle öğretmenlerin okuldaki ilişkilerinde nezaket kurallarına uymaları, yeri geldiğinde meslektaşlarına yardım etmeleri, okulun sorunlarının çözümünde aktif rol almaları teşvik edilmeli, bu konuda başarılı öğretmenler ödüllendirilerek konuya dikkat çekilmelidir. Okullarda ÜKİD'in örgütsel bağlılık, örgüt kültürü, örgüt iklimi, kişilik tipleri, yöneticilerin benimsediği liderlik tipleri gibi başka değişkenlerle ilişkileri de araştırma konusu edilmeli ve okullarda ÜKİD'in önlenmesine yönelik kuramsal temeller sağlamlaştırılmalıdır.

Anahtar Sözcükler: Üretkenlik karşıtı iş davranışı, örgütsel vatandaşlık, rol fazlası davranışlar.

Eurasian Journal of Educational Research 84 (2019) 29-56

Eurasian Journal of Educational Research
www.ejer.com.tr

The Effect of Mobbing Levels Experienced by Music Teachers on Organizational Commitment and Job Satisfaction*

Ayda ARAS[1]

ARTICLE INFO

Article History:
Received: 18 Jun. 2019
Received in revised form: 13 Oct. 2019
Accepted: 11 Nov. 2019
DOI: 10.14689/ejer.2019.84.2

Keywords
mobbing, job satisfaction, organizational commitment, music teachers

ABSTRACT

Purpose: Music education is a learning and teaching process that creates cognitive, affective and psychomotor changes in the behaviors of an individual. One of the most important elements of this process is the music teacher. The experiences of music teachers in the work environment also affect the quality of education they provide. Therefore, this study aimed to determine the relationship between the levels of mobbing experienced by, and the organizational commitment and job satisfaction of music teachers working at primary schools. **Research Methods:** This research was conducted with relational survey model. The study group comprised of music teachers working at primary schools in Ankara province. 248 music teachers in total were included in the sampling by stratified sampling method. Research data were collected by means of Negative Behavior Scale, Organizational Commitment Scale and Job Satisfaction Scale.

Findings: According to the results of the study, significant negative relationship was found between the level of mobbing experienced by, and the levels of job satisfaction and organizational commitment of music teachers. In addition, it was determined that organizational commitment and job satisfaction significantly predicted mobbing behavior.

Implications for Research and Practice: When taking into consideration that music teachers experience mobbing in schools, especially in relation to their occupations, and the mobbing behaviors they are most exposed to, creating their role/position definitions at the level of their competences, taking into account their ideas and views and their requests when they ask to use their rights (sick leave, holiday entitlement) will help increase their organizational commitment and job satisfaction. In future studies, new research models may be formed with different variables on how to increase job satisfaction and organizational commitment or on how to reduce mobbing.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Dr. Aksaray University, e-mail: aydaras@hotmail.com, TURKEY, ORCID: https://orcid.org/0000-0002-9591-6542

Introduction

Education can be expressed as an important process that enables individuals to be beneficial to themselves, their surroundings, countries and humanity. Art education is an important component of education, and music education is of art education. Music education is a learning and teaching process that creates cognitive, affective and psycho motor changes in the behaviors of an individual. One of the most important elements of this process is the music teacher. The experiences of music teachers in the work environment also affect the quality of education they provide. Therefore, job satisfaction and organizational commitment of music teachers may be suggested to be one of the factors of effective music education. However, it is possible that many factors play part in the job satisfaction and organizational commitment of music teachers. In this study, effect of mobbing, which is thought to be one of these factors, on the organizational commitment and job satisfaction of music teachers was examined.

The word 'mob', which derives from the words 'mobile vulgus' that means "fickle crowd" in Latin, has the meaning of "irregular crowd or gang that resorts to illegal violence" in English (Tinaz, 2008, p.7). Animal scientist Konrad Lorenz first used the word 'mobbing' in the 1960s to describe some animal behaviors. Accordingly, mobbing was used in the sense that a group or a flock of small animals threatened a large animal strolling around alone (Karyagdi, 2007). At the workplace, mobbing is the exposure of one or rarely several employees to emotionally damaging behaviors by one or more employees (rarely more than four people) on a daily basis and for several months in a systematic manner (Toker Gokce, 2008, p.4). Leymann has important studies on mobbing and describes mobbing as an individual being attacked through social interaction by one or more people almost on a daily basis and for months (1996, p.168). A different definition of mobbing is, when a person gathers other people around himself/herself with or without their consent, against another individual, and forces those people to discharge the said individual by creating an aggressive environment such as through perpetual malicious actions, making implications, mockery, and degrading the public reputation of the said individual (Davenport, Schwartz & Elliot, 2003, p.15). As one can see, all definitions include an individual being exposed to aggressive behaviors of a person or a group. Moreover, the systematicity or continuity of these behaviors is also emphasized in the definitions.

Davenport, Schwartz, and Elliot state that mobbing is an emotional attack (2003, p.15) and express that this process begins when the individual is the target of disrespectful and harmful behavior. According to Matthiesen (2006, p.14), such behaviors may occur directly, such as through verbal attacks, or indirectly, such as through insulting, slandering or retention of information. Similarly, Zapf and Einarsen (2001) state that these behaviors can be listed in many different types that humiliate, punish, frighten or intimidate the person. However, Leymann states that there are 45 different types of mobbing behaviors and classifies these behaviors under five groups according to their characteristics. These behaviors described by Leymann are provided in Table 1 (Davenport, Schwartz and Elliot, 2003, p.17-19).

Table 1

Types of Mobbing

Groups	Defined Behaviors
Attacks that Affect a Person's Self-Manifestation and the Formation of Communication	1. Your supervisor limits your opportunities to manifest yourself. 2. You are constantly interrupted. 3. Your colleagues or people you work with limit your opportunities to manifest yourself. 4. You are shouted at and scolded with a high voice. 5. The job you perform is constantly criticized. 6. Your private life is constantly criticized. 7. You are harassed by means of telephone calls. 8. You receive verbal threats. 9. You receive written threats. 10. The relationship is rejected by means of gestures and glances.
Attacks to Social Relationships	1. People around you do not talk with you. 2. You cannot talk to anybody; your contact with others is prevented. 3. You are given a workplace that is isolated from others. 4. Your colleagues are prohibited to talk to you. 5. People act as if you are not there.
Attacks to the Reputation of the Individual	1. People talk bad behind your back. 2. There are groundless rumors. 3. You are being mocked. 4. People act as if you are mentally handicapped. 5. You are forced to go through a psychological evaluation/examination. 6. You are being mocked about one of your defects. 7. Your walking, gestures or voice is impersonated in order to mock you. 8. You are being mocked about your religious or political views. 9. You are being mocked about your nationality. 10. You are forced to complete a task that has an adverse impact on your self-confidence. 11. Your efforts are judged in a wrong and degrading manner. 12. Your decisions are constantly questioned. 13. You are referred to by degrading names. 14. Sexual implications.
Attacks to the Life Quality and Occupational Status of the Individual	1. There are no special tasks for you. 2. Tasks that are assigned to you are taken back; you cannot even create a new task. 3. Meaningless tasks are assigned to you for you to maintain. 4. Tasks that require less talent than you have are assigned to you. 5. Your tasks are constantly changed. 6. Tasks that affect your self-confidence are assigned to you. 7. Tasks that are out of your talent area are assigned to you in order to degrade your reputation. 8. General damages, after which you face financial burden, are caused. 9. Your house or workplace is harmed.
Direct Attacks to the Health of the Individual	1. You are forced to do works that require heavy manual work. 2. You receive physical violence threats. 3. Light violence is used to intimidate you. 4. Physical harm 5. Direct sexual harassment.

Source: Davenport, Schwartz and Elliot, 2003, p.17-19.

As seen in Table 1, Leymann classifies mobbing behaviors as attacks that affect a person's self-manifestation and the formation of communication, attacks to social relationships, attacks to the reputation of the individual, attacks to the life quality and occupational status of the individual, and direct attacks to the health of the individual. Matthiesen (2006), however, expresses that these behaviors will be grouped under two more general groups as behaviors related to the work and behaviors related to the person. According to the author, while behaviors that make it difficult for people who experience mobbing to do their jobs or that try to take some or all of their responsibilities away are related to the work, while behaviors such as social exclusion, rumor mongering, insulting, ignoring views, teasing, unwanted sexual approach are related to the person.

Poussard et al. (2003, p.21) expressed that individuals who experience mobbing react to these behaviors in three different levels. Accordingly, in the first level, the person who experience mobbing tries to resist such behaviors. In the second level, the person can no longer resist such behaviors, may suffer from temporary or prolonged mental or physical discomfort, and may have difficulty returning to work. In the third level, the person who experienced mobbing can no longer return to the workplace, and physical and mental harms reach to a point where they cannot be healed even by means of rehabilitation. Matthiesen and Einarsen (2004, p.226), however, state that people who suffer from mobbing will face serious emotional damage such as fear, anxiety, desperation, depression and shock. In addition to the physical and psychological losses faced by individuals during the mobbing process, the material and labor losses of the organizations can be very high. This is because the employee who suffered from mobbing will try to get away from the workplace, and thus he/she will often try to take sick leave. Moreover, this employee may leave the organization afterwards. These will result in a decrease in the effectiveness of the organization (Toker Gokce, 2008, p.48). In addition, studies on mobbing demonstrate that mobbing is an effective variable on human relations, organizational culture, organizational climate, values and performance of the organization. In addition to these, job satisfaction of employees also decreases because of mobbing (Tutar, 2007).

Job satisfaction is the pleasure or positive emotional state of an employee as a result of evaluating his/her job or work life (Basaran, 2008). Locke made the most commonly used definition of job satisfaction in the literature in 1976. Locke describes job satisfaction as "a pleasing or positive emotional state of a person after evaluating his/her work or work experiences" (Saari & Judge, 2004, p.396). Hackman and Oldham (1975, p.162) describe job satisfaction as "the general measurement of how satisfied and happy the employee is from his work". On the other hand, Izgar (2008, p.320) describes job satisfaction as the satisfaction of the expectations of the employees in business life. According to the author, this is because the employees have positive feelings towards the work and develop a positive attitude towards their business life if their expectations are met.

Job satisfaction has many positive consequences for both employees and organizations. High morale, positive relationships between employees, commitment to work, attendance at work and motivation are among the most important

consequences. Job dissatisfaction is a distressing factor for the employee and can lead him/her to negative emotions (Ozkaya, Ekinci Kaya, 2008). The physical, mental and social adaptation of the employee who is dissatisfied with his/her job may be impaired. Consequently, negative consequences may arise, such as employee's withdrawal from work, abandonment of work, indifference towards work, continuous complaining of work and having desperation thoughts about the future of the profession (Izgar, 2008, p.320). In addition, absenteeism and low job performance may also be a result of job dissatisfaction (Keser, 2005, p.78). An employee whose expectations are not met at the workplace may react by demonstrating aggressive behavior in the organization (Sevimli & Iscan, 2005, p.59).

The job satisfaction of employees who experienced mobbing, as well as their organizational commitment is affected negatively by this situation. Organizational commitment is a high level of self-sacrifice as a result of job satisfaction for the benefit of the organization (Tutar, 2007). O'Reilly and Chatman (1986) emphasize that organizational commitment is the psychological bond that the employee has towards his/her organization and expresses that this concept demonstrates the extent to which the individual internalizes or adopts the characteristics or perspectives of the organization. This concept, which reflects the interaction of the employee with his/her organization, is crucial for the effectiveness and development of the organizations. The reason for this is that the employees with high organizational commitment will strive to ensure the continuity and development of their organizations (Ozdevecioglu, 2003, p.127). As a matter of fact, organizational commitment is an important phenomenon in the employees' embracement of the objectives of the organization, perseveration of the desire to stay in the organization, participation in the management and activities of the organization, and adoption of a creative and innovative attitude for the organization (Durna & Eren, 2005). In this context, it is possible to suggest that organizational commitment is one of the factors that play an important role in reducing employee turnover and absenteeism and increasing their job performances (Subramaniam, McManus & Mia, 2002).

Studies in the literature demonstrate that both job satisfaction and organizational commitment play a critical role in the job performances of employees. However, mobbing behaviors that employees suffer from may have a negative impact on these two structures. As a matter of fact, there are studies that demonstrate the negative relationship between mobbing and job satisfaction (Civilidag, 2011; Ozdemir, 2014; Talas, 2016; Vural Ozkan, 2011) and organizational commitment (Aktas Kutukcu, 2015; Hickorkmaz, 2016; Zorlu, 2017). However, no research has been found in the music education field about the impact of this effective variable on music teachers working at educational institutions, especially in primary education institutions, whether it has an impact on the job satisfaction of the music teachers, and how much this situation is a determinant on their organizational commitment. Therefore, this study is expected to fill this void in the music education field. This study is significant for the reason that it is the first study in the literature about music teachers, reflection of mobbing on the outcomes such as organizational commitment and job satisfaction, and the first study demonstrating that the profession of music teaching is nested in educational sciences

as well as field subjects. The managers who will take actions in increasing the performance of music teachers, providing their job satisfaction and increasing their organizational commitment will benefit from the findings of this research.

In this research, we tried to determine the relationship between the levels of mobbing experienced by, and the organizational commitment and job satisfaction of music teachers who are working at primary schools, by taking into consideration the widespread implementation of the concept of mobbing in the institutions and organizations operating as a group and the recognition of these implementations with the effect of current interest.

Research Objective

This research aimed to determine the relationship between mobbing levels experienced by, and organizational commitment and job satisfaction of music teachers working at primary schools. Within the framework of this general-purpose, answers to the following questions were sought:

In relation to the music teachers working at primary schools,

1. What are the levels of experiencing mobbing, organizational commitment and job satisfaction?
2. Do the levels of experiencing mobbing, organizational commitment and job satisfaction demonstrate a significant difference according to the education, seniority, marital status, age and gender variables?
3. Is there a significant relationship between the mobbing they experience, their organizational commitment and job satisfaction?

Method

Research Design

This research was designed with a relational screening model. The research was designed in accordance with the relational survey model that is a research model aiming at defining the presence and degree of change between two or more variables (Karasar, 2009). This study aimed to determine the relationship between mobbing levels experienced by, and organizational commitment and job satisfaction of music teachers working at primary schools.

Research Sample

The population of the study consisted of 308 music teachers working at primary schools in the central districts of Ankara, which are affiliated to the Ministry of National Education. The sample of the study was determined by convenience sampling method. Convenience sampling includes selecting samples that are both easily accessible and willing to participate in research (Teddlie & Yu, 2007) and 248

music teachers were included in the sampling. The demographic information of the music teachers that participated in the research is provided in Table 2.

Table 2

Distribution of the Music Teachers by Demographic Information

Variables	**Categories**	**Frequency**	**%**
Gender	Female	136	54.8
	Male	112	45.2
Age	22-30	36	14.5
	31-39	121	48.8
	40 years and above	91	36.7
Marital Status	Married	137	55.2
	Single	78	31.5
	Divorced	25	10.1
Seniority in teaching (years)	1-5	31	12.5
	6-10	53	21.4
	11-15	65	26.2
	16-20	68	27.4
	21 and above	31	12.5
Seniority in music teaching (years)	1-5	50	20.2
	6-10	44	17.7
	11-15	60	24.2
	16-20	66	26.6
	21 and above	28	11.3
Educational status	Undergraduate	219	88.3
	Graduate	29	11.7

When we examine Table 2, we see that gender ratio of the teachers were proximate, while the age distribution was higher for music teachers between the ages of 31-39 (48.8%). While more than half of the teachers (55.2%) participating in the research were married, 31.5% were single and 7.7% were divorced. Moreover, almost all of the teachers (88.3%) that participated in the research were undergraduates.

Research Instruments and Procedures

Three different data collection tools were used in the research. These were Negative Behavior Scale, Organizational Commitment Scale and Job Satisfaction Scale. The frequency of exposure to mobbing behaviors of Music Teachers was measured by using the Negative Acts Questionnaire Scale (NAQ Scale) developed by Einarsen and Raknes (1997) and adapted into Turkish by Cemaloglu (2007). NAQ Scale consists of a total of 21 items representing exposure to various negative behaviors and a 5-point Likert-type interval is used for each item (1 = none, 2 = occasionally, 3 = once a month, 4 = once a week, 5 = every day). All items on the scale are related to behavior and the term mobbing is not indicated anywhere. The purpose of not indicating the term mobbing is to measure the level of exposure to the behavior without forcing the person surveyed to label the behavior as mobbing.

The Organizational Commitment Scale was developed by Balay (2000) and consists of a total of 27 items. A 5-point Likert-type interval is used for each item in the scale (1 = fully disagree, 2 = somewhat agree, 3 = moderately agree, 4 = agree, 5 = fully agree).

Minnesota Job Satisfaction Scale was developed by Weiss and his friends (Weiss et al., 1967). Translation of the scale into Turkish was conducted by Baycan (1985). Minnesota Job Satisfaction Scale consists of 100 questions; however, the short version of the scale consisting of 20 items was used in the research and a 5-point Likert interval is used for each item (1 = completely unsatisfied, 2 = not satisfied, 3 = neutral, 4 = satisfied, 5 = highly satisfied).

The scales that were used in the research are standard scales for which validity and reliability works have been carried out previously. Therefore, CFA was not carried out for the scales; the construct validity was examined by exploratory factor analysis and their reliabilities by Cronbach alpha. Reliability coefficients and factor loads of the scales and sub-dimensions are provided in Table 3.

Table 3
Reliability Coefficients and Factor Loads of the Scales

Scale	Item Number	Reliability (Cronbach α)	Ranges for factor load values
Negative Behavior	21	0.95	0.54-0.86
Organizational Commitment	27	0.95	0.48-0.85
Job Satisfaction	20	0.92	0.47-0.78

As seen in Table 3, the reliability coefficients were between 0.92 and 0.95. When we examine the table, the factor load values of the sub-dimensions ranged between 0.47 and 0.86.

Data Analysis

Kolmogorov-Smirnov test was used to determine the normal distribution. It was determined after the analyzes that the variables had normal distribution at all levels (p>0.05). For this reason, we used independent sampling t test for the comparison of two groups in the gap analyzes conducted in relation to the views of teachers, and one-way analysis of variance for the comparison of more than two groups. After the analysis of variance, among the multiple comparison tests, we used Tukey test to determine which groups were different from each other. We examined the assumption of homogeneity of variance with Levene test. Path analyzes based on correlation coefficients were performed in the study in order to demonstrate the relationship structures. Linear regression analysis was used to demonstrate the predictions between the variables. In the study, the upper limit for the level of significance in the results obtained for the analyzes was taken as .05. SPSS and LISREL packaged software were used for data analysis.

Results

When presenting the findings of the research, we primarily presented the levels of mobbing the music teachers experience, their organizational commitment and job

satisfaction. Afterwards, gap analyzes in relation to the relevant structures were included. Finally, we examined the effect of the levels of mobbing music teachers experience on organizational commitment and job satisfaction. Accordingly, arithmetic mean and standard deviation values in relation to the levels of mobbing experienced by, and organizational commitment and job satisfaction of the music teachers are provided in Table 1.

Table 4

Arithmetic Mean and Standard Deviation Values of the Levels of Mobbing Experienced by Music Teachers, Their Organizational Commitment and Job Satisfaction.

Scale	Sub-Dimensions	$\bar{X}$	S
Mobbing		1.30	.447
Organizational Commitment	Compliance	4.08	.774
	Identification	3.23	1.16
	Internalization	3.33	.997
	Total	3.52	.812
Job Satisfaction	Internal	3.85	.718
	External	3.59	.865
	Total	3.75	.744

When we examine Table 4, we see that the level of mobbing experienced by music teachers was low ($\bar{X}$=1.30). We may suggest that the music teachers' perception of the sub-dimensions of identification ($\bar{X}$= 3.23), internalization ($\bar{X}$= 3.33) and compliance ($\bar{X}$= 3.33) of organizational commitment was rather high. Therefore, we may suggest that music teachers internalized the institution they work at and established identification with the institution they work at. When we examine Table 4 in relation to the views of music teachers about job satisfaction, we see that music teachers were generally satisfied with their jobs ($\bar{X}$= 3.75). The job satisfaction levels of music teachers were rather high in both internal ($\bar{X}$= 3.85) and external ($\bar{X}$= 3.59) sub-dimensions. Table 5 exhibited the gap analysis results of the levels of mobbing experienced by music teachers according to demographic variables.

Table 5

Comparison of the Levels of Mobbing Experienced by Music Teachers According to Demographic Variables

Variable	Level	N	$\bar{X}$	S	Test§	*p*
Gender	Female	136	1.28	0.45	-0.67	0.50
	Male	112	1.32	0.44		
Age	22-30	36	1.29	0.41	0.68	0.51
	31-39	121	1.27	0.43		
	40 years and above	91	1.35	0.48		
Marital status	Married	137	1.30	.41	0.47	0.63
	Single	78	1.29	.44		
	Divorced	25	1.39	.68		

Table 5 continue

Variable	Level	N	$\bar{X}$	S	Test§	p
Seniority (years)	1-5	50	1.28	0.37	0.94	0.44
	6-10	44	1.32	0.39		
	11-15	60	1.37	0.45		
	16-20	66	1.30	0.58		
	21 and above	28	1.17	0.22		
Educational status	Undergraduate	219	1.28	0.40	-2.48	0.14
	Postgraduate	29	1.50	0.70		

§ shows the values of *t* statistic for gender and educational status and *F* statistic for other variables.

According to Table 5, it can be suggested that the levels of mobbing experienced by music teachers working at primary schools did not demonstrate a statistically significant variance in terms of gender [$t_{(246)}$=–0.67; p>0.05], age [$F_{(2,245)}$=0.68; p>0.05], marital status [$F_{(2,245)}$=0.47; p>0.05], seniority [$F_{(4,243)}$=0.94; p>0.05] and educational status [$t_{(246)}$=–2.48; p>0.05]. Table 6 exhibited the gap analyses of the organizational commitment levels of music teachers according to demographic variables.

As seen from the Table 6, when the results of organizational commitment levels were examined, it might be suggested that the levels of compliance [$F_{(2,\ 243)}$=3.97, p<0.05] and identification [$F_{(2,\ 241)}$=4.16, p<0.05] of music teachers demonstrated variance. In order to determine between which groups the variance occured, Tukey test was performed among Post Hoc tests and it was determined that the teachers in the age group of 22-30 had significantly higher levels of both compliance and identification compared to the teachers in other age groups. We see that there was a significant decrease in these levels of teachers in the older ages. In the comparisons made based on marital status, it was found that there was significant variance in the levels of compliance [$F_{(2,\ 235)}$=5.46, p<0.05] and identification [$F_{(2,\ 233)}$=4.24, p<0.05]. According to the results of Tukey test conducted in order to determine the source of the variance, it was determined that divorced teachers had significantly lower compliance levels compared to both married and single teachers, whereas in the dimension of identification, divorced teachers had significantly lower levels of identification compared to single teachers, and single teachers had significantly lower levels of identification compared to married teachers. In the examination made based on the seniority of the teachers, we observed significant variance between the views of teachers in the internalization sub-dimension [$F_{(4,\ 239)}$=2.53, p<0.05]. Accordingly, Tukey test was used to determine between which groups the variance occured and the internalization dimension levels of teachers with seniority of 16 years and above was determined to be significantly higher compared to the teachers with seniority of 1-5 years, 6-10 years and 11-15 years. Similarly, it was determined that the internalization levels of teachers with seniority of 21 years and above were significantly higher compared to the teachers with seniority of 1-5 years, 6-10 years and 11-15 years. In the remaining comparisons, there was no significant variance in the dimensions of organizational commitment.

Table 6

Comparison of Organizational Commitment Levels of Music Teachers According to Demographic Variables

Variable	Dimension	Level	N	$\bar{X}$[t]	S	Test[§]	*p*	*Significant Difference*
Gender	*Compliance*	1.Female	136	4.14	0.75	1.44	0.15	-
		2.Male	112	4.00	0.80			
	Identification	1.Female	136	3.28	1.10	0.83	0.41	-
		2.Male	112	3.16	1.24			
	Internalization	1.Female	136	3.41	0.93	1.56	0.12	-
		2.Male	112	3.22	1.06			
Age	*Compliance*	1. 22-30 years	36	4.40[a]	0.70	3.97*	0.02	1-2, 1-3
		2.31-39 years	121	4.06[b]	0.79			
		3.40 years above	91	3.98[b]	0.76			
	Identification	1.22-30	36	3.61[a]	1.15	4.16*	0.02	1-2, 1-3, 2-3
		2.31-39	121	3.30[b]	1.18			
		3.40 years above	91	2.98[c]	1.10			
	Internalization	1.22-30	36	3.37	0.87	0.15	0.86	-
		2.31-39	121	3.35	1.10			
		3.40 years above	91	3.28	0.91			
Marital status	*Compliance*	1.Married	137	4.12[a]	0.72	5.46*	0.01	1-3, 2-3
		2.Single	78	4.13[a]	0.78			
		3.Divorced	25	3.58[b]	0.90			
	Identification	1.Married	137	3.13[a]	1.13	4.24*	0.02	1-2, 2-3
		2.Single	78	3.49[b]	1.19			
		3.Divorced	25	2.80[c]	1.01			
	Internalization	1.Married	137	3.27	1.07	0.35	0.70	-
		2.Single	78	3.38	0.90			
		3.Divorced	25	3.39	0.95			
Seniority (years)	*Compliance*	1.1-5 years	50	4.18	0.73	0.60	0.67	-
		2.6-10 years	44	4.10	0.82			
		3.11-15 years	60	3.96	0.74			
		4.16-20 years	66	4.10	0.81			
		5.21 years above	28	4.05	0.76			
	Identification	1.1-5 years	50	3.54	1.19	1.54	0.19	-
		2.6-10 years	44	3.13	1.32			
		3.11-15 years	60	3.10	1.08			
		4.16-20 years	66	3.29	1.13			
		5.21 years above	28	2.97	1.03			
	Internalization	1.1-5	50	3.20[a]	1.01	2.53*	0.04	1-4, 2-4, 3-4, 1-5, 2-5, 3-5
		2.6-10	44	3.12[a]	1.10			
		3.11-15	60	3.08[a]	0.98			
		4.16-20	66	3.54[b]	0.90			
		5.21 years above	28	3.54[b]	0.96			
Educational status	*Compliance*	1.Undergraduate	219	4.09	0.78	0.53	0.60	-
		2.Postgraduate	29	4.00	0.71			
	Identification	1.Undergraduate	219	3.23	1.14	0.21	0.83	-
		2.Postgraduate	29	3.18	1.32			
	Internalization	1.Undergraduate	219	3.36	0.99	1.38	0.17	-
		2.Postgraduate	29	3.09	1.05			

* $p<0.05$

[t] Letters next to the mean indicate different groups.

[§] shows the values of *t* statistic for gender and educational status and *F* statistic for other variables.

Table 7 exhibits the gap analyses of job satisfaction levels of music teachers according to demographic variables.

Table 7

Comparison of Job Satisfaction Levels of Music Teachers According to Demographic Variables

Variable	Dimension	Level	N	$\bar{X}^t$	S	Test§	*p*	*Significant Difference*
Gender	**Internal**	Female	136	3.86	0.70	0.40	0.69	-
		Male	112	3.83	0.74			
	External	Female	136	3.57	0.86	-0.32	0.75	-
		Male	112	3.61	0.88			
Age	**Internal**	22-30	36	3.94	.64	0.95	0.39	-
		31-39	121	3.88	.72			
		40 years and above	91	3.77	.75			
	External	22-30	36	3.74[a]	.91	3.61*	0.03	1-3, 2-3
		31-39	121	3.69[a]	.87			
		40 years and above	91	3.40[b]	.82			
Marital status	**Internal**	Married	137	3.82	0.73	1.87	0.15	-
		Single	78	3.95	0.69			
		Divorced	25	3.64	0.81			
	External	Married	137	3.56[a]	0.81	4.15*	0.02	1-3, 2-3
		Single	78	3.75[a]	0.94			
		Divorced	25	3.19[b]	0.80			
Seniority (years)	**Internal**	1-5	50	3.92	0.64	1.79	0.13	-
		6-10	44	3.81	0.74			
		11-15	60	3.65	0.91			
		16-20	66	3.94	0.53			
		21 and above	28	3.97	0.69			
	External	1-5	50	3.73	0.82	1.31	0.26	-
		6-10	44	3.63	0.88			
		11-15	60	3.51	0.97			
		16-20	66	3.65	0.82			
		21 and above	28	3.30	0.77			
Educational status	**Internal**	Undergraduate	219	3.86	0.69	0.85	0.40	-
		Graduate	29	3.74	0.89			
	External	Undergraduate	219	3.62	0.84	1.57	0.12	-
		Graduate	29	3.35	1.05			

* $p<0.05$

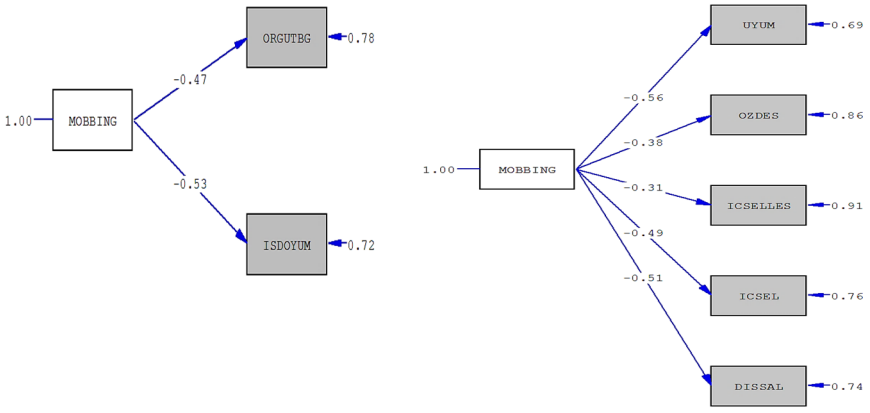
[t] Letters next to the mean indicate different groups.

§ shows the values of *t* statistic for gender and educational status and *F* statistic for other variables.

According to Table 7, it may be suggested that the external job satisfaction levels of music teachers demonstrated variance based on age [$F_{(2,245)}=0.95$; $p>0.05$] and marital status [$F_{(2,245)}=4.15$; $p<0.05$]. Among Post Hoc tests, Tukey results were examined in order to determine the source of the variance. According to this, it was concluded that the external job satisfaction of the teachers who were 40 years of age

and above were significantly lower compared to other teachers, and that the external job satisfaction levels of the divorced teachers were significantly lower than other teachers. Any other demographic variable, other than age and gender, was not determined what caused a significant variance in external job satisfaction. Moreover, there was no significant variance based on demographic variables in the comparisons made according to internal job satisfaction.

Path analysis with observed variables was conducted on two different models (Model 1 and Model 2) in order to examine the relationships between job satisfaction of, mobbing levels experienced by, organizational commitment of music teachers working at primary schools. Model 1 and Model 2 were provided below, respectively.



Model 1 **Model 2**

Figure 1. Path Diagrams for the Relationships Between Mobbing Levels Experienced by, and Job Satisfaction and Organizational Commitment of Music Teachers (ORGUTBG: Organizational Commitment, ISDOYUM: Job Satisfaction, UYUM: Compliance, OZDES: Identification, ICSELLES: Internalization, ICSEL: Internal, DISSAL: External)

When we examine Model 1 provided in Figure 1, we see that the correlation coefficients were negative between the levels of mobbing experienced by, and job satisfaction (r = -0.47) and organizational commitment (r = -0.53) of music teachers working at primary schools. Therefore, it may be suggested that the levels of mobbing experienced by music teachers working at primary schools had negative affect on their organizational commitment and job satisfaction levels. In other words, job satisfaction and organizational commitment decreased, as the mobbing scores of teachers increased. In addition, when we examine the correlation coefficients, we see that the level of mobbing experienced had more impact on job satisfaction compared to the organizational commitment. In Model 2, the correlation coefficients were negative

between the levels of mobbing experienced, compliance, identification, internalization, internal job satisfaction and external job satisfaction of the music teachers working at primary schools. In other words, these sub-dimensions decreased, as mobbing increased. When we examine the correlation coefficients, the sub-dimension that was affected the most by the level of mobbing experienced was the compliance sub-dimension. In other words, a variance that will occur in the levels of mobbing experienced by music teachers significantly reduces the compliancecompliance sub-dimension of organizational commitment. The regression results about the significance of the path coefficients were provided in Table 6. When we examine the results, we can suggest that all predictions were significant (p<0.05). The compliancecompliance coefficients of the Models 1 and 2 were provided in Table 8.

Table 8

Results of Goodness of Fit Coefficient of Models

Models	Goodness of Fit Coefficients					
	Chi-square/sd	**RMSEA**	**GFI**	**AGFI**	**NFI**	**CFI**
Model 1	1.875	0.052	0.902	0.900	0.912	0.905
Model 2	2.025	0.048	0.913	0.905	0.927	0.922

According to Table 8, chi-square/sd ratio was obtained as 1.875 and 2.025. It indicates good fit if this value is less than 2, and acceptable fit if it is between 2 and 3. According to Brown (2006), TLI (Tucker-Lewis Index) and CFI (Comparative Fit Index) values demonstrate model fit if they are 0.90 or higher. GFI (goodness of fit index) between 0.90 and 0.95 indicates acceptable fit, and GFI that is greater than 0.95 indicates good fit (Hooper, Coughlan and Mullan, 2008; Miles and Shevlin 2007). Values greater than 0.85 are acceptable for AGFI (adjusted goodness of fit index) (Raykov, 2006; Schermelleh, 2003). Similar ranges also apply for NFI (normed fit index) (Hu and Bentler, 1999). According to Browne and Cudeck (1993), the RMSEA value that is below 0.08 is another indicator for model fit. The regression analysis results of the relationships between the levels of mobbing experienced by, the organizational commitment and job satisfaction of music teachers were provided in Table 9.

Table 9

Regression Outputs of Relationships Between Levels of Mobbing Experienced by, and Organizational Commitment and Job Satisfaction of Music Teachers

	Dependent variable	**Regression Coefficient**	**Standard Error**	**t**	***p***
Model 1	Organizational Commitment	-0.854	0.102	-8.34	0.01
	Job Satisfaction	-0.869	0.090	-9.68	0.01
Model 2	Compliance	-0.961	0.091	-10.50	0.01
	Identification	-0.990	0.153	-6.46	0.02
	Internalization	-0.680	0.135	-5.03	0.02
	Internal	-0.796	0.090	-8.86	0.01
	External	-0.985	0.082	-9.21	0.01

When we examine Table 9, we see that compliance [$t_{(246)}$=10.50; p<0.05], identification [$t_{(246)}$=-6.46; p<0.05], internalization [$t_{(246)}$=-5.02; p<0.05], internal job satisfaction [$t_{(246)}$=-8.86; p<0.05] and external job satisfaction [$t_{(246)}$=-9.21; p<0.05] significantly predicted the mobbing level. Additionally, according to Table 9, a 1-point increase in the mobbing level resulted in a 0.854-point decrease in the organizational commitment score in general and a 0.869-point decrease in the job satisfaction score in general. In spite of the 1-point increase in the mobbing level, the regression coefficient, which was 0.961 between the compliance sub-dimension of the organizational commitment and mobbing, demonstrated that there was a 0.961-point decrease in the compliance sub-dimension of the organizational commitment. Likewise, in spite of a 1-point increase in the mobbing level, a 0.99-point decrease in the identification sub-dimension of the organizational commitment occurred. The predictions between the internalization sub-dimension of organizational commitment and mobbing were seen to be lower than the predictions with the other sub-dimensions. A 1-point increase in mobbing level resulted in a 0.68-point decrease in the internalization sub-dimension of the organizational commitment. Lastly, we see that a 1-point increase in the mobbing level resulted in a 0.796-point decrease in internal job satisfaction.

Discussion, Conclusion, and Recommendations

This study aimed to determine the relationship between mobbing levels experienced by, and organizational commitment and job satisfaction of music teachers working at primary schools and was conducted with relational screening model. In this research, the views of the music teachers working at primary schools in Ankara city center, which are affiliated to the Ministry of National Education, were used. According to the findings of the study, almost one-fourth of the music teachers (%24,6) were exposed to mobbing behaviors. Furthermore, music teachers encountered mobbing in schools mostly in issues related to their occupations. This finding is supported by a study conducted by Yilmaz (2017). Similarly, it was found in the study conducted with teachers working at primary, secondary and high schools that teachers are most exposed to occupational mobbing behaviors and then to mobbing behaviors towards their personalities.

It was determined that the levels of mobbing experienced by the teachers did not demonstrate a significant variance in the comparisons made based on gender, age, marital status, seniority, and educational status. According to these results, it may be suggested that music teachers' exposure to mobbing is experienced equally in all ages, seniorities and educational statuses regardless of gender and marital status. In addition, Leyman (1996) determined that mobbing does not vary significantly in terms of gender and age. It is determined in the studies conducted by Atar (2017), Besogul (2014), Erdemir (2013), Gokce (2006) and Sonmezisik (2011) that exposure to mobbing behaviors does not demonstrate a significant variance in terms of gender. Similar to the findings of this study, it is revealed in the studies conducted by Otrar and Ozen (2009) and Zorlu (2017) that the variable of marital status does not demonstrate a significant variance. However, it is possible to encounter different results in the

literature from the findings of this study. In a study conducted by Erturk (2005) with primary school teachers and school administrators, it is determined that mobbing exposure levels of the participants vary in terms of gender, position and age. According to the results of these variables, it is concluded that males are exposed to mobbing more than females, school administrators are exposed to mobbing more than teachers and the age group of 53 years and above, which is the highest age group in the scope of the research, is exposed to mobbing more than the other age groups. In his study conducted with secondary school teachers, Urasoglu Bulut (2007) demonstrated that male teachers and employees under the age of 25 are more exposed to mobbing at school. However, in some studies (Cogenli, Asunakutlu & Turegun, 2017; Karabacak Asir & Akin, 2014; Otrar & Ozen, 2009; Ozdemir, 2015), it is concluded that female teachers are exposed more to mobbing behaviors. Serin (2018) demonstrated that primary school teachers' exposure to mobbing behaviors do not demonstrate a significant variance according to variables of marital status, age, occupational seniority, educational status and branch; but that male teachers and teachers who have been working at the school for 1-5 years are exposed to mobbing behaviors more. As is seen, different results have been obtained in the literature about the variation of the levels of mobbing experienced by teachers in terms of demographic variables.

It is concluded that music teachers' perceptions of organizational commitment, compliance, identification and internalization sub-dimensions were quite high. Similarly, Coban (2015) also demonstrated that teachers had high organizational commitment. Aslan and Agiroglu Bakir (2014) determined in their studies, in which they examined the organizational commitment of teachers, that teachers have positive feelings about the institution they work at. The study conducted by Kocabiyik (2017) determined that the organizational commitment levels of teachers are at a moderate level. However, Karacaoglu and Guney (2010); Ugrasoglu and Caganaga (2017); Goren and Sarpkaya (2014) also concluded in their studies that teachers have low organizational commitment and do not feel sufficiently attached to their institutions. It is determined that the levels of organizational commitment of music teachers do not demonstrate significant variance in the comparison based on gender and educational status. In the studies conducted by Karacaoglu and Guney (2010) and Nartgun and Menep (2010), it is determined that there is no variance between the organizational commitment of teachers based on gender. However, studies in the literature are also found where male teachers have higher organizational commitment (Aslan & Agiroglu Bakir, 2014; Coban, 2015; Kursunoglu, Bakay & Tanriogen, 2010). Different from this study, Aslan and Bakir (2014) concluded in terms of educational status variables that the perceptions of organizational commitment of teachers with associate degrees are higher than those with undergraduate degrees.

In this study, it was revealed that the organizational commitment levels of music teachers demonstrated significant variance according to age, marital status and seniority variables. In the comparison of organizational commitment levels according to age groups, it was determined that there was significant variance in the sub-dimensions of compliance and identification, and variance between the young

teachers in the age group of 22-30, the middle-aged teachers in the age group of 31-39, and the teachers in the age group of 40 and above, and that young music teachers had more difficulty in compliance compared to their older colleagues. In terms of age variable, different results were achieved in the organizational commitment. Kursunoglu, Bakay and Tanriogen (2010) demonstrated that the emotional commitment of teachers who are 46 years old and above is higher than that of teachers who are 35 years old and under; and Coban (2015) demonstrated that the organizational commitment scores of teachers in the age group of 36-50 are higher than those of teachers in the age group of 20-35. However, Karacaoglu and Guney (2010) determined that the organizational commitment of teachers does not differ based on age.

In the comparison of levels of organizational commitment of music teachers according to marital status, it was concluded that there was a significant variance in the sub-dimensions of compliance and identification; that in the sub-dimension of compliance, divorced music teachers had less compliance compared to their single or married colleagues, whereas in the sub-dimension of identification, married music teachers had less identification compared to the single music teachers; and that single music teachers had more identification than their divorced colleagues. Kursunoglu, Bakay and Tanriogen (2010) demonstrated that the normative commitment of married teachers is higher compared to the normative commitment of single teachers. Similarly, Goren and Yengin Sarpkaya (2014) revealed that married teachers have a higher level of affective commitment compared to single teachers. Moreover, there are studies concluding that there are no variances between the organizational commitment of teachers in terms of marital status variable (Karacaoglu & Guney, 2010; Nartgun & Menep, 2010).

It is determined in the comparison of the levels of organizational commitment based on seniority year that music teachers who had a seniority of 1-15 years had lower organizational commitment in the internalization sub-dimension than their colleagues who had seniority of 16 years and above. In other words, it was concluded that teachers who had seniority of 15 years or less demonstrated less internalization towards their organizations. Nartgun and Menep (2010) determined that the perception levels of emotional commitment of teachers who have occupational seniority of 1-5 years are lower than those of teachers who have occupational seniority of 6-10 years. On the other hand, Aslan and Bakir (2014) revealed that the perceptions of organizational commitment of teachers who have seniority of 6-10 years and 16-20 years are significantly lower than the perceptions of organizational commitment of their colleagues who have seniority of over 21 years. Kursunoglu, Bakay and Tanriogen (2010), however, determined that there is no variance in the organizational commitment of the teachers according to the seniority variable, but the emotional commitment of the teachers who have been working at that school for 5 years and less is lower than that of teachers working at the school they were working for 6-10 years and 11 years and more.

It is concluded that music teachers were generally satisfied with their jobs according to the sub-dimensions of both internal and external job satisfaction. In other

words, the job satisfaction of the music teachers participating in the study was at a good level. Similarly, in many studies (Altinkurt & Yilmaz, 2014; Gencturk & Memis, 2010; Kumas & Deniz, 2010; Sahin, 2013; Yilmaz, 2017), it is determined that the job satisfaction of teachers is at a moderate level. It was determined in this study that job satisfaction did not vary in terms of gender and seniority and that age and marital status demonstrated a significant variance in job satisfaction levels. Accordingly, in the sub-dimension of external job satisfaction, it was observed that music teachers who were 39 years old and under demonstrated more external job satisfaction compared to their colleagues who were 40 years old and above, and that, accordingly, there was a decrease in the external job satisfaction as the music teachers working at primary schools exceeded the age of 40, and that the external job satisfaction in divorced teachers was found to be lower compared to married or single teachers. Even though it is concluded in many studies (Altinkurt &Yilmaz, 2014; Arkci, 2014; Deregozu, 2016; Gencturk & Memis, 2010; Kilic, 2013; Olcum, 2015; Yilmaz, 2017) that the job satisfaction levels of teachers do not vary based on gender variable, there are also studies that demonstrate higher levels of job satisfaction of female teachers (Kumas & Deniz, 2010) or higher levels of job satisfaction of male teachers (Umay, 2015).

Although there are studies, similar to the present study, indicating that the job satisfaction of teachers is not varied based on seniority (Altinkurt & Yilmaz, 2014; Arkci, 2014; Yilmaz, 2017), it is possible to come across studies (Gencturk & Memis, 2010; Kilic, 2013; Kumas & Deniz, 2010) that determine significant variances in terms of seniority. It is possible to encounter different results in the literature based on age variable. Similar to the findings of the present study, it is determined in a study conducted by Yilmaz (2017) that teachers in the age group of 31-39 have higher job satisfaction levels compared to the teachers in the age group of 40-49. Deregozu (2016) also determined that the job satisfaction score of teachers in the age group of 30-40 is lower. Kumas and Deniz (2010) determined that job satisfaction levels of young teachers (in the age group of 20-25) are higher compared to those of higher age groups; and Filiz (2014), Olcum (2015) and Sahin (2013) determined that age is a variable that does not have an impact on job satisfaction. In terms of marital status variable, there are different results in the literature. It is observed in some studies that single teachers have more job satisfaction compared to married teachers (Deregozu, 2016; Sahin, 2013); and in some other studies, it is observed that the job satisfaction of teachers do not differ based on marital status variables (Filiz, 2014; Yilmaz, 2017).

It was concluded that the level of mobbing experienced had an adverse impact on the levels of organizational commitment and job satisfaction, that job satisfaction and organizational commitment scores of teachers decreased as their mobbing scores increased, and that the level of mobbing experienced had more impact on job satisfaction compared to organizational commitment. It was determined that the level of mobbing experienced had the most impact on the compliance sub-dimension of organizational commitment, then followed by the sub-dimensions of external job satisfaction and internal job satisfaction. Moreover, according to the regression results concerning the relationship between level of mobbing experienced by, and the organizational commitment and job satisfaction of music teachers, it was determined

that level of mobbing significantly predicted organizational commitment and job satisfaction. A negative relationship is determined between mobbing and job satisfaction in the studies conducted with nurses by Ozdemir (2014) and Talas (2016). It is also seen in a study conducted with the instructors that there is a significant negative relationship between the two structures (Civilidag, 2011). Similarly, in a study conducted by Vural Ozkan (2011) with participants working in different fields, a negative relationship between mobbing and job satisfaction is determined. However, a significant negative relationship is found between the two structures in studies examining the relationship between mobbing behaviors and organizational commitment (Aktas Kutukcu, 2015; Hickorkmaz, 2016; Zorlu, 2017). However, there are also studies in literature, which reveal the absence of a significant relationship between mobbing and organizational commitment (Tuncel, 2009; Cetin, 2015).

In conclusion, one of the important findings of this study was to reveal that there was a negative and significant relationship between the levels of mobbing experienced by, and the organizational commitment and job satisfaction of teachers, and that these two structures significantly predicted mobbing behaviors. Therefore, a requirement of increasing the organizational commitment and job satisfaction of music teachers is to ensure that they are not exposed to mobbing behaviors. When taking into consideration that music teachers experience mobbing in schools, especially in relation to their occupations, and mobbing behaviors they are most exposed to, creating their role/position definitions at the level of their competences, taking into account their ideas and views and their requests when they ask to use their rights (sick leave, holiday entitlement) will help increase their organizational commitment and job satisfaction. Therefore, it is obvious that school administrators have important responsibilities in this regard. In this regard, knowing that the organizational commitment of the employees, whose job satisfaction is increased, will increase and the negative effects of mobbing will, in any case, be eliminated, will guide the administrators in determining the strategies about their employees. On the other hand, this research will offer important insight into scientists working and/or conducting research on mobbing. In future studies, new research designs may be formed with a number of different variables on, for example, how to increase job satisfaction and organizational commitment or on how to reduce mobbing.

References

Aksoy, F. (2008). *Psikolojik şiddet'in (mobbing) sağlık çalışanlarına etkisi* (Yayımlanmamış doktora tezi). Marmara Üniversitesi Sağlık Bilimleri Enstitüsü, İstanbul.

Aktas Kutukcu, B. (2015). *Mobbing (yıldırma) ve örgütsel bağlılıkla ilişkisi: Bir kamu kurumu örneğinde* (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi, Sosyal Bilimler Enstitüsü.

Altinkurt, Y., & Yilmaz, K. (2014). Ogretmenlerin mesleki profesyonelliği ile iş doyumları arasındaki ilişki. *Sakarya Üniversitesi Eğitim Fakültesi Dergisi, 4*(2), 57-71.

Arkçı, M. (2014). I*lkogretim okulu mudurlerinin liderlik stillerinin ogretmenlerin iş doyumuna etkisi: Gölbaşı ilçesi örneği* (Yayımlanmamış yüksek lisans tezi). Türk Hava Kurumu Üniversitesi, Sosyal Bilimler Enstitüsü.

Aslan, M., & Ağıroğlu Bakır, A. (2014). Öğretmenlerin okullarındaki örgütsel bağlılığa ilişkin görüşleri. *International Journal of Social Science,* (25), 189-206. Doi number: http://dx.doi.org/10.9761/JASSS2249.

Atar, B. (2017). *Sınıf öğretmenlerinin örgütsel adalet algıları ile psikolojik şiddet algıları arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Akdeniz Üniversitesi, Eğitim Bilimleri Enstitüsü.

Bahce, C. (2007). *Mobbing oluşumunda örgüt kültürünün rolü: bir örnek uygulama* (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi Sosyal Bilimler Enstitüsü, Ankara

Balay, R. (2000). *Özel ve resmi liselerde yönetici ve öğretmenlerin örgütsel bağlılığı: Ankara ili örneği* (Yayımlanmamış doktora tezi). Ankara Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Basaran, İ.E. (2008). *Örgütsel davranış insanın üretim gücü.* Ankara: Ekinoks Eğitim Danışmanlık.

Besogul, C. (2014). *Öğretmenlerin mobbinge maruz kalma düzeyleri ile örgütsel bağlılıkları arasındaki ilişki Kocaeli ili Gölcül ilçesi örneği* (Yayınlanmamış yüksek lisans tezi). Kocaeli Üniversitesi, Sosyal Bilimler Enstitüsü, Kocaeli.

Brown, T. A. (2006). *Confirmatory factor analysis: For applied research*. NY: Guilford Press.

Browne, M. W., & Cudeck, R. (1993). Alternativeways of assessing model fit. K.A. Bollen & J.S. Long (Ed.), *Testing structural models.* Newbury Park: Sage.

Cemaloglu, N. (2007). The relationship between organizational health and bullying that teachers experience in primariy schools in Turkey. *Educational Research Quarterly, 31*(2), 3-29.

Cetin, A. (2015). *İş hayatında yıldırma'nın (mobbing) çalışanların örgütsel bağlılık düzeylerine etkisi: Bir kamu kurumuna yönelik araştırma* (Yayınlanmamış yüksek lisans tezi). Türk Hava Kurumu Üniversitesi, Sosyal Bilimler Enstitüsü.

Civilidag, A. (2011). *Üniversitelerdeki öğretim elemanlarının psikolojik taciz (mobbing), iş doyumu ve algılanan sosyal destek düzeyleri* (Doktora tezi). Selçuk Üniversitesi, Eğitim Bilimleri Enstitüsü.

Coban, T. (2015). *Okul kültürünün öğretmenlerin örgütsel bağlılıkları üzerindeki etkilerinin incelenmesi* (Yayınlanmamış yüksek lisans tezi). Türk Hava Kurumu Üniversitesi, Sosyal Bilimler Enstitüsü.

Cogenli, M.Z., Asunakutlu, T., & Türegün, Z.N. (2017). Gender and mobbing: The case of Turkey. *İşletme Araştırmaları Dergisi, 9*(3), 109-121.

Davenport, N., Schwartz, R. D., & Elliot, G.P. (2003). *Mobbing iş yerinde duygusal taciz* (Translate Önertoy, O.C.). Sistem Yayıncılık No 349. (eserin orjinali 1999'da yayımlanmıştır).

Demir, C. (1998). *Ortaöğretim kurumlarında görev yapan rehber öğretmenlerin iş doyumu* (Yayınlanmamış yüksek lisans tezi). Ankara Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Deregözü, A. (2016). *Kamu ve özel sektörde çalışan öğretmenlerin iş doyumu ve benlik saygısının incelenmesi* (Yayınlanmamış yüksek lisans tezi). Beykent Üniversitesi, Sosyal Bilimler Enstitüsü.

Durna, U., & Eren, V. (2005). Üç bağlılık unsuru ekseninde örgütsel bağlılık. *Doğuş Üniversitesi Dergisi, 6*(2), 210-219.

Ercetin, S.S., Hamedoglu, M.A., & Çelik, S. (2008). Mobbing in primary schools: A case study for Hendek County. *World Applied Sciences Journal, 3*(6), 945-955

Erdemir, S. (2013). *İlköğretim öğretmenlerinin duygusal zeka düzeyleri ile yaşadıkları psikolojik yıldırma (mobbing) arasındaki ilişki üzerine bir araştırma* (Yayımlanmamış yüksek lisans tezi). Gaziantep Üniversitesi, Eğitim Bilimleri Enstitüsü, Gaziantep.

Ergener, B. (2008). *İlköğretim okullarında görev yapan öğretmenlerin yıldırma (mobbing) yaşamaları ile örgütsel bağlılıkları arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

Erturk, A. (2005). *Öğretmen ve okul yöneticilerinin okul ortamında maruz kaldıkları yıldırma eylemleri* (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

Filiz, Z. (2014). Öğretmenlerin iş doyumu ve tükenmişlik düzeylerinin incelenmesi. *Uluslararası Yönetim İktisat ve İşletme Dergisi, 10*(23), 157- 171.

Genctürk, A., & Memiş, A. (2010). İlköğretim okulu öğretmenlerinin öz-yeterlik algıları ve iş doyumlarının demografik faktörler açısından incelenmesi. *Elementary Education Online, 9*(3), 1037-1054.

Gokce, A. T. (2006). *İşyerinde yıldırma: Özel ve resmi ilköğretim okulu öğretmen ve yöneticileri üzerine yapılan bir araştırma* (Yayımlanmamış doktora tezi). Ankara Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

Goren, T., & Yengin Sarpkaya, P. (2014). İlköğretim kurumlarında görev yapan öğretmenlerin örgütsel bağlılık düzeyleri (Aydın ili örneği). *Eğitim Bilimleri Dergisi, 40*, 69-87.

Gunay, A. (2006). Öğretmenlerin lisans eğitimlerinden ve çalışma ortamlarından kaynaklanan sorunları. *Kastamonu Eğitim Dergisi*, 14 (2), 647-652.

Hackman, J.R., & Oldham, G.R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60*(2), 159-170.

Hickorkmaz, S. (2016). *Mobbing algısının örgütsel bağlılık düzeyi üzerindeki etkisi (İzmit ilçesi kamu çalışanları örneği)* (Yayımlanmamış yüksek lisans tezi). Nişantaşı Üniversitesi, Sosyal Bilimler Enstitüsü.

Hooper, D., Coughlan, J., & ve Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods, 6*(1), 53–60.

Hu, L. T., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling, 6*(1), 1–55.

Izgar, H. (2008). Okul yöneticilerinde iş doyumu ve örgütsel bağlılık. *Ahmet Keleşoğlu Eğitim Fakültesi Dergisi, 25*, 317-334.

Karabacak Asir, S., & Akın, G. (2014). Mobbing in primary schools in the context of gender perspective. *International Journal of Human Sciences, 11*(1), 584-602.

Karacaoğlu, K., & Güney, Y.S. (2010). Öğretmenlerin örgütsel bağlılıklarının, örgütsel vatandaşlık davranışları üzerindeki etkisi: Nevşehir ili örneği. *Öneri Dergisi, 9*(34), 137-153.

Karacaoglu, K., & Reyhanoglu, M. (2006). 'Kıbrıs Türkü' ve 'Türkiyeli' ayrımı bağlamında işyerinde yıldırma. *Ankara Üniversitesi Sosyal Bilimler Fakültesi Dergisi, 61*(4), 145-176.

Karasar, N. (2009). *Bilimsel araştırma yöntemi.* (19. Baskı). Ankara: Nobel Yayın Dağıtım.

Karyagdı, A. (2007). *Örgütlerde yıldırma (mobbing) ve bir araştırma* (Yayımlanmamış yüksek lisans tezi). İnönü Üniversitesi Sosyal Bilimler Enstitüsü, Malatya.

Kilic, M. (2013). *İlköğretim okullarında görevli öğretmenlerin örgütsel sinizm düzeyleri ile iş doyumları arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Gaziantep Üniversitesi, Eğitim Bilimleri Enstitüsü.

Kocabiyik, M. (2017). *Öğretmenlerin örgütsel bağlılıklarının yordanmasında, okul yöneticilerinin kullandıkları güç mesafesi ve örgütsel adaletin etkisi* (Yayımlanmamış yüksek lisans tezi). İstanbul Sabahattin Zaim Üniversitesi, Sosyal Bilimler Enstitüsü.

Kocaoglu, M. (2007). *Mobbing (iş yerinde psikolojik taciz, yıldırma) uygulamaları ve motivasyon arasındaki ilişkinin incelenmesine yönelik bir araştırma* (Yayımlanmamış yüksek lisans tezi). Yıldız Teknik Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Kumas, V., & Deniz, L. (2010). Öğretmenlerin iş doyum düzeylerinin incelenmesi. *Marmara Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Dergisi, 32*(2), 123-139.

Kursunoglu, A., Bakay, E., & Tanrıöğen, A. (2010). İlköğretim okulu öğretmenlerinin örgütsel bağlılık düzeyleri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi,* (28), 101-115.

Leymann, H. (1993). *Mobbing.* Hamburg, Rowohlt.

Leymann, H. (1996). The content and development of mobbing at work. *European Journal of Work and Organizational Psychology, 5*(2), 165-184.

Matthiesen, S.B. (2006). *Bullying at work: Antecedents and outcomes* (Doktoral dissertation). University of Bergensis, Norveç.

Matthiesen, S.B., & S. Einersen. (2004). Psychiatric distress and symptoms of PTSD among victims of bullying at work. *British Journal of Guidance & Councelling, 32*(3), 335-356.

Meyer, J.P, & Allen, N.J. (1997). *Commitment in the workplace, theory, research and application.* California: Sage Publications.

Miles, J., & Shevlin, M. (2007). A time and a place for incremental fit indices. *Personality and Individual Differences, 42*(5), 869–874.

Minibas-Pousard, J., & Idig-Camuroglu, M. (2009). *Psikolojik taciz iş yerindeki kabus*. Ankara: Nobel Yayın.

Nartgun, S.S., & Menep, I. (2010). İlköğretim okullarında görev yapan öğretmenlerin örgütsel bağlılığa ilişkin algı düzeylerinin incelenmesi: Şırnak/İdil örneği. *Uluslararası İnsan Bilimleri Dergisi, 7*(1), 288-316.

O'Reilly, C., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, ıdentification and ınternalization on prosocial behavior. *Journal of Applied Psychology, 71*(3), 492-499.

Olcum, D. (2015). *Okul yöneticilerinin karar verme stillerinin öğretmenlerin iş doyumuna etkisi (Sakarya ili örneği)* (Yayınlanmamış yüksek lisans tezi). Sakarya Üniversitesi, Eğitim Bilimleri Enstitüsü.

Otrar, M., & Özen, B. (2009) Rehber öğretmenlerin okul ortamında algıladıkları yıldırma davranışları. *İş Ahlakı Dergisi, 2*(3), 97-120.

Ozdemir A. (2015). *Öğretmenlerin psikolojik şiddet (mobbing) algıları İstanbul İli Anadolu Yakasındaki imamhatip ortaokullarında bir tarama* (Yayınlanmamış yüksek lisans tezi). Maltepe Üniversitesi, İstanbul.

Ozdemir, S. (2014). *Mobbing ve iş doyumu ilişkisi (Hemşireler üzerine bir araştırma)* (Yayınlanmamış yüksek lisans tezi). Atılım Üniversitesi, Sosyal Bilimler Enstitüsü.

Ozdevecioglu, M. (2003). Algılanan örgütsel destek ile örgütsel bağlılık arasındaki ilişkilerin belirlenmesine yönelik bir araştırma. *Dokuz Eylül Üniversitesi İktisadi İdari Bilimler Fakültesi Dergisi, 18*(2), 113-130.

Ozkaya, M. O., Yakin, V., Ekinci, T. (2008). "Stres Düzeylerinin Çalışanların İş Doyumu Üzerine Etkisi", Celal Bayar Üniversitesi Çalışanları Üzerine Ampirik Bir Araştırma", *Yönetim ve Ekonomi*, 15 (1), ss. 163-179

Saari, L.M., & Judge, T.A. (2004). Employee attitudes and job satisfaction. *Human Resource Management, 43*(4), 395–407.

Sahin, I. (2013). Öğretmenlerin iş doyumu düzeyleri. *YYÜ Eğitim Fakültesi Dergisi, 10*(1), 142-167.

Sahin, N. (2006). *Duygusal taciz (mobbing) ve organizasyonel sonuçlar üzerindeki etkisi: Bankacılık sektöründe bir uygulama* (Yayımlanmamış yüksek lisans tezi). İstanbul Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Sevimli, F., & İşcan, Ö.F. (2005). Bireysel ve iş ortamına ait etkenler açısından iş doyumu. *Ege Akademik Bakış Dergisi, 5*(1-2), 55-64.

Sezerel, H. (2007). *Örgütlerde mobbing etkileri ve Tülomsaş–Türkiye Lokomotif ve Motor Sanayi A.Ş'de bir uygulama* (Yayımlanmamış yüksek lisans tezi). Anadolu Üniversitesi Sosyal Bilimler Enstitüsü, Eskişehir.

Sonmezisik, S. (2011). *Anadolu lisesi öğretmenlerinin psikolojik yıldırmaya ilişkin algıları* (Yayımlanmamış yüksek lisans tezi). Dokuz Eylül Üniversitesi, Eğitim Bilimleri Enstitüsü, İzmir.

Subramaniam N., McManus L., & Mia L. (2002). Enhancing hotel managers' organisational commitment: An ınvestigation of the impact of structure, need for achievement and participative budgeting. *Hospitality Management, 21,* 303–320.

Talas, Ş. (2016). *Hemşirelere uygulanan mobbing ile iş doyumu arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). İstanbul Gelişim Üniversitesi, Sosyal Bilimler Enstitüsü.

Teddlie,C., & Yu, F. (2007). Mixed methods sampling a typology with examples. *Journal of Mixed Methods Research,* 1(1), 77-100.

Tinaz, P. (2008). *İş yerinde psikolojik taciz (mobbing)* (2. baskı) İstanbul: Beta Basım Yayım.

Toker Gökçe, A. (2008). *Mobbing: İş yerinde yıldırma nedenleri ve başa çıkma yöntemleri*. Ankara: Pegem Akademi Yayıncılık.

Tuncel, Ö. (2009). *Kişilik ve örgüt kültürü bağlamında yıldırma davranışının örgütsel bağlılık üzerine etkisi: Ampirik bir çalışma* (Yayımlanmamış yüksek lisans tezi). Muğla Üniversitesi, Sosyal Bilimler Enstitüsü.

Tutar, H. (2007). Erzurum'da devlet ve özel hastanelerde çalışan sağlık personelinin işlem adaleti, iş tatmini ve duygusal bağlılık durumlarının incelenmesi. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi, 12*(3), 97-120.

Uğrasoğlu, I.K., & Çaganaga, C.K. (2017). Öğretmenlerin örgüte bağlılık düzeylerinin farklı değişkenler açısından incelenmesi. *International Journal of New Trends in Arts, Sports & Science Education, 6*(4), 10-38.

Umay, G. (2015). *Psikolojik danışman ve rehberlik öğretmenlerinin iş doyumu ve tükenmişlik düzeylerinin ilişkisi* (Yayımlanmamış yüksek lisans tezi). Yeditepe Üniversitesi, Eğitim Bilimleri Enstitüsü, İstanbul.

Urasogulu Bulut, H. (2007). *Ortaöğretim öğretmenlerinde psikolojik şiddet düzeyi (mobbing)*, (Yayımlanmamış yüksek lisans tezi). Niğde Üniversitesi, Sosyal Bilimler Enstitüsü, Niğde.

Varlık, T. (2000). *Devlet ve özel ilköğretim okullarında çalışan öğretmenlerin iş doyumu (Ankara ili örneği)* (Yayınlanmamış yüksek lisans tezi). Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Vural Özkan, G. (2011). *İşyerinde yıldırma (mobbing) ve iş doyumu ilişkisi* (Yayımlanmamış yüksek lisans tezi). Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü.

Yiılmaz, İ. (2017). *Öğretmenlerin maruz kaldıkları psikolojik yıldırma (mobbing) davranışları ile iş doyumu arasındaki ilişki* (Yayınlanmamış yüksek lisans tezi). Muğla Sıtkı Koçman Üniversitesi, Eğitim Bilimleri Enstitüsü.

Yildirim, S. (2007). *Motivasyon ve çalışma yaşamında motivasyonun önemi* (Yayımlanmamış yüksek lisans tezi). Kahraman Maraş Sütçü İmam Üniversitesi Sosyal Bilimler Enstitüsü, Kahramanmaraş.

Yildiz, G. (2004, 7-10 Nisan). Müzik öğretmenlerinin iş doyumu. 1924-2004 Musiki Muallim Mektebinden Günümüze Müzik Öğretmeni Yetiştirme Sempozyumunda sunulan bildiri, Isparta.

Zapf, D., & Einarsen, S. (2001). Bullying in the workplace: Recent trends in research and practice an introduction. *European Journal of Work and Organizational Psychology, 10*(4), 369-373.

Zorlu, Z.C. (2017). *Mobbingin örgütsel bağlılık üzerindeki etkisi: eğitim sektörü çalışanlarına yönelik ampirik bir çalışma* (Yayınlanmamış yüksek lisans tezi). Bahçeşehir Üniversitesi, Sosyal Bilimler Enstitüsü.

Müzik Öğretmenlerinin Mobbing Yaşama Düzeylerinin Örgütsel Bağlılık ve İş Doyumlarına Etkisi

Atıf:

Aras, A. (2019). The effect of mobbing levels experienced by music teachers on organizational commitment and job satisfaction. *Eurasian Journal of Educational Research*, 84, 29-56, DOI: 10.14689/ejer.2019.84.2

Özet

Problem Durumu: Eğitim, bireylerin; kendisine, çevresine, ülkesine ve insanlığa yararlı olabilmesine olanak tanıyan önemli bir süreç olarak ifade edilebilir. Sanat eğitimi eğitimin, müzik eğitimi ise sanat eğitiminin önemli bir bileşenidir. Müzik eğitimi, bireyin davranışlarında bilişsel, duyuşsal ve psikomotor değişiklikler oluşturan bir öğrenme öğretme sürecidir. Bu süreçte en önemli öğelerden birisi müzik öğretmenidir. Müzik öğretmenlerinin iş ortamındaki yaşantıları verilen eğitimin de kalitesini etkilemektedir. Dolayısıyla müzik öğretmenlerinin iş doyumlarının ve örgütsel bağlılıklarının etkili müzik eğitiminin etmenlerinden biri olduğu söylenebilir. Ancak müzik öğretmenlerinin iş doyumları ve örgütsel bağlılıkları üzerinde birçok etmenin de rol oynaması muhtemeldir. Bu çalışmada bu etmenlerden birisi olduğu düşünülen mobbingin müzik öğretmenlerinin örgütsel bağlılık ve iş doyumlarını üzerine etkisi incelenmiştir.

Araştırmanın Amacı: Bu araştırmada ilköğretim okullarında görev yapan müzik öğretmenlerinin mobbing yaşama düzeyleri, örgütsel bağlılıkları ve iş doyumları arasındaki ilişkinin belirlenmesi amaçlanmıştır. Bu genel amaç çerçevesinde aşağıdaki sorulara cevap aranmıştır:

İlköğretim okullarında görev yapan müzik öğretmenlerinin,

1. Mobbing yaşama, örgütsel bağlılık ve iş doyumu düzeyleri nasıldır?
2. Mobbing yaşama düzeyleri, örgütsel bağlılıkları ve iş doyumu düzeyleri eğitim durumu, çalışma yılı, medeni durum, yaş ve cinsiyet değişkenlerine göre anlamlı bir farklılık göstermekte midir?
3. Mobbing yaşama düzeyi, örgütsel bağlılık ve iş doyumları arasında anlamlı bir ilişki var mıdır?

Araştırma Yöntemi: Bu çalışma ilişkisel tarama modeli ile gerçekleştirilmiştir. Araştırmanın evrenini Ankara ili ilköğretim okullarında görev yapan müzik öğretmenleri oluşturmaktadır. Tabakalı örnekleme yöntemi yardımıyla toplam 248 müzik öğretmeni örnekleme alınmıştır. Araştırma verileri Olumsuz Davranış Ölçeği, Örgütsel Bağlılık Ölçeği ve İş Doyum Ölçeği aracılığılar toplanmıştır. Veri analizi için SPSS ve LISREL paket programlarından yararlanılmıştır. Öğretmen görüşlerine ilişkin olarak yapılan fark analizlerinde iki grubun karşılaştırılmasında bağımsız örneklem t testi, ikiden çok grubun karşılaştırılmasında ise tek yönlü varyans analizi kullanılmıştır. Varyans analizi sonrası hangi grupların birbirinden farklı olduğunun tespiti için çoklu karşılaştırma (multiplecomparisons) testlerinden Tukey testi uygulanmıştır. Araştırmada ilişki yapılarının ortaya konulabilmesi için gözlenen değişkenlerle yol analizleri yapılmıştır. Araştırmada ilişki yapılarının ortaya konulabilmesi için korelasyon katsayılarına dayalı path analizleri yapılmıştır. Değişkenler arasındaki yordamaların ortaya çıkartılmasında ise regresyon analizinden yararlanılmıştır.

Araştırma Bulguları: Araştırmanın bulgularına göre müzik öğretmenlerinin neredeyse dörtte biri (%24,6) mobbing davranışlarına maruz kalmaktadır. Ayrıca müzik öğretmenleri okullarda en fazla mesleklerine ilişkin konularda mobbing yaşamaktadırlar. Müzik öğretmenlerinin örgütsel bağlılığın, uyum, özdeşleşme ve içselleştirme alt boyutlarına ilişkin algılarının oldukça yüksek olduğu sonucuna ulaşılmıştır. Müzik öğretmenlerinin iş doyumunun hem içsel hem de dışsal alt boyutuna göre, genellikle işlerinden memnun olduğu sonucuna ulaşılmıştır.

Araştırmada öğretmenlerin mobbing yaşama düzeyleri, örgütsel bağlılıkları ve iş doyumları demografik değişkenler açısından da incelenmiştir. Öğretmenlerin; mobbing yaşama düzeylerinin cinsiyet, yaş, medeni durum, kıdem ve eğitim durumlarına göre yapılan karşılaştırmalarda anlamlı bir farklılık göstermediği tespit edilmiştir. Müzik öğretmenlerinin örgütsel bağlılık düzeylerinin yaş, medeni durum ve kıdem yılı değişkenine anlamlı farklılık olduğu bu çalışma ile ortaya konulmuştur. Örgütsel bağlılık düzeylerinin yaş gruplarına göre karşılaştırılmasında; uyum ve özdeşleşme alt boyutlarında anlamlı bir farklılık gösterdiği, uyum alt boyutunda 22-30 yaş aralığındaki genç öğretmenler ile 31-39 yaş aralığındaki orta yaşa sahip

öğretmenler ile 40 yaş ve üzerindeki öğretmenler arasında farklılık bulunduğu, genç müzik öğretmenlerinin kendilerine göre yaşça büyük olan meslektaşlarına göre uyum konusunda zorlandıkları tespit edilmiştir. Müzik öğretmenlerinin örgütsel bağlılık düzeylerinin medeni duruma göre yapılan karşılaştırmada, uyum ve özdeşleşme alt boyutlarında anlamlı bir farklılık gösterdiği, uyum alt boyutunda boşanmış müzik öğretmenlerinin bekar veya evli meslektaşlarına oranla daha az uyumlu oldukları, özdeşleşme alt boyutunda ise evli müzik öğretmenlerinin bekar müzik öğretmenlerine göre daha az özdeşleşme gösterdikleri, bekar müzik öğretmenlerinin de boşanmış meslektaşlarından daha fazla özdeşleşme gösterdikleri sonucuna ulaşılmıştır. Örgütsel bağlılık düzeylerinin kıdem yılına göre yapılan karşılaştırmada 1-15 yıl kıdeme sahip müzik öğretmenlerinin, 16 yıl ve üzerindeki meslektaşlarına göre içselleştirme alt boyutunda örgütsel bağlılıklarının daha düşük olduğu tespit edilmiştir. Diğer bir ifadeyle 15 yıl ve daha az kıdeme sahip öğretmenlerin örgütlerine daha az oranda içselleştirme gösterdikleri sonucuna ulaşılmıştır. İş doyumunun cinsiyet açısından ve kıdem açısından farklılaşmadığı bu çalışmada, yaş ve medeni durumun iş doyumu düzeylerinde anlamlı düzeyde fark yarattığı tespit edilmiştir. Buna göre dışsal iş doyumu alt boyutunda 39 yaş ve altı müzik öğretmenlerinin 40 yaş ve üstü meslektaşlarına göre daha fazla dışsal iş doyumu gösterdikleri, buna göre ilköğretim okullarında görev yapan müzik öğretmenlerinin 40 yaşını geçtikçe dışsal iş doyumunda azalma olduğu ve boşanmış öğretmenlerde dışsal iş doyumunun evli veya bekar öğretmenlere göre daha düşük olduğu tespit edilmiştir.

Araştırma sonuçlarına göre müzik öğretmenlerinin mobbing yaşama düzeyi ile iş doyumu ve örgütsel bağlılık düzeyleri arasındaki negatif yönde ve anlamlı ilişki bulunmuştur. Korelasyon katsayılarına göre mobbing yaşama düzeyinin iş doyumunu örgütsel bağlılığa göre daha fazla etkilediği sonucuna ulaşılmıştır. Korelasyon katsayılarına göre mobbing yaşama düzeyinin en fazla örgütsel bağlılığın uyum alt boyutunu etkilediği, bunu iş doyumunun dışsal iş doyumu ve içsel iş doyumu alt boyutlarının takip ettiği saptanmıştır. Ayrıca müzik öğretmenlerinin mobbing yaşama düzeyinin örgütsel bağlılık ve iş doyumu arasındaki ilişkilere yönelik regresyon sonuçlarına göre, mobbing düzeyinin örgütsel bağlılık ve iş doyumunu anlamlı derecede yordadığı tespit edilmiştir.

Araştırma Sonuçları ve Önerileri: Müzik öğretmenlerinin okullarda özellikle mesleklerine ilişkin konularda mobbing yaşadığı ve en fazla maruz kaldıkları mobbing davranışları göz önüne alındığında, öğretmenlerin rol/görev tanımlarının yeterlilikleri seviyesinde oluşturulması, fikir ve görüşlerinin dikkate alınması, haklarını (hastalık izni, tatil hakkı gibi) kullanmayı talep ettiklerinde isteklerinin dikkate alınması örgütsel bağlılıklarının ve iş doyumlarının artırılmasına yardımcı olacaktır. İleride yapılacak araştırmalarda, iş doyumunun, örgütsel bağlılığın ve mobbingin farklı değişkenlerle ilişkileri araştırılarak, bu yapılar için yeni araştırma modelleri oluşturulabilir.

Anahtar Kavramlar: Mobbing, yıldırma, iş doyumu, örgütsel bağlılık, müzik öğretmenleri.

Eurasian Journal of Educational Research 84 (2019) 57-70

Eurasian Journal of Educational Research
www.ejer.com.tr

Rasch-Based Objective Standard Setting for University Placement Test

Ado Abdu BICHI[1], Rohaya TALIB[2], Rahimah EMBONG[3], Hasnah Binti MOHAMED[4], Mohd Sani ISMAIL[5], Abdallah IBRAHIM[6]

ARTICLE INFO

Article History:

Received: 1 Jul. 2019

Received in revised form: 19 Sept. 2019

Accepted: 22 Sept. 2019

DOI: 10.14689/ejer.2019.84.3

Keywords

rasch measurement, placement test, cut-scores, objective standard setting

ABSTRACT

Purpose: University placement test is an important admission policy priority in Nigeria, because it serves as a university-based selection criterion for placement of students into undergraduate programs in Nigeria. Although recently attention have been shifted on the call to develop a standard content and standardize the test, yet attention has not been paid on the development of standard setting in which the decisions to select or reject the applicants are made. This study; therefore, investigated the application Rasch-based Objective Standard Setting (OSS) to establish the standards in a university placement test.

Methods: To demonstrate the application of OSS, 9 judges were employed for the conduct of standard ratings; the data used for Rasch calibration with WINSTEP were the responses of 600 students on the 60 items validated Economics Placement Test (EPT).

Findings: The experts' ratings and Rasch generated logits (item difficulties) were used in quantifying the set of essential items selected. Results of OSS produced the cut-scores of <-0.62 into Basic, -0.62 logits into Proficient and 0.02 logits for Advanced performance levels. The examinees in these categories were, 39% at Basic, 32% at Proficient and 29% at Advanced performance levels.

Implications for Research and Practice: The results of this OSS provide performance levels with a clear content related description to informed decision on students' mastery of the content in EPT. It is recommended that, results from the OSS should be compared with other existing IRT-based methods in similar study to ascertain its external validity.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Corresponding Author, School of Education, Universiti Teknologi Malaysia, Johor Bahru, MALAYSIA, e-mail. adospecial@gmail.com, ORCID: https://orcid.org/0000-0003-2897-5136

[2] School of Education, Universiti Teknologi Malaysia, Johor Bahru, e-mail: rohayatalib@utm.my , MALAYSIA, ORCID: https://orcid.org/0000-0002-3937-7193

[3] Faculty of Contemporary Islamic studies, Universiti Sultan Zainal Abidin, MALAYSIA, email: rahimahembong@unisza.edu.my , ORCID: http://orcid.org/0000-0003-0636-8044

[4] School of Education, Universiti Teknologi Malaysia, Johor Bahru, MALAYSIA, ORCID: https://orcid.org/0000-0001-5119-6742

[5] Faculty of Contemporary Islamic studies, Universiti Sultan Zainal Abidin, MALAYSIA, ORCID: https://orcid.org/0000-0003-4608-5639

[6] Centre for Fundamental Studies, Universiti Sultan Zainal Abidin, MALAYSIA, ORCID: https://orcid.org/0000-0003-1698-1192

Introduction

University placement test serves the purposes of placement of prospective undergraduate into appropriate programmes of universities; therefore, its results or feedback must have important consequences in taking decisions on students' qualification to be placed in any of the university programme (Bichi, Talib, Atan, Ibrahim & Yusof, 2019). The university placement test is conducted to screen students into undergraduate or graduate programmes; therefore, the test has important consequences such as influencing the future achievement of the students. In developing the tests, educational experts should ensure that admission tests are valid and reliable which should be able to predict students' future academic success (Tas & Minaz, 2019; Atkinson, 2001).

All assessment systems are built upon validity, whether the assessment tools (tests) are locally-designed and administered or a standardized test is designed which aims to use a test that produces results to support valid inferences and actions (Atkinson, 2001). Moreover, in educational and psychological testing, the quality of inference generated from the assessment results must be sound and well-structured in principles and empirically verified to withstand systematic criticism (Bichi, et. al, 2019). To produce tests in educational measurement, established criteria and guidelines of valid and reliable test development should be adequately followed. This implies professionalism in both the construction and the use of the test (Sanz & Fernández, 2005).

In Nigeria context, test development remains one of the most tedious aspects in research; there remains less validity and reliability evidence of the university placement test called Post-UTME in Nigeria universities because the Post UTME are developed usually by groups of teachers/lecturers and members of administrative staff of tertiary institutions who incidentally lack the requisites, skills and professional competency to developed and validate placement test of any nature (Akanwa & Nkwocha, 2015; Bichi, 2015; Ikoghode, 2015; Uhunmwuangho & Ogunbadeniyi, 2014) since these tests are constructed for the placement of prospective undergraduate into the Bachelor degree programmes. Similarly, only one study in the literature described the psychometric properties of the Post-UTME Economics i.e Hafiz et al. (2016) and no study described the development and validation of Post-UTME items in Nigeria. Moreover, there is a growing concern over the issue of inappropriate procedure in reporting the students' performances or scores in the test and that is a great mismatch in the appropriateness of the decision taken on students to place them in a particular programme of the university.

In developing standardized tests, especially university placement test, the reliability and validity of the test and reporting of students' performances is essential and inevitable. Thus, in validating test items certain qualities to be considered include item difficulty, item discrimination, quality of the distractors as well as reliability (Barlow, 2014). An evaluation system and assessment programs such as university placement test, reporting student performances is an important concern because a pass-fail decision is taken on students before finally placing prospective

undergraduates in a particular program. Therefore, standards or performance standard is a crucial validity principle and essentially, in high stake assessment methods where the performance standards are used to take critical decision of pass-fail affects especially prospective undergraduate students (Stone et al., 2011).

Objective of the study

This study presented the application of Rasch-Based (IRT) Objective Standard Setting Method to establish cut-scores by categorising examinees into Basic, Proficient and Advanced performance levels in a developed university placement test in Nigeria.

Standard Setting

Standard setting was used to classify students into different performance standards. Standard setting can be described as a method of generating single cut score, (for example, pass-fail) or multiple cut scores (for example dimension of attainment, excellent, moderate and weak) based on the test requirements or conditions. This cut score work as division of at least two classifications which are necessary for the test (Cizek & Bunch, 2007). Apart from determining the level of students' mastery or achievement, standard setting is a technique applied to obtain cut score which can categorise the examinees into below basic to higher level of performance (Bejar, 2008). As indicated by the report, standard setting is a vital part of test development stages which should include test development professionals, measurement experts and policy makers to ensure that, valid and reliable results are obtained (Bejar, 2008).

There are two classifications of standard setting; norm-referenced (relative) and criterion-referenced (absolute). In norm-referenced classification, standards are determined on the basis of the collective or aggregate performance of the entire group of examinees. Performances are observed between examinee scores as a measure of the whole examinee group and more often used in low-stakes test while criterion referenced standards feature the segment of the test. The standardization depends upon the learning materials and use in high-stakes testing, for example, graduation or final examination.

Basically, there are two popular techniques common among psychometricians and policy makers used in establishing performance standards in a standardized test by classifying the performance levels into (advanced, proficient and basic or below proficient), these are norm-referenced and criterion-referenced standard setting approaches.

Norm-Referenced Standard Setting (NRS)

According to Carey and Manwaring (2011) in a norm referenced standard setting procedure, four (4) growth models are applied in determining the examinees' relative performance level, the models include; trajectory, students' growth percentile (SGP), the transition table and projection. Trajectory is the most common among the growth models, because the model requires the identification of the gap between the examinee' current performance level and the already established standard or

proficiency level (Carey & Manwaring, 2011). The second strategy is the student growth model (SGP), this strategy employs norms across particular periods usually years. This model compares the performances of students in similar groups across years to identify whether some level of growth is demonstrated in the current class. The third, which is the transition table, positions or places the examinees into any of the three classifications when their performances are below the proficient level (i.e high minimal, low minimal and weak). Examinees are anticipated to progress to at least to the category higher than their current standing to achieve their annual growth goal (Khatimin, Aziz, Zaharim & Yasin, 2013).

The last and also the most complex model in norm-reference is the projection strategy. This model comprises of two segments. The first is performance standards which is a product of the combination of norm-reference and criterion-reference techniques. It is clear that the standards are certainly not based on content, but alternately is cluttered by referencing to relative or norms. Secondly, it attempts and proposes the prediction of examinees academic progress based on the past record or achievement (Carey & Manwaring, 2011; Silber & Foshay, 2010). The projection model uses advanced level statistics to compare the current examinees with a relatively larger group of similar examinees in the previous years and from different environments to project or predict their success and possibility of attaining the required proficiency. Conclusively, this model considers past performances to predict future success which is believed to be unattainable and unacceptable in the area of high-stake examinations.

Criterion-Referenced Standard Setting (CRS)

The Criterion-Referenced Standard Setting can broadly be categorized as traditional and modern. The traditional Criterion-Referenced Standard Setting includes examinees performances and content definition. The examinee performance technique can be seen as an assessment of the content through a generated or quantifiable examinee performance. This method is symbolized in Angoff (1971) which is a popularized model; it can also be seen in other models such as the one offered by Nedelsky (1954), Ebel (1979) and Jaeger (1982). These models require that, an expert or judges in the standard setting exercise evaluate the content given to them in a set of test items and predict the examinee success. Explicitly, the experts or judges are expected to predict the proportion of the examinees who can competently and minimally answer the particular question or item correctly in a given test. At the end of the exercise, a sum or average of their predictions becomes the established performance standard which is commonly come up with after several and consistent iterative sessions where the judges deliberate and reach agreement on the minimally acceptable standard. The Angoff model is considered to be the most popular in this category because it is considered more "sensible, valuable, adequate, and much of the time ideal to different models.

In Modern Criterion-Referenced Standard Setting, Modern Item Response Theory (IRT) techniques such as Rasch approach are popularly been used especially in high-stake testing programmes in the modern assessment setting, this is because the models provide a great avenue and ability in tracking the criterion-referenced performance

growth. When the goal of testing programme is to define the content and apparently a criterion-referenced is content based standard setting method, then defining or describing content through examinees performances using test scores is completely inadequate (Stone et al., 2011; Stone 2009) for the reason that content is only laterally associated to the defined examinee performance and that should not be the basis for its definition. In an effort to solve these critical issues of validity concerns in traditional models, improved modern techniques of establishing standard settings were developed among which are Bookmark Model (Lewis, 1996) and the Objective Standard Setting (OSS) Approach (Stone, 1996). The OSS as modern criterion referenced standard setting model will be the focus in this study.

Objective Standard Setting Model (OSS)

Objective standard setting (OSS) defines standards through content directly and not through expectations or likelihood of success (Stone, 2001). A panel of experts or judges are used in the process of setting the standards similar to the traditional approach of standard setting. Conversely, in this technique panels of judges are asked to appraise the contents based on its presentation through the items and determine whether the content is well represented to be considered essential for an examinee to have mastered the content and not the prediction of the likely proportion of successful examinees. Though the entire content is expected to be relatively essential not all content in an assessment or testing program is essential (i.e highly central, core and critical).

Objective standard setting procedure can only be successful with the application of Rasch measurement model. Through Rasch measurement model, raw, deterministic or ordinal test scores are transformed into probabilistic linear-scale identical to ruler with measurement units termed as logits. This transformation holds and improves the full content definition that is necessary in the testing program while creating standard interval level measure. The test scores (crude) failed to address the innate connection among items and its body or with its difficulty level. A raw score of say 75 for instance, may represent 75 correct answers (scores) when applying conventional scoring strategies. Interestingly the Rasch measurement approach tends to address this issue by creating construct ruler that gathers the individual items and individual person parameters along with specific single or more rulers. The test items are arranged in one side and the persons are displayed in another side with easy items and less abled person with less ability at the bottom while most difficult items with high abled persons are placed at the highest point of the ruler (Khatimin, Aziz, Zaharim & Yasin, 2013).

The item measures (logits) represent the construct quantitatively and offer its qualitative expression. Using the logits (item measures) test items are assembled from the less difficult or easiest to the most difficult items on the construct ruler. On the basis of these progresses, this standard setting model has been effectively and constantly utilized in establishing standards setting or performance levels on dichotomously scored tests (MacDougall & Stone, 2015). The ability to apply Rasch measurement models ruler in setting standards lead to the creation of construct within

the OSS, it provides theoretical possibilities to develop multilevel performance standards using the same method. This could make it possible to create two standards or performance levels (advanced and proficient) and apply those levels to a construct ruler.

The OSS was adopted in this study because the need to classify learners into achievement is a frequent and long-standing occurrence internationally (Stone, 1996). The current trends revealed that the development measures are solidly situated in normative gatherings, without reference to explicit substance and eventually utilize normative information which are not criterion referenced. Such self-assertive and norm-referenced standard setting conditions are unsatisfactory and incomprehensible in the realm of high-stakes testing where choices should be legitimately solid and authority of explicit substance is required (Silber & Foshay, 2010). In that capacity, most psychological studies where high-stakes testing is actualized have received modern criterion referencing techniques for standard setting in which OSS approach appears to be more recent, objective and content balanced standard setting technique.

Method

Research Design

This study intended to establish the standards in a university placement test and to provide evidence of adequacy of the Rasch-based Objective Standard Setting (OSS) in setting standard performance or cut score. Due to the fact that setting cut score in this study was related to the determination and identification of valid and justifiable standard, this was a descriptive survey research (Karasar, 2016).

Instrumentation

The Economics Placement Test (EPT) was a developed 60 items multiple choice test (Bichi, et. al, 2019). The distribution of the 60 items reflects the five (5) Economics sub-dimensions as contained in the National Economics Curriculum of Nigeria (NERDC, 2016) and spread across five domains of Bloom's Taxonomy of Cognitive Objective (revised). The EPT proved to be appropriate to be used with prospective university students as the test possessed adequate content validity (CVR=0.91) with corresponding modified Kappa of 0.864. Equally, the EPT has an excellent person, item as well as adequate internal consistency reliability of 0.87, 0.99 and KR-20 = 0.86 (Linacre, 2019). Similarly, the item measure (infit and outfit) parameters were suitable for all the 60 test items (Bichi, et. al, 2019; Khatimin, et. al., 2013).

Sampling and Data Collection Procedure

To complete the performance standard setting exercise in this study, nine experts were employed to form the panel of judges. All the nine members are experts in Economics Education, assessment and testing because they each taught and participated in the development and administration of the university placement test at universities and colleges in Nigeria. All of the members in the panel hold higher degree (Master and PhD). Nine experts are considered adequate because at least six experts are required to conduct standard setting in OSS (Sondergeld, Stone & Kruse, 2018).

Therefore, on agreement and consent of the experts to participate in this exercise, an OSS item and content description that, contained items and topics, objective for 'item mapping' and performance level descriptions were developed and distributed to each of them. The Judges were asked to review content-balanced item and classify the items as either (i) necessary to demonstrate *minimal proficiency* (ii) necessary to demonstrate *advanced competency* and (iii) not necessary to demonstrate *competency* (Sondergeld, et al., 2018). At the end of the exercise, experts provided their rating on each item individually.

Similarly, to generate item logits for the analysis, the 60 items EPT was administered to 600 prospective university students in Nigeria. The students were through their 3 years senior secondary school and passed through all the Economics contents as spelt in the curriculum, and they were preparing for their final and University entrance examinations that year. Their responses were scored and analysed using Rasch measurement procedures and the item measures; data fit, item and person measures generated were used for selection of essential items.

Data Analysis

Experts provided their individual final rating and classification of the items into (i) necessary to demonstrate *minimal proficiency* (ii) necessary to demonstrate *advanced competency* and (iii) not necessary to demonstrate *competency*. Similarly, data from the administration of the EPT was coded and entered in appropriate data sheet for analysis using WINSTEP 3.7.1 (Linacre, 2019) to determine the item measures; data fit, item and person measures as well as item map.

Rasch generated item measures (logits) or item difficulties were used in quantifying the essential items selected. The mean of item measure (logits) linked to each content expert's designated vital or essential test items became the cut score for that expert. The aggregate average score across the experts was used as a cut-score for the test (Sondergeld et. al., 2018). Lastly, considering the fact that all measurement processes were not free from errors, this OSS method took care of it. A sample of content balanced test items below and above criterion within or up to two standard errors of measurements were chosen to produce a standard Rasch construct ruler to determine the ability at *basic*, *proficient* and *advanced* cut scores.

Results

After the expert judges complete reviews and ratings, the panels of judges classified the items into *"essential"* for content mastery, '*minimal*' proficiency and *not necessary* to demonstrate competency. The practice of OSS began with the selection of essential items identified by the experts within the test.

As required by OSS the previously Rasch calibrated result (measures) was used to quantify the selected items in the two categories. The results in Table 1 showed the mean rating (quantified criterion) associated with each of the panellist's decision on essentials items in logits which became the measure or cut score for that expert judge. An overall average across panel of experts became the final cut score.

The result presented in Table 1 showed that, two standards *advanced* and *proficient* were established by the panelists. The *Advance* standard (0.02 logits) was higher than the *Proficient* standard (-0.62 logits), thus any scores less than -0.62 logits became the *Basic* level or standards. This represented the different achievement scores statistically. Even though some differences existed within the individual expert's ratings between the two levels, the experts set performance standards which represented a strong difference between advanced and proficient standards.

Table 1
Expert Judge Standards (Logits)

	Advanced	Proficient
Expert Judge	(Logits)	(Logits)
1	0.20	-0.11
2	-0.12	-0.36
3	0.16	-0.96
4	0.09	-0.56
5	-0.33	-0.88
6	0.05	-0.80
7	-0.21	-0.76
8	0.16	-0.70
9	0.16	-0.43
Mean Logits	0.02	-0.62

The above information was used with the *Person Statistics* measure order from Rasch analysis to classify the examinees into corresponding performance levels of *Basic* <-0.62 logits, *Proficient* 0.62 logits and *Advanced* 0.02 logits.

Figure 1 depicts the categories in a Rasch construct map, as represented the distribution of the examinees appears to shift upward or higher than the marked proficient level. This is an indication that, the examinees were able to answer moderately difficult and higher difficult items than the less difficult test items.

Based on the logits classifications 39% fell under *Basic* performance level, 32% fell under *Proficient* level and 29% of the examinees fell under *Advanced* performance levels. The final cut scores (Criterion) and the percentage of examinees at each performance levels are presented in Table 2

Table 2
Examinees Category (Cut Scores)

Statistics	Cut Scores (in Logits)		
	Basic	*Proficient*	*Advanced*
Logits	< -0.62	-0.62	0.02
Examinee	39% (n = 234)	32% (n = 191)	29% (n = 175)

These results means that, 61% of the examinees in this study fell in the category of *Proficient* to *Advanced* level, and that, only 39% were classified as in the *Basic* level, which means that, majority of the examinees were within the required skills (Sondergeld, et al., 2018).

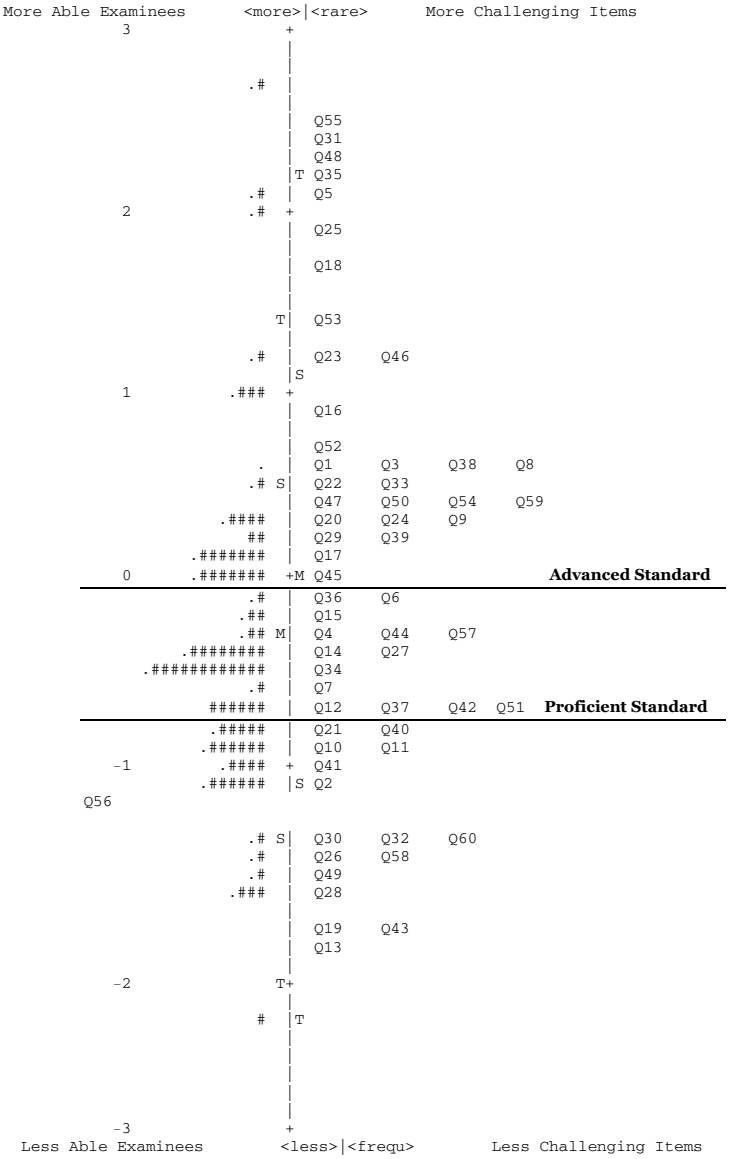


Figure 1. *Rasch Person-Map*

Discussions, Conclusion and Recommendation

This study was conducted to establish cut-scores using IRT-based (*Objective Standard Setting*) method in a university placement test by categorising examinees into Basic, Proficient and Advanced performance levels.

Findings after the rounds of reviews, ratings and discussion regarding the nature of minimal competency revealed that, three standards *Advanced*, *Proficient* and *Basic* were established by the panelists. The Advance standard (0.02 logits) was higher than the Proficient standard (-0.62 logits), thus any scores less than -0.62 logits became the Basic level or standards. The examinees were classified into corresponding performance levels of *Basic* (<-0.62 logits), *Proficient* (0.62 logits) and *Advanced* (0.02 logits). Based on the logits classifications 39% fell under *Basic* performance level, 32% fell under *Proficient* level and 29% of the examinees fell under *Advanced* performance levels. This final cut scores (Criterion) means that, 61% of the examinees in this study fell in the category of *Proficient* to *Advanced* level, and that, only 39% were classified as in the *Basic* level, which means that, majority of the examinees were within the required skills (Sondergeld, et al., 2018).

Based on the finding of this study, Majority of the test takers appeared to be within required levels, with moderately and higher-level ability. The examinee classification showed that, they were able to get the items with moderate and higher difficulty levels right. These findings are consistent with that of (Sondergeld, et al., 2018) while some examines fell within the basic levels, finally, there were test takers in the proficient and advanced levels (n=88.5%, 85%). The largest was the test takers in the advanced classification with n=75 (78.1%). Also, the finding of Khatimin, et. al., (2013) whose findings using OSS revealed that over sixty percent (64%) of the examinees were at the mastery level of the linear algebra and recommended that, academic institutions can decide to adjust the scores to accommodate more students by applying the standard errors (SE).

Similarly, in line with the findings of Stone, Koskey and Sondergeld (2011) whose study included five-year successive investigation by using examination data, examinees were at good performance with a favourable standing, where students who participated in the exercises fell within advanced and proficient standing. In contrary to the finding of this study, Khatimin, Zaharim and Aziz (2014) however, found that, after identifying the mastery levels of -0.08 logits, 74% of the examinees were categorized into performance levels below basic and that, only 26% of the students attained the acceptable mastery levels. This means that, the students in their study did not reach the mastery levels to answer the questions correctly.

Considering the place of standard setting as an important validity principle and more important in high-stakes testing environments, the result of this OSS provided performance level with a clear content related description to informed decisions on students' mastery of the content in a placement test, hence demonstrated effectiveness in designing construct relevant standard and its superiority on establishing standard setting. In a university placement test, reporting students' performance is an important concern because a pass-fail decision is taken on students before finally placed in particular programmes. The cut score proposed in this study can be used in ranking

and selecting the qualified candidates objectively. Therefore, by practitioners utilizing the proposed cut off score in this study, the subjectivity in the selection and placement of prospective undergraduates in Nigerian universities may be reduced or completely eliminated to make the placement of students a transparent process using standardized procedure. It is therefore recommended that to establish more meaningful criterion-referenced standards across the curriculum content being measured, further studies should consider involving or employing more panelists in order to provide more evidence of rating consistency among the panelists. Similarly, result from the Rasch-based Objective Standard Setting (OSS) procedure need to be compared with other existing IRT-based methods in order to ascertain its external validity.

References

Akanwa, U. N. & Nkwocha, P. C. (2015). Prediction of South Eastern Nigerian students under graduate scores with their UME and Post-UME Scores. *IOSR Journal of Research & Method in Education,* 5(5), PP 36-39

Angoff, W. (1971). Scales, norms and equivalent scores. In R. L. Thorndike (Ed.), *Educational measurement* (pp 506-600). Washington, DC: American Council on Education.

Atkinson, R. C., & Geiser, S. (2009). Reflections on a century of college admissions tests. *Educational Researcher*, *38*(9), 665-676.

Barlow, P. B. (2014). *Development of the Biostatistics and clinical epidemiology skills assessment for medical residents.* Doctoral thesis, University of Tennessee

Bejar, I. I. (2008). Standard setting: What is it? Why is it important. *R& D Connections*, *7*,1-6.

Bichi, A. A. (2015). Analysis of UTME and Post-UTME scores of education students at Northwest University Kano-Nigeria. In *1st International Conference on Education*. Held on 9th-10th April 2015 at Novotel Beijing Xinqiao, Beijing China

Bichi, A. A., Talib, R., Atan, N. A., Ibrahim, H. & Yusof, S. M. (2019). Validation of a developed university placement test using classical test theory and Rasch measurement approach. *International Journal of Advanced and Applied Sciences*, Volume-6, Issue-6, Pp: 22-29

Bichi, A. A., Talib, R., Mohamed, H., Ahamad, J. & Khairuddin, N. (2019). Exploratory sequential design to develop and validate Economics placement test for Nigerian universities. *International Journal of Recent Technology and Engineering (IJRTE)*, Volume-7, Issue-6S5, Pp: 769-772

Carey, K., & Manwaring, R. (2011). Growth Models and Accountability: A recipe for remaking ESEA. Education Sector Reports. *Education Sector*.

Cizek, G. J., & Bunch, M. B. (2007). *Standard setting: A guide to establishing and evaluating performance standards on tests*. SAGE Publications Ltd.

Ebel, R. L. (1979). Essentials of educational measurement, Prentice-Hall. *Englewood Cliffs, NJ*.

Ikoghode, A. (2015). Post-UTME screening in Nigerian universities: How relevant today?. *International Journal of Education and Research*, *3*(8), 101-116.

Karasar, N. (2016). *Scientific research method*. Ankara: Nobel Akademik Yayincilik

Khatimin, N., Aziz, A. A., Zaharim, A., & Yasin, S. H. M. (2013). Development of objective standard setting using Rasch measurement model in Malaysian institution of higher learning. *International Education Studies*, *6*(6), 151-160.

Khatimin, N., Zaharim, A., & Aziz, A. A. (2014, December). Standard setting in students' assessment of higher education institution in Malaysia. In *2014 IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE)* (pp. 499-504). IEEE.

Lewis, D. M. (1996). Standard setting: A bookmark approach. In *IRT-based standard setting procedures utilizing behavioural anchoring, DR Green (Chair), Symposium conducted at the Council of Chief State School Officers National Conference on Large-Scale Assessment, Phoenix, AZ, 1996*.

Linacre, J. M. (2019). *A User's Guide to WINSTEPS MINISTEP: Rasch-Model Computer Programme*. Online http://www.winsteps.com/winsteps.htm

MacDougall, M., & Stone, G. E. (2015). Fortune-tellers or content specialists: Challenging the standard setting paradigm in medical education programmes. *J Contemp Med Edu*, *3*(3), 135.

Nedelsky, L. (1954). Absolute grading standards for objective tests. *Educational and Psychological Measurement*, *14*(1), 3-19.

Sanz, I & Fernández, M. (2005). The university entrance exam in Spain: Present situation and possible solutions. *Presented as a poster in the 2005 EALTA Conference*

Silber, K. H., & Foshay, W. R. (Eds.). (2010). *Handbook of improving performance in the workplace* (I). San Francisco, CA: Pfeiffer.

Sondergeld, T. A., Stone, G. E., & Kruse, L. M. (2018). Objective standard setting in educational assessment and decision making. *Educational Policy*, 0895904818802115.

Stone, G. E. (1996). The construction of meaning: Replicating objectively derived criterion-referenced standards. In *annual meeting of the American Educational Research Association. New York, NY*.

Stone, G. E. (2001). Objective standard setting (or truth in advertising). *Journal of applied measurement*, *2*(2), 187-201.

Stone, G. E., Koskey, K. L., & Sondergeld, T. A. (2011). Comparing construct definition in the Angoff and Objective Standard Setting models: Playing in a house of cards without a full deck. *Educational and psychological measurement*, *71*(6), 942-962.

Tas, H., & Minaz, M. B. (2019). An investigation into examination-type preferences of primary school students in relation to various variables. *Eurasian Journal of Educational Research (EJER)*, (81).

Uhunmwuangho, S. O., & Ogunbadeniyi, O. (2014). The university matriculation examination as a predictor of performance in post university matriculation examination: A model for educational development in the 21st century. *African Research Review*, *8*(1), 99-111.

Eurasian Journal of Educational Research 84 (2019) 71-92

Eurasian Journal of Educational Research
www.ejer.com.tr

Foundation University Students' Consumer Orientation and Learner Identity Levels and Their Correlations with Academic Performance*

Betul ISCAN[1], Aydin BALYER[2]

ARTICLE INFO

Article History:
Received: 30 June 2018
Received in revised form: 14 Nov. 2018
Accepted: 22 Sep. 2019
DOI: 10.14689/ejer.2019.84.4

Keywords
Academic performance, consumer identity, foundation university, learner identity, neoliberalism

ABSTRACT

Purpose: The purpose of this research was to determine the level of foundation university students' consumer orientation and learner identity; and their correlations with students' academic performance. **Research Methods:** The study was conducted with a correlational survey model. The sample was 376 students from two foundation universities in Istanbul in 2017-2018 academic year. In order to collect the data, "The Extent of Students' Consumer Orientation and Learner Identity Scale" was used. The data were analyzed with SPSS 21 packet program. **Findings:** Results showed that the level of consumer orientation was at 'Disagree' level, and the learner identity was at "Agree" level. A negative correlation was found between academic performance and students' consumer orientation levels. There was also a low and positive correlation between academic performance and the level of learner identity. **Implications for Research and Practice:** It might be said that decision-makers in higher education field should take measures to maintain and increase quality towards changing social demands, behaviors and opinions of students in marketising and marketised universities.

© 2019 Ani Publishing Ltd. All rights reserved

*This study was presented at the 5th International Eurasian Educational Research Congress in Antalya, 02 May – 05 May, 2018

[1] Yildiz Technical University, TURKEY ORCID: https://orcid.org/0000-0002-8844-5906
[2] Yildiz Technical University, TURKEY, ORCID: https://orcid.org/0000-0003-1784-2522

Introduction

Nowadays, as a result of neo-liberal movements, there is a tendency to marketize higher education field all over the world as well as in Turkey. In this regard, students are considered as consumers of marketised universities, which is considered to cause consumer orientation in students (Naidoo & Jamieson, 2005; Nixon, Scullion & Hearn, 2016; Tomlinson, 2016). Consumer-oriented students see higher education as a process to acquire vocational qualification (Wellen, 2005). Thus, students aim to gain only required knowledge and skills which are demanded by the business sector (Molesworth, Nixon & Scullion, 2009; Nordensvärd, 2010; Williams, 2010). In this direction, for students the target is not being a real learner, but getting only diploma (Brown, 2011; Brown & Carasso, 2013; Molesworth et al., 2009; Nixon et al, 2016; Nordensvärd, 2010; Pathan, Mahesar & Shah, 2017; Saunders, 2015; Tomlinson, 2014; 2016).

Playing active role in learning and intellectual development contradicts with consumer-oriented learners' tendency for passive learning (Nixon et al, 2016; Tomlinson, 2016). Consumer-oriented learners aim to have well-paid jobs and increase employability, which reveals beneficiary perspectives towards higher education (Bunce, Baird & Jones, 2017; Nixon et al, 2016; Saunders, 2015; Tomlinson, 2014; 2016; Williams, 2013). Namely, these kinds of students are career focused students (Pathan et al., 2017). They even separate courses as necessary or unnecessary for their future career. In this context, they do not want to take unnecessary courses, and they enjoy doing practical work (Haywood, Jenkins & Molesworth, 2011; Nixon et al., 2016). Also, they tend to decrease theoretical parts of lessons to the lowest level (Nixon et al., 2016; Nixon, Scullion & Molesworth, 2010).

These consumer-oriented students consider learning as process of getting brief, pre-packaged knowledge, which impairs acquisition of upper-level skills and development of autonomous and lifelong learning habits (Naidoo et al., 2005; Naidoo, Shankar & Veer, 2011). In addition, the higher the tuition fee is, the higher the level of consumer orientation increases (Tomlinson, 2016; Wellen, 2005; Williams, 2013). With increasing importance of employment, students consider higher education as an investment for their future career (Williams, 2013). Research reveal that at market-driven universities students consider learning as commercial process and they consider themselves as passive learners (Naidoo et al., 2011).

Learner identity is also of great importance. Students with high level of learner identity identify themselves as learners first, while those with low ones identify themselves with different roles (Lawson,2014). It means that a student with high learner identity participates in lectures regularly, reads about the field, strives for learning, defines themselves as learner, enjoys learning, and minds university process (Bunce et al., 2017; Lawson, 2014).

The other element is students' academic performance. Academic performance is regarded as the most important factor presenting quality of education (Johansen, 2014). It is used to evaluate achievement and generally evaluated by grade point average (GPA) (Strenze, 2007). In addition, while it is thought that consumer

orientation negatively affects academic achievement, there are not few studies conducted on it (Mark, 2013). Therefore, it is important to understand the correlation between academic performance and the level of consumer orientation and learner identity.

The number of foundation universities has increased in Turkey recently. It is claimed that they are sometimes established without having enough academic and physical infrastructure, and the student acceptance scores are believed to be below average. Therefore, it is a question of matter whether these universities function well or not. To this end, the results of this research may help understand the situation better. Thus, this study aimed to determine whether there was a correlation between the level of consumer orientation and learner identity behaviors of students with their academic performance. For this general aim, the answers of the following questions were researched:

1. What is the level of consumer orientation and learner identity behaviors of foundation university students?

2. Is there a significant difference in the level of consumer orientation and learner identity behaviors of foundation university students regarding the participants' age, gender, grade level, scholarship ratio, department and goal GPA for graduation?

3. Is there a significant correlation between the level of foundation university students' consumer orientation and academic performance?

4. Is there a significant correlation between the level of foundation university students' learner identity and academic performance?

Method

Research Design

The study was conducted with a correlational survey model which searched correlation between two or more different variables (Creswell, 2014). The variables were the levels of consumer orientation and learner identity behaviors of foundation university students and their academic performance.

Research Sample

The population comprised of 376 students in two foundation universities in Istanbul in 2017-2018 academic year. These two universities were chosen as population, because they were rich in departmental diversity. There are 35 bachelor's degree and 27 associate degree programs in Fatih Sultan Mehmet Foundation University. There are 111 bachelor's degree and 188 associate degree programs in Istanbul Medipol University. The sample size required for the population was 24.670 (Higher Education Council (YOK), 2018) at 95% confidence level was calculated as 376 (Cochran, 1962. as cited in Balci, 2015). The students were selected with random sampling method (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz & Demirel, 2012).

Of these participants, 299 were females, and 77 were males. As far as department variable is considered, the students were from 55 departments and 196 of them were from STEM departments while 180 of them were from non-STEM departments. When age is considered, the mean-age was 21.

Research Instruments and Procedures

The data were collected using "The Extent of Students' Consumer Orientation and Learner Identity Scale" developed by Bunce et al. (2017) and adapted into Turkish by Iscan and Balyer (2018). It was scaled as five-point Likert type and rated as "totally disagree" (1)" to "totally agree (5)". The scale was composed of 18 items under two factors; 8 items for "consumer orientation" and 10 for "learner identity". The factor loading of the items for Factor 1 was found as between 0,523-0,759 and for Factor 2 as 0,523-0,759. The explanatory variances were stated as "the level of consumer orientation" and "the level of learner identity" of the foundation university students to explain their relations with academic performance. Cronbach's Alpha value for each dimension of the adapted scale was measured for consumer orientation as 0.855 and 0.848 for learner identity. It is suggested that Cronbach's Alpha value above 0.80 is highly reliable (Cokluk, Sekercioglu & Buyukozturk, 2010). Thus, it was found that Factor 1 (0,855) and Factor 2 (0,848) have high internal consistency.

Data Analysis

The data were analyzed with SPSS 21 packet program. Kolmogorov-Smirnov normality analysis was done to determine whether the distribution of the data came from normality. Pearson correlation analysis was used to analyze the relationship and the degree of relationship, t-test was used to determine if there is a significant difference between the means of two sample groups. Variance analysis (ANOVA) was implemented to examine whether there is a significant difference between the averages of more than two groups (Kalayci, 2009). Also, levene test was used to check the homogeneity of variances and post-hoc Scheffe test was used to find out which means are significantly different from each other (Buyukozturk, 2007) to determine the differences between the groups and if the variances are distributed homogeneously and the averages of the groups (Buyukozturk, 2007). Cronbach Alpha value test was used to evaluate the reliability of the scale (Kalayci, 2009).

Table 1

Normal Distribution Test Results

Scale	Statistic	df	p	Kurtosis	Skewness	Mean	Median
Consumer Orientation	0,115	376	0,00	0,671	-0,278	2,17	2,00
Learner Identity	0,078	376	0,00	-0,236	-0,474	3,84	3,90

According to the results of the normality analysis, although the data did not come from the normal distribution ($p < 0.05$), it was decided that the distribution of the data did not deteriorate from the normality due to the fact that the kurtosis and skewness were between ± 2.0 (George & Mallery, 2010), the mean and the media were close to each other, and the number of participants was above 30 due to the central limit theorem. As a result, it was decided to use parametric analyses (normal distribution analyses).

It is stated that if p-value is less than 0.05 ($p< 0.05$), it is interpreted that results are statistically significant. If p-value is greater than 0.05 ($p> 0.05$), results are statistically insignificant. As for correlation coefficient (r-value), if it is between 0.70 and 1.00, it represents high level of relationship. If r-value is between 0.70 and 0.30, it shows moderate relationship. If it is between 0.30 and 0.00, it presents low relationship (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz & Demirel, 2012).

Results

In this part, the data were presented. Firstly, descriptive statistics related to the level of consumer orientation were shown at Table 2.

Table 2

The Level of Consumer Orientation

Items		**Totally Disagree**	**Disagree**	**Undecided**	**Agree**	**Totally Agree**	$\bar{x}$	**s.s**
2. If I cannot get a good job after I graduate, I should have some of my tuition fees refunded	n	140	72	64	31	69	2,51	1,51
	%	37,23	19,15	17,02	8,24	18,35		
	%	38,56	25,00	17,02	8,51	10,90		
7. It is part of my lecturers' job to make sure I pass my courses	n	204	76	57	22	17	1,86	1,15
	%	54,26	20,21	15,16	5,85	4,52		
							Mean = 2,25	

In Table 2, the level of consumer orientation was at Disagree' level ' ($\bar{x}$=2,25). The item with the highest arithmetic mean was " If I cannot get a good job after I graduate, I should have some of my tuition fees refunded ($\bar{x}$ = 2,51) ". The item with the lowest mean was 'It is a part of my lecturer's job to make sure I pass my courses ($\bar{x}$=1,86).'. These findings might be interpreted that there is a relationship between the tuition fee paid and the level of consumer orientation and the increase in tuition fee over time might increase consumer orientation of the students. The highest arithmetic mean might be interpreted as the students' opinion on getting return for the tuition fee paid for higher education. The lowest mean might be due to the fact that the students do not take the responsibility for learning in paid process in which students are considered as customers, therefore the responsibility of students'

learning is put on lecturers' shoulders.

Table 3

The Level of Learner Identity

Items		Totally Disagree	Disagree	Undecided	Agree	Totally Agree	$\bar{x}$	s.s
10.I prepare for class	n	39	68	133	83	53	3,11	1,17
	%	10,37	18,09	35,37	22,07	14,10		
	%	6,65	14,36	42,82	22,87	13,30		
15.I want to learn as much as possible while at university	n	4	2	48	74	248	4,49	0,82
	%	1,06	0,53	12,77	19,68	65,96		
	%	2,93	7,45	15,16	26,06	48,40		
							Mean= 3,79	

In Table 3, the level of learner identity was at "Agree" level ($\bar{x}$ = 3,79). Also, while the highest item was "I want to learn as much as possible while at university ($\bar{x}$ = 4.49)"; the lowest ($\bar{x}$=3,11) was "I prepare for class". The high level of learner identity may be due to the students' desire to succeed because higher education provides employment and higher salary. When the highest and the lowest mean are considered, the students' tendency to complete the learning process effortlessly might be interpreted as a sign of consumer orientation, which might negatively influence learner's identity.

Table 4

Difference of the Level of Consumer Orientation and Learner Identity in Terms of Gender

	Gender	n	$\bar{x}$	s.s.	Levene Test f	Levene Test P	t	p
Consumer Orientation	Female	299	2,08	0,81	1,377	0,241	-4,040	0,000
	Male	77	2,51	0,90				
Learner Identity	Female	299	3,86	0,60	4,427	0,036	1,222	0,224
	Male	77	3,75	0,69				

*p<0,05

In Table 4, difference in consumer orientation level regarding gender was statistically significant (t=-4,040; p<0,05 p=0.000). In this regard, the female students'

level of consumer orientation was lower ($\bar{x}$= 2.08) than males' ($\bar{x}$= 2.51). The difference of the level of learner identity was not statistically significant (p>005). It can be commented that males exhibit more consumer orientations in higher education than females. It might be concluded that males gain more positive results than females in all aspects from the investment they make to labor market and education.

Table 5

Difference of the Level of Consumer Orientation and Learner Identity in Terms of Age

	Age	N	$\bar{x}$	s.s	T	sd	p
Consumer Orientation	18-20	218	2,36	0,76	-1,02	374,00	0,31
	21 - +	158	2,44	0,81			
Learner Identity	18-20	218	3,78	0,60	-0,37	374,00	0,71
	21 - +	158	3,80	0,64			

In Table 5, regarding age variable, difference in consumer orientation and learner identity levels were not statistically significant (p>005). Insignificant difference between the level of consumer orientation and age might be because of universities' failure to change views and behaviors of students. Insignificant difference between the level of learner identity and age may be because of the awareness of students about life.

Table 6

Difference of the Level of Consumer Orientation and Learner Identity in Terms of Grade Level

	Grade Level	N	$\bar{x}$	s.s	f	p
Consumer Orientation	1	128	2,12	0,70	1,255	0,286
	2	182	2,15	0,90		
	3 - +	66	2,32	0,95		
Learner Identity	1	128	3,90	0,60	1,726	0,179
	2	182	3,83	0,63		
	3 - +	66	3,73	0,64		

In Table 6, difference in consumer orientation and learner identity levels was not statistically significant regarding grade level (p>0.05). Insignificant difference in consumer orientation in terms of grade level might be because of the students' low level of consumer orientation in Turkey. For the learner identity level, it may be because of that the foundation university students consider diploma guarantee in return for tuition fee paid.

Table 7

Difference of the Level of Consumer Orientation and Learner Identity in Terms of Scholarship Ratio

	Scholarship Ratio	**n**	$\bar{x}$	**s.s.**	**F**	**P**	**Scheffe**
Consumer Orientation	Full	70	1,78	0,68	9,654	0,000*	1-3
	%50	212	2,24	0,88			1-2
	%25	94	2,31	0,82			
Learner Identity	Full	70	3,87	0,66	0,911	0,403	
	%50	212	3,86	0,65			
	%25	94	3,76	0,53			

*p<0.05
**p>0.05

In Table 7, difference in consumer orientation level regarding scholarship ratio was statistically significant (f=9,654, p=0.000 p<0.05). As a result of Scheffe tests, there were significant differences between the student groups with full and 25% scholarship, and also between the ones with full and %50. The students with 25% ($\bar{x}$= 2.31) and 50% ($\bar{x}$= 2.24) scholarships have higher level of consumer orientation than those with full ($\bar{x}$ = 1,78). There was not statistically significant difference between these groups regarding learner identity. Based on this consumer orientation data, it might be concluded that the foundation university students paying tuition fee are willing to provide more services, satisfaction and benefit for the fee they paid and therefore have more consumer orientated views and behaviors.

Table 8

Difference of the Level of Consumer Orientation and Learner Identity in Terms of Department

	Department	**n**	$\bar{x}$	**s.s.**	**Levene Test**		**T**	**p**
					f	**P**		
Consumer orientation	STEM	196	2,21	0,87	1,026	0,312	0,968	0,334*
	Non-STEM	180	2,13	0,83				
Learner identity	STEM	299	3,74	0,60	0,975	0,324	-3,228	0,001**
	Non-STEM	77	3,94	0,63				

*p>0.05
**p<0.05

In Table 8, difference in the level of consumer orientation was not statistically significant. However, there was a statistically significant difference regarding learner

identity (t=-3,228; p<0,05 p=0.000). The level of learner identity was lower for those studying at STEM departments ($\bar{x}$=3,74) than those at non-STEM departments ($\bar{x}$=3,94). This may be because that foundation university students choose one of the STEM departments to get a job with higher salary instead of the departments they are interested in. Furthermore, the student, seeing diploma as a right in return for tuition fee, might only aim to pass courses with minimum effort.

Table 9

Difference of the Level of Consumer Orientation and Learner Identity in terms of Goal GPA for Graduation

	Goal GPA for graduation	**N**	$\bar{x}$	**s.s.**	**F**	**P**	**Scheffe**
Consumer Orientation	(-) – 3.00	102	2,60	0,96	21,654	0,000*	1-3
	3.00 – 3.50	165	2,07	0,76			
	3.50 – 4.00	109	1,91	0,70			
Learner Identity	(-) – 3.00	102	3,55	0,65	32,084	0,000*	1-2 1-3
	3.00 – 3.50	165	3,78	0,57			
	3.50 –4.00	109	4,18	0,51			

*p<0.05

In Table 9, difference of consumer orientation level regarding goal GPA for graduation was statistically significant (f =21,654, p = 0.000, p <0.05). According to Scheffe test results, there was a significant difference between students with (-)-3,00 and 3,50-4,00 goal GPA. The level of consumer orientation was higher for those with (-)-3.00 goal GPA ($\bar{x}$= 2,60) than those with 3,50-4,00 ($\bar{x}$= 1,91). The low level of goal GPA for graduation of the students with high level of consumer orientation might be due to the tendency of students to focus on diploma as their right and thus to complete the higher education process with minimum effort.

Difference of the level of learner identity was statistically significant (f=32,084, p=0.000 p<0.05). According to Scheffe test result, the significant differences were between the students with (-)-3.00 goal GPA and those with 3,00-3,50 goal GPA, and between the ones with (-)-3,00 and 3,50-4,00. The level of learner identity for those with (-)-3,00 GPA goal ($\bar{x}$=3,55) was lower than those with 3,00-3,50 goal GPA ($\bar{x}$=3,78), and than those with 3,50-4,00 goal GPA ($\bar{x}$=4,18). The low level of learner identity of the students with low goal GPA might be due to their low motivation towards higher education and therefore their adoption of superficial learning approach.

Table 10

Correlation Between Academic Performance (GPA) and the Level of Consumer Orientation

		Consumer Orientation	GPA
Consumer Orientation	r	1	-0,284
	p		0,000*
GPA	r		1
	p		

*p<0.05

In Table 10, there was a low and negative correlation between academic performance and the level of consumer orientation (r = -0,284 p = 0.001, p = 0, 000). This may be due to the fact that university students with consumer-oriented views and behaviors want to complete higher education process with minimum effort by regarding diploma as guarantee. Thus, the tendency to ignore the responsibilities required by higher education might be interpreted as the reason of low AGNO, which is the indicator of the academic performance of the students.

Table 11

Correlation between Academic Performance (GPA) and the Level of Learner Identity

		Learner Identity	GPA
Learner Identity	r	1	0,322
	p		0,000*
GPA	r		1
	p		

*p<0.05

In Table 11, there was a low and positive correlation between academic performance and the level of learner identity (r = 0.322 p = 0.000, p = 0.000). Intellectual engagement, deep learning approach, students' introducing themselves as learners, regular attendance to lessons increase both academic performance and the level of learner identity so they might be interpreted as the causes of this positive correlation.

Discussion, Conclusion and Recommendations

In this study, the students' consumer orientation level was found at 'Disagree' level. In this regard, while Bunce et al. (2017) found similar results; Delucchi and Korgen (2002), Nixon, Scullion and Hearn (2016), Obermiller, Fleenor and Raven (2005), Universities UK (2017), and Ikeda, Campomar and Veludo-de-Oliveira (2009)

observed contrasting findings. They found that students consider themselves as consumers in higher education. The consumer orientation level of students in Turkey is close to Bunce et al.'s result (2017). Financial support of higher education in the UK is almost totally students' responsibility (Geven, 2015) as in Turkey where 90% of tuition fee is provided by students (Buyukuslu, 2010) Thus, in these two countries, similar ratio of tuition fee and proximity of students' consumer orientation might indicate that there may be positive relationship between ratio of tuition fee and students' consumer orientation level.

In this research, the item with the highest mean was "If I cannot get a good job after I graduate, I should have some of my tuition fees refunded." which might mean that students want to get their tuition fee's worth. This result was supported by Barnett (2011), Brown (2011), Clark (2009), Jones-Devitt and Smith (2007), Naidoo and Williams (2015), Paricio (2017) and Tomlinson' research results (2016). The item with the lowest mean is that "It is part of my lecturers' job to make sure I pass my courses."; which contradicts with Koris and Nokelainen's findings (2015) that students in marketised universities think that learning, graduating and getting a diploma are their responsibilities, rather than lecturers' and universities'. Another result showed that the level of learner identity is at 'Agree' level; which might mean that students want to be successful, because success provides employment and a well-paid job, therefore; their learner identity level is high. Similar results were found out by Abouserie (1995) and Ekinci (2008).

It was also found that females' consumer orientation level is lower than males'. Increase in females' education level is important for employment (Yildiz, 2013). Therefore, it is necessary for women to keep education level high and to improve at the highest level (Mulligan & Rubinstein, 2008). Yildiz (2013) observed that there is gender discrimination and low female employment in Turkey. Therefore, women have to be highly skilled; which might be reason for women's low consumer orientation. However, Bunce et al. (2017) found that consumer orientation does not differ regarding gender; and Douglas, Douglas and Barnes (2006) discovered that both male and female students describe themselves as consumers.

Regarding age variable, there was no statistically significant difference. However, Bunce et al. (2017) found that there is a negative relationship between age and consumer orientation level. This result is not consistent with study results of Douglas et al. (2005) that students between 25-29 and 30-34 ages consider themselves more as consumers than the other age groups. This may stem from conditions in Turkey. In Turkey, it is alleged that foundation universities do not provide necessary academic, intellectual, personal and social development for students, which is similar with the results of Balaban and Cakmak's (2016) study.

In this study, difference of the level of learner identity regarding age is not statistically significant. However, lifelong learning skills (Adams, 2007; Koc, 2007) and factors determining the level of learner identity are similar. Yildiz (2014) observed that participants' perception of lifelong learning increases as age increases,

which might lead to an increase in learner identity. But the result of this study does not support Yildiz's (2014) findings.

The consumer orientation level differs concerning scholarship rates. Students with 25% and 50% scholarships have higher consumer orientation than those with 100% scholarship; which are similar with the results of Bunce et al. (2017), Koris et al. (2015), Tomlinson (2016), Wellen (2005) and Williams (2013). They reveal that consumer orientation level increases as tuition fee increases. Kaynas (2012) states that consumers choose products or services to get more benefits; which might be interpreted that as students want to receive tuition fee back as high quality service, benefit and satisfaction so they show consumer orientation, which is similar with Barnett's (2011) and Jones-Devitt et al.' results (2007).

Moreover, results of this research showed that the learner identity level was found lower at STEM departments than those at non-STEM departments. Similarly, Entwistle and Tait (1995) state that at STEM departments, students have more superficial learning approaches, because STEM departments lead learners to adopt superficial learning approach, and superficial learning approach is related to low level of learner identity (Platow, Mavor & Grace, 2013).

As for students' goal GPA for graduation, there is a significant difference in students' consumer orientation level. In this context, as goal GPA decreases, the level of consumer orientation increases; which might be because students see diploma as a right in return for tuition fee (Naidoo et al., 2005). Students may also have a tendency to complete higher education with minimum effort (Brown, 2011; Calyson & Haley, 2005), to focus only on diploma rather than learning (Brown, 2011; Brown et al., 2013; Clark, 2009; Molesworth et al., 2009; Naidoo et al., 2005; Newson, 2004; Nixon et al., 2016; Nordensvärd, 2010; Pathan et al., 2017; Saunders, 2015; Tomlinson, 2014; 2016; Wellen, 2005; Williams, 2010). This finding is not consistent with the findings of Bunce et al. (2017), Tomlinson (2014) and Saunders (2015). It was seen in the study that as goal GPA for graduation decreases, the level of learner identity decreases which might be because of low motivation towards higher education and therefore; students have superficial learning approach. Gorard, Smith, May, Thomas, Adnett and Slack (2006) support this finding.

The results also showed that there is a negative and weak correlation between academic performance (GPA) and the level of consumer orientation, which is similar with the result of Bunce et al. (2017). In Alkis (2015) and O'Connor and Paunonen's (2007) studies; there is a positive correlation between students' responsibility and success. Consumer-oriented students view higher education as service they get in exchange of tuition fee so students tend to avoid responsibilities (Barnett, 2011; Jones-Devitt et al., 2007; Naidoo et al., 2005; Naidoo et al., 2011; Nixon et al., 2016; Williams, 2010); which might cause decrease in academic performance. Alkis (2015) observed that students are more interested in lectures which they consider beneficiary. Brackney and Karabenick (1995) also state that there is positive correlation between students' exam grades and importance they give to lectures. Thus, while it is expected that consumer oriented students give importance to

lectures because of employment and high salary opportunity, it is found that there is a negative correlation between the level of consumer orientation and academic performance. Therefore, the research result contradicts with the findings of Alkis (2015) and Brackney et al. (1995).

There is also a positive and low correlation between academic performance (GPA) and the level of learner identity. Alkis (2015), Brewer and Burgess (2005), Bunce et al. (2017) and Lawson (2014) assert that regular attendance to lectures provides higher grades. Lawson (2014) also observes that students with high learner identity regularly participate in all lectures, seminars and presentations. Thus, the fact that participation in lecture increases both the level of student's learner identity and academic performance might be interpreted as the reason for positive correlation between the level of learner identity and academic performance. Krause (2005) and Bunce et al. (2017) states that intellectual engagement is positively related to academic performance so to the level of learner identity. Thus, intellectual engagement may be interpreted as the reason. Boyle, Duffy and Dunleavy (2003), Chan (2003), Ramsden (2000) and Smyth, Mavor, Platow, Grace and Reynolds (2015) found that students with deep learning approach have internal motivation to learn and to use learning strategies such as critical thinking and higher-level cognitive activities. Chan (2003) also states that students with superficial learning approach do not have motivation towards learning. Bunce et al. (2017) and Platow et al. (2013) state that people with higher learner identity show deep learning approach. Thus, it is observed that having deep learning approach affects both the level of learner identity and academic performance of the students positively. As result, this finding might be resulted from students' deep learning approach.

A number of conclusions were drawn in this study. First, it was observed that the level of students' consumer orientation is at "Disagree" level, and the level of learner identity was at 'Agree' level. Another result showed that the females' consumer orientation level was lower than males'. As for variables, there was no significant difference between age, and consumer orientation and learner identity levels. Students with 25% and 50% scholarships had higher level of consumer orientation than those with 100%. While there was no significant difference in the level of consumer orientation, the level of learner identity studying at STEM departments was lower than those studying at non-STEM departments. The level of consumer orientation of students whose goal GPA for graduation was between (-) -3,00 was higher than those between 3,50-4,00. The learner identity level of students whose goal GPA for graduation was between (-) -3,00 was lower than those between 3,00-3,50, and than those between 3,50-4,00. Negative and low correlation was found between consumer orientation level and academic performance. A positive and low correlation was found between learner identity level and academic performance.

Decision-makers for higher education might make arrangements to increase academic performance by considering the negative correlation between the level of consumer orientation and academic performance, and positive correlation between the level of learner identity and academic performance. The decrease in academic performance might be investigated. There found positive correlation between the

learner identity level and academic performance. A research might be conducted to determine ways to increase the learner identity level and to decrease consumer orientation. A mixed study might be carried out to compare findings. A similar research can be conducted at public and foundation universities in different regions and provinces, with graduate and post-graduate students with various samples. The level of males' consumer orientation was found to be higher than females'. The reasons behind it might be examined with another mixed research.

References

Abouserie, R. (1995). Self esteem and achievement motivation as determinants of students approaches to studying. *Studies in Higher Education*, 20(1), 19-27.

Adams, D. (2007). Lifelong learning skills and attributes: The perceptions of Australian secondary school teachers. *Issues in Educational Research*, 17(2), 149.

Alkis, N. (2015). *The influence of personality traits, motivation and persuasion principles on academic performance* (master's thesis). The Middle East Technical University, Ankara,Turkey.

Balaban, O., & Cakmak, D. (2016). Examination of university students' perception of personal development training. *The Sakarya Journal of Economics*, 5 (1), 1-17.

Balci, A. (2015). *Research in social sciences (11st edition).* Ankara: Pegem A Publication.

Barnett, R. (2011). *The marketised university: Defending the indefensible*. In M. Molesworth, R. Scullion, & E. Nixon (Eds), The marketisation of higher education and the student as consumer (pp. 39-51). London: Routledge.

Boyle, E. A., Duffy, T., & Dunleavy, K. (2003). Learning styles and academic outcome: The validity and utility of Vermunt's inventory of learning styles in a British higher education setting. *British Journal of Educational Psychology*, 73, 267-290. doi:10.1348/00070990360626976

Brackney, B. E., & Karabenick, S. A. (1995). Psychopathology and academic performance: the role of motivation and learning strategies. *Journal of Counseling Psychology*, 42(4), 456-465.

Brewer, E. W., & Burgess, D. N. (2005). Professor's role in motivating students to attend class. *Journal of Industrial Teacher Education*, 42(3), 23-47.

Brown, R. (2011). *Higher education and the market.* New York and London: Routledge.

Brown, R., & Carasso, H. (2013). *Everything for sale? The marketisation of UK higher education.* London: Routledge, Taylor and Francis Group.

Bunce,L., Baird, A., & Jones, S.E. (2017). The student-as-consumer approach in higher

education and its effects on academic performance, *Studies in Higher Education*, 42,11. doi:10.1080/03075079.2015.1127908

Buyukozturk, S. (2007). *Data analysis handbook for social* sciences (8th ed.). Ankara: Pegem Yayincilik.

Buyukozturk, S., Kilic Cakmak, E., Akgun, E.A., Karadeniz S., & Demirel, F. (2012). *Scientific Research Methods (11th edition).* Ankara: Pegem Publication.

Buyukuslu, A.R. (2010). The rise of academic capitalism and global universities. İstanbul: Derin Publication.

Chan, K. (2003). Hong Kong teacher education students' epistemological beliefs and approaches to learning. *Research in Education*, 69, 36-50.

Clark, L. (2009). Average students debts will hit more than £10,000 by the end of the decade, *The Daily Mail* (21 April).

Clayson, D.E.,& Haley, D.A. (2005). Marketing models in education: Students as customers, products, or partners, *Marketing Education Review*, 15,1, 1-10. doi:10.1080/10528008.2005.11488884

Douglas, A., Douglas, J., & Barnes, B. (2006). *The student as customer?* Proceedings of the 9th Toulon-Verona Conference University of Paisley, 7th-8th September 2006.

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches.* Sage Publications.

Cokluk, O., Sekercioglu, G., & Buyukozturk, S. (2010). *Multivariate statistics for social sciences: spss and lisrel applications*. Ankara: Pegem A.

Delucchi, M., & Korgen, K. (2002). We're the customer – we way the tuition': student consumerism among undergraduate sociology majors. *Teaching Sociology*, 30(1), 100–107.

Ekinci, N. (2008). *Undergraduate students' approaches to learning and their relationships with the variables of teaching-learning process (Ph.D. dissertation),* Hacettepe University Social Sciences Institute, Department of Educational Sciences, Ankara.

Entwistle, N., & Tait.,H. (1995). Approaches to studying and perceptions of the learning environment across disciplines. *New Directions for Teaching and Learning*, 64, 93–103.

Fatih Sultan Mehmet Foundation University. (2018). *Departments.* Retrieved November 5, 2018, from http://www.fatihsultan.edu.tr/

George, D., Mallery, P. (2010). *SPSS for windows step by step: a simple guide and reference*

17.0 update, 10. Boston: Pearson.

Geven, K. (2015). "How did the latest increase in fees in england affect student enrolment and inequality?", *The European Higher Education Area*, 479–500.

Haywood, H., Jenkins, E., & Molesworth, M. (2011). *A degree will make all your dreams come true: Higher education as the management of consumer desires.* In N.Molesworth, R. Scullion, & E. Nixon (Eds.), The marketization of higher education and the student as consumer. Abingdon: Routledge

Higher Education Council (YOK). (2018). The number of students in 2017-2018 education year. Retrieved from https://istatistik.yok.gov.tr/

Ikeda, A. A., Veludo-de-Oliveira, T.M., & Campomar, M.C. (2009). *"Business students' perspective on customer in education"*, paper presented at the BALAS Annual Conference, ITESM, 1 April 2009, Guadalajara, Mexico, available at http://citation.allacademic.com/meta/p_mla_apa_research_citation/2/9/6/1/4/pages296144/p296144-1.php (accessed April 2013).

Iscan, B., & Balyer, A. (2018). Adaptation of the scale of the extent of students' consumer orientation and learner identity into Turkish. *YILDIZ Journal of Educational Research*, 3(1), 1-26.

Istanbul Medipol University. (2018). *Departments.* Retrieved November 5, 2018, from http://www.medipol.edu.tr/Default.aspx

Johansen, V. (2014). Entrepreneurship education and academic performance, *Scandinavian Journal of Educational Research,* 58,3, 300-314. doi:10.1080/00313831.2012.726642

Jones-Devitt, S., & Smith, L. (2007). *Critical thinking in health and social care.* London, Thousand Oaks, New Delhi and Singapore: Sage Publishers.

Kalayci, S. (2009). *SPSS applied multivariate statistical techniques.* Ankara: Dinamik Akademi.

Kaynas, M. (2012). Consumers irrational behaviours and their economic outcomes (master's thesis). T.C. Istanbul Kultur University Social Sciences Institute, Department of Economics, Economics of Management Program. Istanbul

Koc, G. (2007). *Lifelong learning.* O. Demirel (Ed.), New Directions in Education (209-222) Ankara: Pegem A Publication.

Koris, R., & Nokelainen, P. (2015). The student-customer orientation questionnaire (SCOQ). application of customer metaphor to higher education. *International Journal of Educational Management*, 29(10), 115–138.

Krause, K.-L. (2005). *Understanding and promoting student engagement in university*

Learning communities. Paper presented at the Sharing Scholarship in Learning and Teaching: Engaging Students, James Cook University, Townsville

Lawson, A. (2014). Learner identities in the context of undergraduates: a case study, *Educational Research*, 56, 3, 343-356. doi: 10.1080/00131881.2014.934557

Mark, E. (2013). Students are not products. They are customers. *College Student Journal*, 47(3), 489–493.

Molesworth, M., Nixon, E.,& Scullion, R. (2009). Having, being and higher education: the marketisation of the university and the transformation of the student into consumer. *Teaching in Higher Education*, 14 (3), 277–87.

Mulligan, C. B., & Rubinstein, Y. (2008). Selection, investment, and women's relative wages over time, *Quarterly Journal of Economics*, 122 (3), 1061-1110.

Naidoo, R., & Jamieson, I. (2005). Empowering participants or corroding learning: towards a research agenda on the impact of student consumerism in higher education. *Journal of Education Policy*, 20 (3): 267–281.

Naidoo, R., Shankar, A., & Veer, E. (2011). The consumerist turn in higher education: Policy aspirations and outcomes, *Journal of Marketing Management*, 27, 11-12, 1142-1162. doi:10.1080/0267257X.2011.609135

Naidoo, R., & Williams, J. (2015). The neoliberal regime in English higher education: charters, consumers and the erosion of the public good. *Critical Studies in Education*, 56 (2): 208–223.

Newson, J. (2004). Disrupting the 'student as consumer' model: the new emancipatory project. *International Relations*. 18(2), 227-239.

Nixon,E., Scullion, R., & Hearn, R. (2016). Her majesty the student: marketised higher education and the narcissistic (dis)satisfactions of the student consumer, Studies in Higher Education. doi: 10.1080/03075079.2016.1196353

Nixon, E., Scullion, R., & Molesworth, M. (2010). *How choice in higher education can create conservative learners.* In M. Molesworth, Scullion, R., & Nixon, E. Nixon (Eds.), The marketisation of higher education and the student as consumer (pp. 196–208). London:Routledge.

Nixon,E., Scullion, R., & Hearn, R. (2016). Her majesty the student: marketised higher education and the narcissistic (dis)satisfactions of the student consumer, *Studies in Higher Education*.

Nordensvärd, J.(2010). *The consumer metaphor versus the citizen*. In M. Molesworth, E. Nixon and R. Scullions (editors). The Marketisation of Higher Education: The Student as Consumer, Routledge.

Obermiller, C., Fleenor, P., & Raven, P. (2005). Students as customers or products:

perceptions and preferences of faculty and students, *Marketing Education Review*, 15(2), 27-36.

O'Connor, M. C., & Paunonen, S. V. (2007). Big five personality predictors of post-secondary academic performance. *Personality and Individual Differences*, 43(5), 971- 990.

Paricio, J. (2017). Students as customers: a paradigm shift in higher education. Debats. *Journal on Culture, Power and Society,* 131(3), 137-149.

Pathan, S. K., Mahesar, H. A., & Shah, S. (2017). The impact of student consumerism metaphor on higher education students: a critical review of literature. *Grassroots,* 50(3).

Platow, M. J., Mavor, K. I., & Grace, D. M. (2013). On the role of discipline-related self- concept in deep and surface approaches to learning among university students. *Instructional Science,* 41 (2), 271–85.

Ramsden, P. (2000). *Learning to teaching in higher education*. London: Newyork

Routhladge Falmer.

Saunders, D. B. (2015). They do not buy it: exploring the extent to which entering first-year students view themselves as customers, *Journal of Marketing for Higher Education*, 25,1, 5-28. doi: 10.1080/08841241.2014.969798

Smyth, L., Mavor, K. I., Platow, M. J., Grace, D.M & Reynolds, K.J. (2015). Discipline social identification, study norms and learning approach in university students, *Educational Psychology,* 35, 1, 53-72. doi: 10.1080/01443410.2013.82

Strenze, T. (2007). Intelligence and socioeconomic success: A meta analytic review of longitudinal research. Intelligence, 35, Stock, J., & Cervone, D. (1999). *Proximal Goal Setting Cognitive Therapy and Research,* 14 (5).

Tomlinson, M. (2014). Exploring the impacts of policy changes on student approaches and attitudes to learning in contemporary higher education: implications for student learning engagement. *Higher Education Academy.* Retrieved from http://www.heacademy.ac.uk/resources/detail/Research/policy_change_student_attitudes.

Tomlinson, M. (2016). Student perceptions of themselves as 'consumers' of higher education, *British Journal of Sociology of Education,* 38,4, 450-467. doi: 10.1080/01425692.2015.1113856

Universities UK. (2017). *Education, consumer rights and maintaining trust: what students want from their university.* Retrieved from http://www.universitiesuk.ac.uk/policy-and analysis/reports/Documents/2017/education-consumer-rights-maintaining-trust-web.pdf

Wellen, R. (2005). The university student in a reflexive society: consequences of consumerism and competition, *Higher Education Perspectives*, 1(2).

Williams, J. (2010). *Constructing consumption: what media representations reveal about today's students.* In the marketisation of higher education, edited by M. Molesworth, R. Scullion, and E. Nixon, 170–82. Oxon: Routledge.

Williams, J. (2013). *Consuming HE why learning can't be bought*. London: Bloomsbury.

Yildiz, O. (2013). Women employment in Turkey from the view of employer: A field survey. *Dokuz Eylul University Literature Faculty Journal*, 2(3), 95-110.

Yildiz, S. (2014). What do universities promise? A content analysis of print ads of the universities in Turkey. *Anadolu University Journal of Social Sciences,* 14(2), 157 160.

Vakıf Üniversitesi Öğrencilerinin Tüketici Yönelim ve Öğrenen Kimlik Düzeyi ile Akademik Performansı Arasındaki İlişki

Atıf:

Iscan, B., & Balyer, A. (2019). Foundation university students' consumer orientation and learner identity levels and their correlations with academic performance. *Eurasian Journal of Educational Sciences, 84*, 71-92, DOI: 10.14689/ejer.2019.84.4

Özet

Problem Durumu: Son yıllarda yükseköğretimin piyasaya açılması ile üniversitelerde tüketici yönelimli öğrencilerden daha fazla söz edilmektedir. Piyasalaşan üniversitelerde öğrencilerin tüketici yönelimli öğrenci davranış ve tutumları üzerine araştırmaların artmasına rağmen, öğrencilerin kendini tüketici olarak görme düzeyi üzerine hala yeterli sayıda araştırma bulunmamaktadır. Dolayısıyla öğrencilerin tüketici yönelimi araştırma yapılması gereken bir konu olarak gündeme gelmiştir.

Yükseköğretimde piyasalaşmanın aynı zamanda öğrencilerin öğrenen kimliği üzerinde ve dolayısıyla öğrenci kavramı üzerinde farklılıklara yol açtığı düşünülmektedir. Dolayısıyla yapılan bu araştırma ile Türkiye'de piyasaya katılan vakıf üniversitesi öğrencilerinin öğrenen kimlik düzeylerinin ortaya çıkarılması hedeflenmektedir. Bu konuda farklı ülkelerde araştırmalar bulunmasına rağmen Türkiye'de alanyazında yeterince araştırma bulunmamaktadır. Aynı zamanda piyasalaşmanın akademik performans ile öğrencilerin tüketici yönelim ve öğrenen kimlik düzeyi ile ilişkisini incelemek yükseköğretimin kalitesini artırmak için önemli görülmektedir. Dolayısıyla hem alan yazındaki eksiklikleri tamamlamak hem de konuyu Türkiye bağlamında çalışmak için bu araştırmanın yapılması hedeflenmiştir.

Araştırmanın Amacı: Bu çalışma, farklı değişkenlere göre vakıf üniversitesi öğrencilerinin tüketici yönelim ve öğrenen kimlik düzeyini ve bunların akademik performans ile arasında bir ilişkinin bulunup bulunmadığını belirlemeyi amaçlamaktadır.

Araştırmanın Yöntemi: Çalışma nicel ilişkisel tarama modeline dayalı yürütülmüştür. Araştırmada incelenen değişkenler, vakıf üniversite öğrencilerinin tüketici yönelim ve öğrenen kimlik düzeyi ve akademik performanstır. Araştırmanın evrenini, 2017-2018 eğitim-öğretim yılında İstanbul'daki iki vakıf üniversitesinde öğrenim gören 376 öğrenci oluşturmaktadır. Öğrenciler basit seçkisiz örnekleme yöntemiyle seçilmiştir. Araştırmada veriler, Bunce, Baird ve Jones (2017) tarafından geliştirilen ve İşcan ve Balyer (2018) tarafından Türkçeye uyarlanan "Öğrenci Tüketici Yönelim ve Öğrenen Kimlik Düzeyini Belirleme Ölçeği" kullanılarak toplanmıştır. Ölçek beşli likert tipi bir ölçektir. Veriler, SPSS 21 istatistik programı kullanılarak analiz edilmiştir.

Araştırmanın Bulguları: Araştırmada elde edilen sonuçlara göre katılımcıların tüketici yönelimi 'katılmıyorum' düzeyinde bulunmuştur ($\bar{x}$=2,25). Öğrencilerin tüketici yönelim düzeyini gösteren en yüksek madde ($\bar{x}$=2,51) ortalamayla "*Mezun olduktan sonra iyi bir işe giremezsem, okul yapmış olduğum ödemelerin bir kısmını geri ödemelidir."* olarak bulunurken, en düşük madde ise ($\bar{x}$=1,86) ortalamayla "*Hocalarımın işinin bir parçası da beni derslerimden geçirmektir*." olarak bulunmuştur. Yine diğer bir sonuca göre öğrencilerin öğrenen kimlik düzeyi ($\bar{x}$=3,79), 'katılıyorum' düzeyindedir. Öğrenen kimlik düzeyine ait en yüksek madde ($\bar{x}$=4,49) ortalamayla "*Üniversitede mümkün olduğu kadar çok şey öğrenmek isterim*." maddesi iken, en düşük madde, ($\bar{x}$=3,11) ortalamayla "*Derslere hazırlık yaparım.*" maddesidir. Kadınların tüketici yönelim düzeyi ($\bar{x}$=2,08), erkeklere göre ($\bar{x}$=2,51) daha düşük bulunmuştur. Öğrenen kimlik düzeyinin cinsiyete göre farklılığı istatistiksel olarak anlamlı değildir (p>0.05). Öğrencilerin tüketici yönelim ve öğrenen kimlik düzeyi yaşa göre istatistiksel anlamda bir farklılık göstermemiştir (p>0.05). Katılımcıların tüketici yönelim düzeyinin ve öğrenen kimlik düzeyinin sınıf düzeyine göre farklılığı istatistiksel olarak anlamlı değildir (p>0.05). Bursluluk durumu değerlendirildiğinde, %25 burslu ($\bar{x}$=2,31) ve 50% burslu ($\bar{x}$=2,24) olanların tüketici yönelim düzeyi, tam burslu olanların düzeyine ($\bar{x}$=1,78) göre daha yüksek bulunmuştur. Öğrencilerin öğrenen kimlik düzeyinin bursluluk oranlarına göre farklılığı istatistiksel olarak anlamlı değildir (p>0.05). Katılımcıların tüketici yönelim düzeyinin bölümlerine göre farklılığı istatistiksel olarak anlamlı değildir (p > 0.05). STEM bölümündeki öğrencilerin öğrenen kimlik düzeyi ($\bar{x}$=3,74), STEM bölümünde olmayan öğrencilere ($\bar{x}$=3,94) göre daha düşük bulunmuştur. Hedeflenen mezuniyet AGNO'su (-)-3,00 katılımcıların tüketici yönelim düzeyi ($\bar{x}$=2,60), hedeflenen mezuniyet AGNO'su 3,50-4,00 olanlara ($\bar{x}$=1,91) göre daha yüksek bulunmuştur. Hedeflenen mezuniyet AGNO'su (-)-3,00 ($\bar{x}$=3,55) olan katılımcıların öğrenen kimlik düzeyi, hedeflenen mezuniyet AGNO'su 3,00-3,50 ($\bar{x}$=3,78) ve 3,50-4,00 ($\bar{x}$=4,18) olanlara göre daha düşüktür. Akademik performans ile tüketici yönelim düzeyi arasında negatif yönde düşük kuvvetli bir ilişki bulunmuştur (r=-0,284 p=0.001, p=0,000). Akademik performans ile öğrenen kimlik düzeyi arasında pozitif yönde düşük kuvvetli bir ilişki tespit edilmiştir (r= 0,322 p=0.000, p=0,000).

Araştırma Sonuçları ve Öneriler: Araştırmada elde edilen sonuçlara göre, öğrencilerin tüketici yönelimleri 'katılmıyorum'; öğrenen kimlik düzeyi ise 'katılıyorum' düzeyindedir. Kadınların tüketici yönelim düzeyi, erkeklerin tüketici yönelim düzeyine göre daha düşük iken; öğrenen kimlik düzeyi cinsiyete göre anlamlı farklılık göstermemektedir. Tüketici yönelim ve öğrenen kimlik düzeyi, yaşa göre anlamlı bir farklılık sergilememektedir. Tüketici yönelim düzeyi ve öğrenen kimlik düzeyi öğrencilerin bulunduğu sınıf düzeyine göre anlamlı farklılık göstermemektedir. %25 ve 50% burslu olanların tüketici yönelim düzeyi, tam burslu olanların tüketici yönelim düzeyine göre daha yüksek iken; öğrenen kimlik düzeyi bursluluk oranına göre anlamlı farklılık göstermemektedir. Tüketici yönelim düzeyi bölüme göre anlamlı farklılık göstermezken, STEM bölümündeki öğrencilerin öğrenen kimlik düzeyi, STEM bölümünde olmayan öğrencilerin öğrenen kimlik düzeyine göre daha düşüktür. Hedeflenen mezuniyet AGNO'su (-)-3,00 olan öğrencilerin tüketici yönelim düzeyi, hedeflenen mezuniyet AGNO'su 3,50-4,00 olan öğrencilerin tüketici yönelim düzeyine göre daha yüksektir. Hedeflenen mezuniyet AGNO'su (-)-3,00 olan öğrencilerin öğrenen kimlik düzeyi, hedeflenen mezuniyet AGNO'su 3,00-3,50 ve 3,50-4,00 olan öğrencilerin öğrenen kimlik düzeyine göre daha düşüktür. Tüketici yönelim düzeyi ile akademik performans arasında negatif yönde düşük bir ilişki var iken, öğrenen kimlik düzeyi ile akademik performansı arasında pozitif yönde düşük bir ilişki vardır.

Yükseköğrenim alanında politika geliştirenler, vakıf üniversitelerinin tüketici yönelim düzeyi ile akademik performans arasındaki negatif ilişki ve öğrenen kimlik düzeyi ile akademik performans arasındaki pozitif ilişkiyi dikkate alarak akademik performansı artırmaya yönelik düzenlemeler yapabilirler. Böylece tüketici yönelim düzeyi arttıkça, akademik performanstaki düşüşün nedenleri araştırılabilir. Ayrıca, öğrenen kimlik düzeyi ile akademik performans arasındaki pozitif ilişkiye dayanarak, öğrenen kimlik düzeyini artırmak için ne yapılması gerektiği konusu yürütülecek olan karma bir araştırma yöntemiyle karşılaştırılabilir. Yine benzer bir araştırma devlet üniversitelerinde, farklı bölgelerdeki ve illerdeki vakıf üniversitelerinde de yapılabilir. Benzer bir araştırma lisans, lisansüstü ve doktora düzeylerine yürütülebilir ve lisans öğrencileriyle karşılaştırılabilir.

Anahtar Kelimeler: Akademik performans, neoliberalizm, öğrenen kimlik, tüketici kimliği, vakıf üniversitesi.

This study was produced from Betul ISCAN's thesis "Investigation of The Correlation Between The Extent of Consumer Orientation and Learner Identity, and Academic Performance of University Students: Foundation University Case" and supported by the Scientific Research Projects Unit of Yildiz Technical University. Project Number: 3342.

Eurasian Journal of Educational Research 84 (2019) 93-114

Eurasian Journal of Educational Research
www.ejer.com.tr

Early Childhood Preservice Teachers' Experiences with Reflective Journal Writing

Figen SAHIN[1], Muge SEN[2], Caglayan DINCER[3]

ARTICLE INFO

Article History:
Received: 07 Nov. 2018
Received in revised form: 22 Aug. 2019
Accepted: 23 Nov. 2019
DOI: 10.14689/ejer.2019.84.5

Keywords
reflective journals, reflective practice, early childhood, teacher education

ABSTRACT

Purpose: Reflective journal writing is considered as a form of reflective practice. The research studies suggested that journal writing allowed the teacher to reflect on their practices, improved their self-awareness and supported their professional development. Even though the research showed that journal writing as an effective tool for reflective practice, the need exists for the studies conducted in the area of early childhood teacher education. Thus, this qualitative study aims to gain a more in-depth understanding of early childhood preservice teachers' experiences with reflective journal writing.

Research Methods: This study is a qualitative study focusing on the experiences of Turkish preservice teachers. The participants were ten preservice teachers attending an early childhood teacher education program. A demographic information form, semi-structured interviews, and reflective journals were used to collect data.

Findings: The findings of this study were reported on the basis of two focal points: the *role* of reflective journals and the *content* of reflective journals. For the role of reflective journals, three themes derived from data were as follows: (i) gaining insight, (ii) detailed evaluation, and (iii) developing strategies for the future. At the analysis of the content of reflection, meeting the real classroom environment and positive experiences gained from the field were the two themes that emerged from the data.

Implications for Research and Practice: This study showed that writing a reflective journal can be considered an important tool for self-evaluation and professional growth. In future studies, the role of reflective writing in teacher's professional development, especially a variety of differing types of reflective strategies, can be addressed.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Corresponding Author. Gazi University, Faculty of Education, Department of Primary Education, Division of Preschool Education, Ankara-TURKEY, e-mail: figensahin@gazi.edu.tr ORCID: https://orcid.org/0000-0001-5614-6883

[2] Ankara University, Faculty of Educational Sciences, Department of Elementary Education, Division of Preschool Education, Ankara-TURKEY, e-mail: msen@ankara.edu.tr ORCID: https://orcid.org/0000-0003-4854-6531

[3] Hasan Kalyoncu University, Faculty of Education, Division of Preschool Education-Gaziantep-TURKEY, e-mail: caglayan.dincer@hku.edu.tr, ORCID: https://orcid.org/0000-0001-5468-9155

Introduction

Over the past two decades, there has been a movement around the world towards the use of reflective practice and reflective journals (e.g. Bain, Mills, Ballantyne, & Packer, 2002; Isikoglu, 2007). Research studies in teacher education have focused on both the importance of reflective thinking, as well as ways of increasing reflective practices (Pavlovich, 2007; Russell, 2005). In parallel with these practices, there are many professional standards that have reported that reflection is an important part of quality teaching National Association for the Education of Young Children [NAEYC], 2009; National Council for Accreditation of Teacher Education [NCATE], 2008). Developing reflection in teacher education, as Pedro (2005) asserted, is a "worthwhile effort" (p. 63).

According to Zeichner and Liston (1996), the interest in reflection can be considered "a reaction against the view of teachers as technicians who narrowly construe the nature of the problems confronting them and merely carry out what others, removed from the classroom, want them to do" (p. 4). Emphasizing the training of teachers as reflective practitioners supports the idea that preservice teachers should be trained from the perspective of "learning facilitator" or "social mediator" (Larrivee, 2008). Reflection in teacher education provides teachers with reason abilities to evaluate and improve their teaching practices (Jay & Johnson, 2002), supports their professional development (Körkkö, Kyrö-Ämmälä, & Turunen, 2016), and acts "as a compass" for better determining their current situation and contemplating their future direction (Farrell, 2012, p. 7).

Although an increasing amount of literature has addressed the definition of reflection and strategies for improving reflection, there continues to be a debate over the meaning of reflection. The term reflection is seen as ill-defined (Hatton & Smith, 1995) and represented as complicated (Clarà, 2015; Griffiths, 2000; Jay & Johnson, 2002; LaBoskey, 1993; Russell, 2005). The roots of the term reflection originated with Dewey (1933) who defined the reflective action as an "active, persistent and careful consideration of any belief, or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (p. 9). Hatton and Smith (1995) basically defined reflection as the "deliberate thinking about action with a view to its improvement" (p. 40). The elements of reflection are considered from various frameworks, "reflection is situated in practice, is cyclic in nature, and makes use of multiple perspectives" (Ward & McCotter, 2004, p. 245). Schön (1987) suggested the reflection in action and reflection on action. In Schön's framework, *reflection in action* implies "conscious thinking and modification while on the job" (Hatton & Smith, 1995, p. 34). *Reflection on action* occurs before and after the experience while planning and thinking about the lesson or while evaluating what happened (Zeichner & Liston, 1996).

Reflective teachers are active in asking questions and evaluating their beliefs and assumptions about what they do in practice (Cruickshank, Jenkins, & Metcalf, 2006; Larrivee, 2008; Lee, 2008). Zeichner and Liston (1996) stated that acknowledging teachers as reflective practitioners is to accept teachers as active individuals with

ideas, beliefs, and theories related to their work, as well as both problem posers and solvers in the educational context rather than regarding them as merely the implementers of pre-planned programs.

Reflective thinking and practice take into account different trends in the research literature. For example, while one vein of research focuses on the improvement of reflective thinking (Pavlovich, 2007; Russell, 2005), another group of research is interested in describing the levels or classification of reflective thinking (Cengiz, Karatas, & Yadigaroglu, 2014; Collier, 1999; Hatton & Smith, 1995; Jay & Johnson, 2002; Larrivee, 2008; Valli, 1997; Ward & McCotter, 2004). The striking finding of these research trends was that descriptive reflection tended to be the most common preference among preservice teachers (Cengiz et al., 2014; Hatton & Smith, 1995). On the other hand, based on their review, Dyment and O'Connell (2011) stated that preservice teachers could write higher quality journals if consideration was made regarding the limiting and supporting factors which influence their writing.

One of the most important points to be considered in supporting reflective practitioners is to provide preservice teachers with "mediation structures" to aid them in systematically focusing on their experiences, as well as to take action (Larrivee, 2008). To help teachers become more reflective teachers different types of strategies are beneficial, such as portfolios (Kaasila & Lauriala, 2012), e-portfolios (Oakley, Pegrum, & Johnston, 2014), video journaling (Parikh, Janson, & Singleton, 2012), video analysis (Tripp & Rich, 2012), action research (Vaughn, Parsons, Kologi, & Saul, 2014; Yost, Sentner, & Forlenza-Bailey, 2000), and narratives (Larrivee, 2008). Also, it is important to use multiple systematic aids, not limit preservice teachers to one approach, and to use several strategies (Lee, 2005).

Journal writing is characterized as a form of reflective practice (Al-karasneh, 2014; Bain et al., 2002; Farrell, 2013; Lee, 2008; Pavlovich, 2007; Pedro, 2005; O'Connell & Dyment, 2011; Uline, Wilson, & Cordry, 2004; Valli, 1997; Yost et al., 2000). In other words, it is seen as a "device for working with events and experiences to extract meaning from them" (Boud, 2001, p. 9). Journal writing is a vehicle for reflection that fits the 'reflection on action' category of Schön. Journal writing is not only a place for writers to record their experiences and events but also a forum in which these events and experiences can be restructured (Boud, 2001). Collier (1999) stated that reflective writing allows students to become "aware of the sound and the character of their own voices" as well as to learn "how they think and how they convey what they think to others through their words and actions" (p. 179). Journal writing entries also create personal space for students to reflect upon their knowledge, feelings, experiences and the reasoning behind their choices (Valli, 1997).

Several studies which addressed the role of writing reflective journals revealed that journal writing supported teachers' ability to reflect on their teaching practices, increased their understanding regarding the complex nature of teaching (Tadesse Degago, 2007), and also improved their self-awareness and professional development (Al-Hassan, Al-Barakat, & Al-Hassan, 2012; Francis, 1995; Larrivee, 2008). In addition, reflective journaling is considered as a tool for preservice teachers

to foster dispositional development (LaBelle & Belknap, 2016). Around the world, the studies conducted with preservice and in-service teachers in early childhood area (Beavers, Orange, & Kirkwood, 2017; Cherrington & Loveridge, 2014; Durand, Hopf, & Nunnenmacher, 2016; Foong, Binti, & Nolan, 2018; Kahles, 2015; Riojas-Cortez, Alanís, & Flores, 2013) have addressed on different aspects of reflection and reflective thinking. In Turkey, a few studies have focused on reflective journal writing of preservice teachers in different areas of education, computer and instruction technology (Akkoyunlu, Telli, Cetin, & Daghan, 2016), science (Cengiz et al., 2014) primary education (Ekiz, 2006; Koc & Yildiz, 2012), and child development and early childhood education (Isikoglu, 2007; Kucukoglu, Ozan, & Tasgin, 2016; Sahin, 2009). Although a wealth of research literature has considered journal writing as an effective tool, there continues to be a need for conducting further research in this area with early childhood preservice teachers. Reflective teaching is more important than ever, especially for early childhood teachers who are working in diverse classrooms (Thomas & Packer, 2013). As a result, this qualitative study aims to gain a more in-depth understanding of early childhood preservice teachers' first experiences with reflective journal writing. Based on this aim, the research questions for this study were as follows: (1) What are the perceptions of pre-service teachers regarding the role of reflective journal writing? (2) What is the content of the pre-service teachers' reflective journals?

Method

Research Design

This study utilized the methods of qualitative research, which aims to better understand the experiences and ideas of the participants (Lincoln & Guba, 1985; Merriam, 1998) and basically involves "an interpretive and naturalistic approach to the world" (Denzin & Lincoln, 2000, p. 3). This study was conducted to gain a deeper understanding of the perceptions of preservice teachers concerning their experiences and the role reflective journal writing played. Regarding the qualitative research tradition, to increase the trustworthiness of this study, the strategies, including prolonged engagement and triangulation, suggested by researchers (Creswell, 2013; Lincoln & Guba, 1985; Merriam, 1998) were utilized. Throughout this study, observing the participants while they implemented their activities, as well as holding pre and post-conferences with them, allowed the researchers to become more familiar with and better understand the participants. The experiences of the participants were provided in detail, along with rich descriptive accounts. To provide triangulation, three researchers worked together in each stage of this study, and this provided the opportunity to enhance the quality of this study by providing multiple perspectives. Furthermore, the journals and interviews were used together in understanding the perspectives of the participants regarding journal writing.

Research Participants

The participants of this study were ten preservice teachers enrolled in an early childhood teacher education program and registered for an undergraduate course focusing on movement education and play in childhood. The researchers employed *purposive sampling* (Patton, 1990) and selected participants who volunteered to take part in this study and from which it was believed rich data could be obtained. Pseudonyms were assigned to the participants. The participants in this study were all female, and their age ranged from 21 to 25 years old, and had a high school degree from different type of schools, and had diverse experiences related to young children. During the research process, only the preservice teachers who participated in this study wrote reflective journals. The participants were provided with the information on the content and their role in this study and not offered any incentives for the participation of this study.

The setting of this study. As a requirement of a four-hour compulsory course in their program, participants attended the theoretical part of the course, conducted observations of early childhood classrooms, planned movement and play activities suitable for 5-6-year-old children, and implemented their plans in actual classroom contexts. Practicing part of the course lasted five weeks in a public school. The students also participated in post-conferences with the professors of the course and completed reflective journal entries after each week of teaching practice. Course-related information is summarized in Table 1. For selected participants, reflective journal writing was a new concept, and before this experience, the reflective journal was not used as a reflective tool in any of their courses. An introductory session regarding the nature and practice of reflective journal writing was provided to the participants, and questions relating to the program were answered at the beginning of this study. In selected weeks, preservice teachers were provided with a reflective focus related to their practices.

Table 1.

Course Information

Section of the Course	*Content of the Course*	*Active Roles*
Theoretical-Section (in-university)	Have knowledge related to motor development, play and movement education and how to design activities for preschool children	Participation-Course instructor Preservice teachers
Practice-Section (in pre-K class)	Plan, implement and evaluate activities in classrooms	Implementation-Preservice teachers Observation-Instructors
Pre-Conference	Review and discuss the planned activities	Preservice teachers-Instructors
Post-Conference	Discuss and evaluate their own practices	Preservice teachers-Instructors

Research Instruments and Procedures

In this study, a demographic information form, semi-structured interviews, and other related documents were utilized as data collection tools. A demographic information form was completed by each participant. The form consisted of participants' demographic information, as well as the participants' previous experiences with children. The primary data collection tool for this study was face-to-face semi-structured interviews. The questions, which sought to address the thoughts and feelings of the participants regarding their practices throughout the course, as well as their thoughts and feelings regarding journal writing, were prepared by the researchers in light of the literature. Participant interviews were conducted at the office of one of the researchers who was not the instructor of the course following the completion of the course and after the collection of the student journals. Each participant interview lasted approximately 25-40 minutes, was recorded, and later transcribed verbatim. Semi-structured interviews allowed the researchers, "to respond to the situation at hand" (Merriam, 1998, p. 74) and to integrate additional questions into the interview when deemed necessary for gaining further understanding. Another data collection tool was the analysis of weekly reflective journals and the review of weekly activity plans, which included a section for assessment. In the creation of their reflective journals, participants were asked to use freestyle writing and to focus on important events that had happened that day, as well as on specific incidents that they faced in their practice.

Data Analysis

In this study, data were analyzed using a constant comparison method (Strauss & Corbin, 1990). To prepare data for analysis, a total of 50 reflective journals and 50 activity plans were organized chronologically for each participant. Data analysis was conducted in two stages. The first stage was to analyse interview data and journals regarding the first research question. The second stage was to examine data from journals for the second research question. Overall, in this study, rather than using preconceived categories for analysing the data, the analysis was instead data-driven, which "involves constructing a category system from the evidence that has been collected" (Edwards, 2001, p. 132). The analysis of the data was inductive; therefore, in the first phase of data analysis, the researchers reviewed the data multiple times to determine recurring issues and then coded them manually. The process was iterative, with the primary aim of identifying emerging codes. After determining emergent codes, the three researchers collaborated on the recoding and revising of the codes and also on determining the categories derived from the data.

Results

The reflective journal contents and the writing styles of participants varied and were individualistic based on their context. In this study, findings from the reflective journals and semi-structured interviews of the preservice teacher participants were

reported on the basis of two focal points. The first of these focal points was the *role* of reflective journals, and the second focal point was the *content* of reflective journals.

The Role of Reflective Journals

In general, in this study, the findings showed that reflective journal writing for preservice teachers served as a tool for professional awareness and evaluation. In particular, reflective journal writing supported preservice teachers' ability to gain greater confidence and to be objective when making personal evaluations. In addition, a majority of the participant preservice teachers expressed that reflective journal writing had become a new and important part of their professional life. In this context, a preservice teacher stated, *"It was important to write, it made a big difference in reflective journaling, and I realized that I needed to use it not only in the field of education, preschool education but also in my other daily life. I realized that it was a need for me"* (Elif, Interview).

The reflective journals of the participant preservice teachers had both similarities and differences, with each research participants' journal possessing both a common theme, as well as differing perspectives based on their own context. For example, a participant expressed her views regarding reflective journals, which she described as, *"pouring and embodying experiences on paper"*, by stating, *"I think the reflective journal is effective in every respect, even when I entered into my professional life, I also like to make a notebook like this one every day and write everything there"* (Aylin, Interview). Aylin shared her view relating to the benefits of writing reflective journals during teaching practice through her journal entry:

> *The reflective journals that we wrote after the implementation process were obviously very useful to me. I can see where I made a mistake when writing my reflective journal. I think what I must do and find solutions. I saw my deficiencies in my reflective journal. It is also nice to express my thoughts and emotions after the implementation on a blank page. I think in your reflective journal, you have the opportunity to share everything like I'm talking to myself* (Aylin, Journal-Week 5).

Another participant journaled that, *"Reflective journal writing allowed me to recognize my mistakes and the good things I did. I think it is more effective and useful than the evaluation that we normally write"* (Gizem, Journal-Week 5). As a result of the analysis, three salient themes defining the role of reflective journals were determined as follows: Gaining insight, detailed evaluation and developing strategies for the future.

Gaining insight. Preservice teachers in the study group indicated that reflective journaling helped in developing a better awareness of their mistakes from the implementation process during teaching and also raised awareness of their strengths and weaknesses more than external evaluation. Melis expressed her views on this topic by stating, *"I think it was very helpful for me to see the negatives because realizing my own mistakes benefitted me more than someone else telling me"* (Interview), and Oyku emphasized that the reflective journal is helpful for *"realizing mistakes easily"* and

"noticing good things more easily" (Interview). Another example of evaluating the reflective journal as an instrument utilized for gaining insight was provided by Aylin, stating, "*It was like a human talking to herself. In a reflective journal, people actually admit things that they cannot admit to themselves"* (Interview).

Preservice teachers also pointed out that keeping journals makes it compulsory for the person to be objective on self-evaluation in addition to their gaining increased and renewed insight. Excerpts from the preservice teachers' opinions are as follows:

> *I think [keeping a journal] allowed me to see myself from the outside. It helped me to see myself not with my own eyes, but with someone else's. It allowed me to see more detail about my mistakes or what I did correctly or maybe to be more objective. Otherwise, I might feel like I was successful even if I was not, but it did not make me feel like it when I got into the reflective journal work* (Yesim, Interview).
>
> *It is a bit difficult for people to put their negative side on the paper. Let's say a person cannot criticize himself. Every time you must criticize from any aspect. If you are not at peace with yourself, it is difficult to write a reflective journal* (Oyku, Interview).

Detailed evaluation. At the beginning of this study, preservice teachers reported similarities between the reflective journaling and the three-dimensional assessment (program, teacher and children). At the end of this study, though, the preservice teachers who had gained reflective journaling experience through their weekly practice, instead stated that the reflective journaling process provided a much more comprehensive and detailed (e.g., holistic) evaluation and added more to three-dimensional assessment. In this regard, Gizem stated:

> *Because while you actually mean to write a little review and leave the scene, you find a good opportunity to think about the one-hour period you have experienced, and you find a lot to think about. Well, it may not have much effect on the material, but it is effective for evaluating the program* (Gizem, Interview).

The participant Aylin, who also believes that keeping a reflective journal can help one to consider, recognize, and note in a more detailed way, *"the missing and ignored ideas*" (Interview). Yasemin's view concurred, stating that, *"Because reflective journaling is much broader, it enabled us to see everything from a wider perspective. It enabled us to see everything in detail. We evaluated things in a more detailed way rather than only negative comments. It provided a great contribution to us"* (Interview). Moreover, Elif commented that writing a reflective journal helped her to open up opportunities to *"analyze, consider deeply and give some ideas for further activities"*, as well as directed participants to think in a more *"multidimensional"* way (Elif, Interview). Another participant, Beril, shared the belief that reflective journal writing requires certain contributions because the process involves emotions, as well as calls upon a three-dimensional assessment:

> *With the evaluations, we realized that we usually ignored our emotions. This can be a daily plan or a single activity. Also, we observed all of our behaviors, positive or negative, children's behaviors and attitudes. A detailed evaluation is something*

positive. I think we can see where we make mistakes much more easily in this way (Beril, Interview).

While the participant, Yesim, stated similar beliefs that reflective journaling provides both a space for detailing and also for expressing emotions:

> *In planning, I was able to do this, when I wrote the reflective journal, I made the effort to do more detailed planning, perhaps because I wrote the mistakes along with my own feelings. I figured I could not do things when they were implicit. I realized this through the reflective journal, but I may not have thought about it when I left the activity, how I felt that is, why did I feel this way? I would not have thought of them* (Yesim, Interview).

Developing strategies for the future. A majority of the participants found that reflective journals acted as a sort of facilitator for defining practice strategies and also for evaluating these strategies. Some preservice teachers expressed this in their interviews, while other preservice teachers instead utilized their journal to reflect these sentiments:

> *I tried not to do something that I said, 'I did it because I did that' in my previous practice. Or I tried to use a situation that children liked in the next implementation, too. When I do this thing, I cannot attract their attention, I must not do that, I must make changes by doing this* (Interview).

> *I will continue to keep a reflective journal for myself during my upcoming implementations. During this period, keeping that journal affected my behaviour before, during, and after the event. I'm getting more detailed and trying to plan the next step* (Elif, Journal-Week 5).

Melis expressed her belief that writing a reflective journal is an effective way for *"taking action"* in implementations she will plan and use in the upcoming weeks in the following statement:

> *It made me see the mistakes I had made. Maybe it prevented me from making those mistakes in the next week. Of course, it contributed to the plans. Then, I changed my approach to the children, thanks to reflective journals. I used to have the wrong attitude. There were words I had used in the wrong way. When I wrote them down, I mean, confessed my mistakes to myself, I internalized it. Then, I can say I proceeded with more confidence in the correct way* (Melis, Interview).

In determining their future strategies, participants addressed that they most utilized the *"reminder"* function of reflective journaling. In her interview, Ceren also explained that it was important to reflect upon any planned process which could not previously be performed because the journaling acted as a data source for preparing later implementations. Another participant, Elif stated:

> *If I hadn't written a reflective journal, I would have only remembered the most apparent or the worst or the most interesting or the best memories. I would not have remembered more from the remaining experiences. Thus, I felt like the process had been done* (Elif, Interview).

The Content of the Reflective Journals

Along with attempting to understand the participant preservice teachers' perceptions regarding the role of reflective journal writing, it was also a part of this research to dissect the content of the participant teachers' reflective journals. For example, what experiences the teacher candidates emphasized in their reflective journals. Through analysis of their reflective journal entries, two themes emerged as follows: meeting the real classroom environment and positive experiences gained from the field.

Meeting the real classroom environment. When the contents of the reflective journals were examined, subcategories from contact with the real classroom environment were identified. The subcategories that were established from the findings were as follows: (1) the difficulties experienced in the real classroom environment and (2) concerns regarding the transfer of theoretical knowledge into practice. The challenging experiences that the preservice teachers experienced were most prominently witnessed in their classroom management practices. For example, Yesim emphasized the impacts of external factors on her experiences by stating:

> *I could not manage the classroom. Although it is because I am inexperienced, the overwhelming number of students was also a factor. It was really hard for me to respond to all the needs of 20 different children with different problems and needs as a single teacher. While I was trying to control some of the children, I could not manage the others* (Yesim, Journal-Week 2).

Aylin expressed her experiences regarding this issue with the following words; *"I had difficulty in classroom management during my practices […] Disorganized children made the practice difficult"* (Journal-Week 5). Moreover, Betul exemplified her concerns regarding classroom management by stating, *"I had many concerns about organizing children when their attention was distracted from time to time. However, when all children joined in all activities, it helped this concern pass quickly"* (Journal-Week 2). Gizem expressed her perceptions regarding classroom management in her journal from the second week in the following words: *"I don't think I will have more difficulties if I gain the ability to manage the classroom. Because, if I manage the classroom, I will feel less anxiety as I confide in myself more, and I will feel more comfortable"*.

Another subcategory of experiencing the real classroom environment is the concern of transferring theoretical knowledge into classroom practice. In their reflective journals, the preservice teachers often stated that they had difficulty in transforming the information they had gained in their undergraduate coursework into their real-world classroom practice. Among the participants, Gizem and Sibel, both noted in their journals their negative feelings towards putting their theoretical knowledge into practice.

While Gizem stated, *"I tried to use the pitch and intonation of my voice as our lecturer constantly told us, I tried to act as if I was one of them when I was with the children, but I feel that this actually caused them to ignore me because they were not used to such things"* (Journal-Week 2), Sibel wrote the following, *"I realized that it was not applicable to a*

group that did not recognize you, as we learned in school, that we could draw children's attention with a song" (Journal-Week 5). On the other hand, some participants stated that they had problems in transferring the knowledge they had learned because of their general *"lack of practical experience"*. For example, Elif expressed her concerns regarding this situation in the following way, *"I think it is important to know the personality and developmental characteristics of the child as well as his name to have effective group work"* (Journal-Week 3).

Positive experiences gained from the environment. When the reflective journals were analyzed, the second theme was the positive experiences preservice teachers had during the implementation process. In their reflective journals, preservice teachers included positive experiences from their field experiences, as well as the personal lessons they felt they gained working with particular age groups during the implementation of planned activities. Gizem's journal entries regarding her experiences over time were:

> *I had too much difficulty preparing activities for the first week. It took me a week to do the materials, but when I looked back at the last week, I recognized that I got more used to and gained practice. With all of this, I can now control myself easier. I'm not overly panicked like I was in the first week. The closer I got to the last week, the less panicked I was* (Journal-Week 5).

Oyku also emphasized her positive experiences, stating, *"Even when I said a sentence, I learned how careful I needed to be. Because I saw what can happen if you do not provide a clear directive. At the same time, I realized that using sound tones is an effective tool to attract children's attention to a game"* (Journal-Week 5). On the other hand, Melis stated that she integrated the information obtained from the field during practice with her acquired theoretical knowledge:

> *Before attending the practicum sessions as a requirement of movement education class, I did not fully understand the purpose of having the children carry out movement activities. In practice, though, I recognized that the children were constantly doing desk activities and could never fully use their energy […] Thanks to these (movement) activities, children were able to use their energy in a positive way. From this point of view, when I become a teacher in the future, instead of saying 'don't run, don't hit your friend', I figured that I need to include what the child wants to do by planning movement activities like this* (Journal-Week 5).

Discussion, Conclusion and Recommendations

This qualitative study aimed to understand the perspectives of early childhood preservice teachers who were not accustomed to using the journals regarding reflective journal writing process and analysis of the content of the reflective journals. To summarize, the results suggested that for the participants of this study, journal writing acted as a tool for *"gaining insight"*, *"making detailed evaluation"*, and *"developing strategies for the future"*. *"encountering real classroom life"* and *"positive experiences they had"* were the primary focus of their journals.

One of the main results of this study was that the participants' reflective journal writing served as *"a useful tool for self-evaluation"*. Results from this research study corroborated with the previous research literature suggested that reflective journal writing is a crucial practice for one's professional development (Al-Hassan et al., 2012; Jay & Johnson, 2002), as a self-awareness tool (Farrell, 2013; Francis, 1995), and a meaningful activity (Brown, Cheddie, Horry, & Monk, 2017). In this study, the primary contribution of reflective journal writing for participant preservice teachers was the ability for them to utilize journaling for not only recognizing their successes but also their failures. As a result, participants understand that they have a concrete tool that can be used to evaluate better and understand their classroom experiences. As Thomas and Packer (2013) stated, "Reflection leads to a greater self-awareness-the first step toward positive change and both personal and professional growth" (p. 12). Since preservice teachers should be active stakeholders in the daily process of the classroom, reflective journal writing can serve as an objective facilitator in their self-evaluation process, as suggested by the results of this study. In addition to ensuring preservice teachers understand not only aspects that do need improvement but reflective journal writing also allows them to query themselves about, "Why did I make this mistake, how did I do it, what should I do? As a result, reflective journal writing supports teachers in reviewing the complexities of teaching, both the successes and failures, in the pursuit of self-development (Tadesse Degago, 2007).

Another important finding of this study was that writing a reflective journal is not only about preservice teachers reliving the practice but it is also about considering what they can do in their future teaching. A very fitting metaphor was used by Farrell (2012), compared reflective journaling to orienteering with a compass by describing reflective practices as, "stop, look, and discover where they are at that moment and then decide where they want to go (professionally) in the future" (p. 7). In this study, reviewing and revisiting their classroom practices through their reflective journals acted as a reminder, which enabled them to be more cautious in the future, as well as revealed clues regarding the important aspects of the teaching life. Sahin's (2009) study with child development preservice teachers showed that participants determine goals for future practices in their journal. In a study, Lee (2008) showed that journals provide opportunities for preservice teachers to develop features that will support their future careers. The present study also pointed out that the teacher can review and evaluate the important factors which influenced the teaching process through reflective journals.

This study showed that one of the most important and effective roles of writing a reflective journal for participant preservice teachers is the addition of the emotional dimension to the multidimensional structure of evaluation. Reflective journal writing assists participants of the study by providing detailed depth to their practice experience, as well as facilitating the opportunity to view extenuating factors of the process. Similarly, Lee's (2008) study of preservice teachers revealed that reflective journals functioned as a tool that allowed teachers to be more introspective regarding their own thoughts and feelings. The use of reflective journals did support the

participants in providing more detailed and in-depth assessments along with their own self-evaluation.

In this study, when the participants' reflective journals were examined regarding content, it was recognized that the preservice teachers' problems were primarily related to aspects of classroom management. Likewise, in related studies, classroom management was seen as the problem most frequently addressed by teachers (Al Hassan et al., 2012; Veenman, 1984). In this vein, Ozturk, Gangal, and Besken Ergisi (2014) stated that prospective preschool teachers did not benefit from the classroom management courses they had received during their undergraduate education and that these teachers also did not associate the experiences they had learned in the classroom to problematic behaviors. Uline et al., (2004) also reported that classroom management was the most frequently stated concern in teachers' reflective journals. Similarly, classroom management was the central part of journals for the participants of the present study.

Another important aspect derived from reflective journal writing in this study, as Al-Hassan et al., (2012) also pointed out in their study, is the "difficulty in converting the theoretical learned knowledge into practice". The difficulty in bridging the gap between theory and practice was emphasized by Unver and Kursunlu (2014), who stated that the sequencing of the undergraduate teacher training curriculum lessons regarding theory and for applying that theory into practice was occurring at different times. As a result, preservice teachers were not gaining sufficient opportunities for learning and applying that learning into real-world practice within an actionable time frame.

The use of reflective journaling provided the participant preservice teachers a safe space in which they could express themselves through writing, as well as record their assessment information. The participants were more accustomed to completing verbal assessments through post-interviews, yet at the beginning of this study, they pointed out that writing reflective journals seemed compelling. With the completion of this research, the participants now stated they recognized the importance of implementing reflective journal writing into their daily lives and also realized how necessary reflective journaling was as a pedagogic tool. Similarly, Tadesse Degago (2007) noted that preservice teachers should use reflective journals as an instrument for expressing their concerns regarding their education, as well as addressing specific concerns and/or problems. Another study, Francis (1995), reported that some of the teacher candidates showed resistance to voluntary journaling in daily life due to overwhelming course loads. Moreover, McGarr and Moody (2010) also stated that asking students to write journals frequently could lead to a focus on quantity rather than quality. At the beginning of this study, there were some concerns among the participating preservice teachers. Their opinions remained positive even though they had expressed difficulty in understanding how to write reflective journals. The findings of Lee (2008) paralleled these findings, reporting that as preservice teachers gained experience in journal writing, they also gained knowledge and were more likely to favour journaling for their day-to-day writing.

Writing a reflective journal can be considered an important tool utilized by preservice teachers for self-evaluation during their burgeoning professional careers. It has also been suggested that turning reflective journal writing into a habit in one's professional life can be important for supporting overall professional growth (Jay & Johnson, 2002; Koc & Yildiz, 2012) and can be seen as a long-term investment in teacher education. Preservice teachers often receive support through written and verbal feedback from their instructors as feedback relates to the pertinent processes of teaching (e.g., observation, planning, implementation, and evaluation), and especially in the application of their preservice training within the classroom. One can anticipate that in the future, journal writing should better enable preservice teachers to develop their reflective thinking skills, and as a result, better carry out more in-depth and critical self-assessments of their professional practices.

As discussed, reflective journal writing has been seen as a tool for stimulating reflective thinking, and in this study, reflective journal writing was utilized in an attempt to reveal participant preservice teachers' thoughts and feelings regarding their in-class practicum experiences. The use of different opportunities and different reflective strategies (e.g., microteaching, portfolios, and video analysis), as posited by Lee (2005), is expected to contribute to the overall improvement of awareness through self-assessment. Moreover, collective reflection as a method for having deeper reflection suggested by the current studies (e.g. Foong et al., 2018) also could be utilized in this area.

This study provided an opportunity for participants during their undergraduate studies to gain valuable information, knowledge, and experience regarding the use of reflective journal writing. Since the reflection has become a central part of teacher education in the countries, such as Australia, USA, and New Zealand (Han, Blank, & Berson, 2017; Lemon & Garvis, 2014; Myers, Smith, & Tesar, 2017), preservice early childhood teacher education programs in Turkey could more integrate reflective activities into their courses.

This small-scale study was part of a 14 week-course, which focuses on movement education and play, lasted one term of the academic year and reflected the experiences of the ten preservice teachers who participated in this study. Experience of journal writing can be extended to other courses and teaching practicum of the students to see how preservice teachers could benefit from journal writing. In future studies, the focus could turn to the examination of a variety of differing types of reflective strategies. In addition to this, the studies can be conducted by more diverse preservice teachers, such as male participants and different grade levels. Moreover, future research studies should also address whether or not preservice teachers' use of reflective journal writing during their professional lives does in any way influence their teaching development and/or does it influence how they ultimately reflect upon their overall professional development.

References

Akkoyunlu, B., Telli, E., Cetin, N. M.,& Daghan, G. (2016). Ogretmen egitiminde yansitici gunluklere iliskin ogretmen adaylarinin gorusleri [Views of prospective teachers about reflective journals on teacher education]. *Turkish Online Journal of Qualitative Inquiry*, *7*(4), 312-330.

Al-Hassan, O., Al-Barakat, A. , & Al-Hassan, Y. (2012). Pre-service teachers' reflections during field experience. *Journal of Education for Teaching: International Research and Pedagogy*, *38*(4), 419-434. doi: 10.1080/02607476.2012.707918

Al-Karasneh, S. M. (2014). Reflective journal writing as a tool to teach aspects of social studies. *European Journal of Education*, *49*(3), 395-408. doi: 10.1111/ejed.12084

Bain, J. D., Mills, C., Ballantyne, R., & Packer, J. (2002). Developing reflection on practice through journal writing: Impacts of variations in the focus and level of feedback. *Teachers and Teaching*, *8*(2), 171-196. doi:10.1080/13540600220127368

Beavers, E., Orange, A., & Kirkwood, D. (2017). Fostering critical and reflective thinking in an authentic learning situation. *Journal of Early Childhood Teacher Education*, *38*(1), 3-18. doi: 10.1080/10901027.2016.1274693

Boud, D. (2001). Using journal writing to enhance reflective practice. *New Directions for Adult and Continuing Education*, *2001*(90), 9-18.

Brown, C. S., Cheddie, T. N., Horry, L. F., & Monk, J. E. (2017). Training to be an early childhood professional: Teacher candidates' perceptions about their education and Training. *Journal of Education and Training Studies*, *5*(6), 177-186. doi: 10.11114/jets.v5i6.2308

Cengiz, C., Karatas, F. O., & Yadigaroglu, M. (2014). The investigation of pre-service science teachers' reflective journals. *Procedia-Social and Behavioral Sciences*, *116*, 3297-3302. doi: 10.1016/j.sbspro.2014.01.751

Cherrington, S., & Loveridge, J. (2014). Using video to promote early childhood teachers' thinking and reflection. *Teaching and Teacher Education*, *41*, 42-51. doi: 10.1016/j.tate.2014.03.004

Clarà, M. (2015). What is reflection? Looking for clarity in an ambiguous notion. *Journal of Teacher Education*, *66*(3), 261-271. doi: 10.1177/0022487114552028

Collier, S. T. (1999). Characteristics of reflective thought during the student teaching experience. *Journal of Teacher Education*, *50* (3), 173-181. doi: 10.1177/002248719905000303

Creswell, J. W. (2013). *Gecerlik ve degerlendirme standartları* (O. Birgin, Cev). M. Bütün, & S. B. Demir (Eds.). *Nitel arastırma yöntemleri: Beş yaklaşıma göre nitel araştırma*

ve araştırma deseni [Qualitative inquiry & research design] (ss. 243-268). Ankara: Siyasal Kitabevi.

Cruickshank, D. R., Jenkins, D. B., & Metcalf, K. K. (2006). *The act of teaching*. NewYork: McGraw-Hill Companies.

Denzin, N. K., & Lincoln, Y.S. (2000). Introduction: The discipline and practice of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds, 2nd). *Handbook of qualitative research* (pp.1-28). Thousand Oaks, CA: Sage Publications, Inc.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston, MA: DC Heath & Company.

Durand, J., Hopf, M., & Nunnenmacher, S. (2016). Potentials and challenges of video-based self-reflection for the professionalisation of early childhood education and care professionals. *Early Child Development and Care*, *186*(1), 23-41. doi: 10.1080/03004430.2015.1031124

Dyment, J. E., & O'Connell, T. S. (2011). Assessing the quality of reflection in student journals: A review of the research. *Teaching in Higher Education*, *16*(1), 81-97. doi: 10.1080/13562517.2010.507308

Edwards, A. (2001). Qualitative design and analysis. In G. M. Naughton, S. A. Rolfe, & I. Siraj-Blatchford (Eds). *Doing early childhood research: International perspectives on theory and practice* (pp. 117-135). Philadelphia, PA: Open University Press.

Ekiz, D. (2006). Kendini ve baskalarini izleme: Sinif ogretmeni adaylarinin yansitici gunlukleri [Self-observation and peer-observation: Reflective diaries of primary student-teachers]. *Ilkogretim Online*, *5*(1), 45-57.

Farrell, T. S. (2012). Reflecting on reflective practice: (Re)visiting Dewey and Schön. *TESOL Journal*, *3*(1), 7-16. doi: 10.1002/tesj.10

Farrell, T. S. (2013). Teacher self-awareness through journal writing. *Reflective Practice: International and Multidisciplinary Perspectives, 14*(4), 465-471. doi: 10.1080/14623943.2013.806300

Foong, L., Binti, M., & Nolan, A. (2018). Individual and collective reflection: Deepening early childhood pre-service teachers' reflective thinking during practicum. *Australasian Journal of Early Childhood*, *43*(1), 43-51. doi: 10.23965/AJEC.43.1.05

Francis, D. (1995). The reflective journal: A window to preservice teachers' practical knowledge. *Teaching and Teacher Education*, *11*(3), 229-241. doi: 10.1016/0742-051X(94)00031-Z

Griffiths, V. (2000). The reflective dimension in teacher education. *International Journal of Educational Research*, *33*(5), 539-555. doi: 10.1016/S0883-0355(00)00033-1

Han, S., Blank, J., & Berson, I. R. (2017). To transform or to reproduce: Critical examination of teacher inquiry within early childhood teacher preparation. *Journal of Early Childhood Teacher Education*, *38*(4), 308-325. doi: 10.1080/10901027.2017.1393643

Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education*, *11*(1), 33-49. doi: 10.1016/0742-051X(94)00012-U

Isikoglu, N. (2007). Okul oncesi ogretmen adaylarinin profesyonel gelisiminde yansitici gunluklerin rolu [The role of reflective journals in early childhood pre-service teachers' professional development]. *Kuram ve Uygulamada Egitim Bilimleri*, *7*(2), 819-825.

Jay, J. K., & Johnson, K. L. (2002). Capturing complexity: A typology of reflective practice for teacher education. *Teaching and Teacher Education*, *18*(1), 73-85. doi: 10.1016/S0742-051X(01)00051-8

Kaasila, R., & Lauriala, A. (2012). How do pre-service teachers' reflective processes differ in relation to different contexts?. *European Journal of Teacher Education*, *35*(1), 77-89. doi: 10.1080/02619768.2011.633992

Kahles, B. (2015). The power of reflective writing for early childhood teachers in Palestine. *World Journal of Education, 5*(1), 94-101. doi: 10.5430/wje.v5n1p94

Koc, C., & Yildiz, H. (2012). Ogretmenlik uygulamasinin yansiticilari: Gunlukler [The reflectors of teaching experience: Diaries]. *Egitim ve Bilim*, *37*(164), 223-236.

Körkkö, M., Kyrö-Ämmälä, O., & Turunen, T. (2016). Professional development through reflection in teacher education. *Teaching and Teacher Education*, *55*, 198-206. doi: 10.1016/j.tate.2016.01.014

Kucukoglu, A., Ozan, C., & Tasgin, A. (2016). Topluma hizmet uygulamalari dersinde yansitici gunlukler.[Examining community service-learning process through reflective journals]. *Ilkogretim Online*, *15*(3), 787-803. doi: 10.17051/io.2016.97012

LaBelle, J. T., & Belknap, G. (2016). Reflective journaling: fostering dispositional development in preservice teachers. *Reflective Practice, 17*(2), 125-142. doi: 10.1080/14623943.2015.1134473

LaBoskey, V. K. (1993). Why reflection in teacher education?. *Teacher Education Quarterly*, *20*(1), 9-12.

Larrivee, B. (2008). Meeting the challenge of preparing reflective practitioners. *The New Educator*, *4*(2), 87-106. doi: 10.1080/15476880802014132

Lee, H. J. (2005). Understanding and assessing preservice teachers' reflective thinking. *Teaching and Teacher Education*, *21*(6), 699-715. doi: 10.1016/j.tate.2005.05.007

Lee, I. (2008). Fostering preservice reflection through response journals. *Teacher Education Quarterly*, *35*(1), 117-139.

Lemon, N., & Garvis, S. (2014). Encouraging reflective practice with future early childhood teachers to support the national standards: An Australian case study [Online]. *Australasian Journal of Early Childhood*, *39* (4), 89-94.

Lincoln, Y. & Guba, E. G. (1985). *Naturalistic inquiry.* Beverly Hills, CA: SAGE

McGarr, O., & Moody, J. (2010). Scaffolding or stifling? The influence of journal requirements on students' engagement in reflective practice. *Reflective Practice*, *11*(5), 579-591. doi: 10.1080/14623943.2010.516968

Merriam, S.B. (1998). *Qualitative research and case study applications in education.* San Francisco, CA: Jossey-Bass Publishers.

Myers, C. Y., Smith, K. A., & Tesar, M. (2017). Diffracting mandates for reflective practices in teacher education and development: Multiple readings from Australia, New Zealand, and the United States. *Journal of Early Childhood Teacher Education*, *38*(4), 279-292. doi: 10.1080/10901027.2017.1389788

National Association for the Education of Young Children. (2009). *NAEYC Standards for Early Childhood Professional Preparation Programs. Retrieved from https://www.naeyc.org/sites/default/files/globallyshared/downloads/PDFs/resources/position-statements/2009%20Professional%20Prep%20stdsRevised%204_12.pdf*

National Council for Accreditation of Teacher Education. (2008). *Professional standards for the accreditation of teacher preparation institutions*. Washington, DC: National Council for Accreditation of Teacher Education. Retrieved from http://www.ncate.org/~/media/Files/caep/accreditation-resources/ncate-standards-2008.pdf

O'Connell, T., & Dyment, J. (2011). Health and physical education pre-service teacher perceptions of journals as a reflective tool in experience-based learning. *European Physical Education Review*, *17*(2), 135-151. doi: 10.1177/1356336X11413181

Oakley, G., Pegrum, M., & Johnston, S. (2014). Introducing e-portfolios to pre-service teachers as tools for reflection and growth: Lessons learnt. *Asia-Pacific Journal of Teacher Education*, *42*(1), 36-50. doi: 10.1080/1359866X.2013.854860

Ozturk, Y., Gangal, M, & Besken Ergisi, M, (2014). Okul oncesi ogretmen adaylarinin egitimlerinin sinif yonetimi ve stratejileri uzerindeki etkisine iliskin goruslerinin incelenmesi [The impact of teaching education program on pre-service teachers' classroom management views and classroom management strategies]. *Erzincan Universitesi Egitim Fakültesi Dergisi,* 16(1), 224-238.

Parikh, S. B., Janson, C., & Singleton, T. (2012). Video journaling as a method of reflective practice. *Counselor Education and Supervision*, *51*(1), 33-49. doi: 10.1002/j.1556-6978.2012.00003.x

Patton, M. Q. (1990) *Qualitative evaluation and research methods (2nd ed*.). Newbury Park, CA: Sage.

Pavlovich, K. (2007). The development of reflective practice through student journals. *Higher Education Research & Development*, *26* (3), 281-295. doi: 10.1080/07294360701494302

Pedro, J. Y. (2005). Reflection in teacher education: exploring pre-service teachers' meanings of reflective practice. *Reflective Practice*, *6*(1), 49-66. doi: 10.1080/1462394042000326860

Riojas-Cortez, M., Alanís, I., & Flores, B. B. (2013). Early childhood teachers reconstruct beliefs and practices through reflexive action. *Journal of Early Childhood Teacher Education*, *34*(1), 36-45. doi: 10.1080/10901027.2013.758536

Russell, T. (2005). Can reflective practice be taught?. *Reflective Practice*, *6*(2), 199-204. doi: 10.1080/14623940500105833

Sahin, F. (2009). The importance of reflective thinking and reflective journals: A qualitative study of experiences of teacher candidates in early childhood classrooms. In H. Asutay & E. Bayir (Eds.), *5th International Balkan Education and Science Congress: Vol. 2. Education in Balkans Today* (pp. 669-671). Edirne: Trakya University Rectorship.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Fransisco, CA: Jossey-Bass.

Strauss, A., & Corbin. J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* London: Sage.

Tadesse Degago, A. (2007). Using reflective journals to enhance impoverished practicum placements: A case in teacher education in Ethiopia. *Teaching Education*, *18*(4), 343-356. doi: 10.1080/10476210701687633

Thomas, S., & Packer, D. S. (2013). A reflective teaching road map for pre-service and novice early childhood educators. *International Journal of Early Childhood Special Education*, *5*(1), 1-14. Retrieved from https://www.intjecse.net/index.php/ijecse/article/view/69

Tripp, T., & Rich, P. (2012). Using video to analyze one's own teaching. *British Journal of Educational Technology*, *43*(4), 678-704. doi: 10.1111/j.1467-8535.2011.01234.x

Uline, C., Wilson, J. D., & Cordry, S. (2004). Reflective journals: A valuable tool for teacher preparation. *Education*, *124*(3), 456-461.

Unver, G., & Kursunlu, E. (2014). Okul oncesi ogretmen egitiminde kuram uygulama baglantısı [Connecting the theory and practice in preschool teacher education]. *Uluslararası Egitim Programları ve Ogretim Calismalari Dergisi*, 4(7), 39-54. Retrieved from http://www.ijocis.com/index.php/ijocis/article/view/13

Valli, L. (1997). Listening to other voices: A description of teacher reflection in the United States. *Peabody Journal of Education*, *72*(1), 67-88.

Vaughn, M., Parsons, S. A., Kologi, S., & Saul, M. (2014). Action research as a reflective tool: A multiple case study of eight rural educators' understandings of instructional practice. *Reflective Practice*, *15*(5), 634-650. doi: 10.1080/14623943.2014.900030

Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, *54*(2), 143-178.

Ward, J. R., & McCotter, S. S. (2004). Reflection as a visible outcome for preservice teachers. *Teaching and Teacher Education*, *20*(3), 243-257. doi: 10.1016/j.tate.2004.02.004

Yost, D. S., Sentner, S. M., & Forlenza-Bailey, A. (2000). An examination of the construct of critical reflection: Implications for teacher education programming in the 21st century. *Journal of Teacher Education*, *51*(1), 39-49. doi: 10.1177/002248710005100105

Zeichner, K. M., & Liston, D. P. (1996). *Reflective teaching: An introduction.* Mahwah, NJ: L.Erlbaum.

Okul Öncesi Öğretmen Adaylarının Yansıtıcı Günlük Yazma Deneyimleri

Atıf:

Sahin, F., Sen, M., & Dincer, C. (2019). Early childhood preservice teachers' experiences with reflective journal writing. *Eurasian Journal of Educational Research, 84*, 93-114, DOI: 10.14689/ejer.2019.84.5

Özet

Problem Durumu: Yansıtıcı günlük yazma son zamanlarda öğretmen eğitiminde ele alınan konular arasında yer almakta ve öğretmen adaylarının uygulamalarında bir yansıtma aracı olarak kullanılmaktadır. Yansıtmanın karmaşık bir terim olduğu ve alan yazında çeşitli şekillerde kavramsallaştırıldığı görülmektedir. Yansıtıcı öğretmenlerin sadece önceden planlanan uygulamaları gerçekleştiren değil, uygulamalar üzerinde düşünen, problem çözen, etkin bireyler oldukları belirtilmektedir. Yapılan çalışmalar özellikle yansıtmanın rolü, sınıflandırması ve yansıtıcı düşünmeyi geliştiren stratejilere odaklanmaktadır. Yansıtıcı düşünme becerilerinin gelişimine katkı sağlayacak uygulamalar arasında yansıtıcı günlük yazma, video kaydı alma, portfolyo/e-portfolyo, eylem araştırması vb. stratejiler gösterilmektedir. İlgili araştırmalar yansıtıcı günlük yazmanın öğretmenlerin kendi uygulamaları konusunda yansıtma yapmalarını, öğrenme ve öğretmenin karmaşık

yapısını anlamalarına ve öz-farkındalık ve profesyonel gelişime katkılarını göstermektedir. Her ne kadar yansıtıcı günlük yazma ile ilgili alan yazında çalışmalar yer almasına rağmen, özellikle okul öncesi öğretmen adayları ile ilgili yapılan çalışmalar sınırlı sayıdadır.

Araştırmanın Amacı: Bu çalışmanın amacı; okul öncesi öğretmen adaylarının yansıtıcı günlük yazma deneyimlerini daha derinlemesine anlamaktır. Bu doğrultuda öğretmen adaylarının yansıtıcı günlükler konusundaki duygu ve düşünceleri ile yansıtıcı günlüklerinin içeriğinin incelenmesi amaçlanmıştır.

Araştırmanın Yöntemi: Bu çalışmada nitel araştırma yöntemlerinden yararlanılmıştır. Çalışmaya amaçsal örneklem yöntemiyle seçilen, dört yıllık okul öncesi öğretmenliği lisans programına devam eden, gönüllülük ilkesi ile araştırmaya katılım gösteren ve süreçte "Beden Eğitimi ve Oyun Öğretimi" dersini alan, yaşları 21 ile 25 arasında değişen on kadın öğretmen adayı dahil edilmiştir. Çalışmada veri toplamak için; demografik bilgi formu, yarı yapılandırılmış görüşmeler, haftalık olarak gerçekleştirilen uygulamalara yönelik etkinlik planları ve yazılan yansıtıcı günlüklerden yararlanılmıştır. Veri analizinde tümevarımsal bir yaklaşım benimsenmiştir. Nitel araştırma geleneğine bağlı olarak alanyazında önerilen çalışmanın güvenirliğini arttırmak amacıyla detaylı betimleme ve uzun süreli katılım ve çeşitleme stratejileri kullanılmıştır. Katılımcıların yansıtıcı günlüklerle ilgili deneyimlerini içeren ayrıntılı betimlemelere yer verilmiştir. Çeşitlemeyi sağlamada çoklu araştırmacı ve çoklu yöntemler kullanılmıştır. Çalışma, çoklu araştırmacı açısından erken çocukluk eğitimi alanında deneyimli üç öğretim elemanı tarafından yürütülmüştür. Çoklu yöntemler açısından ise; yarı yapılandırılmış görüşmeler ve doküman analizi yoluyla sağlanmıştır.

Araştırmanın Bulguları: Araştırma bulguları araştırma sorularının da temelini oluşturan iki odak noktasında sunulmuştur. Bunların ilki yansıtıcı günlüklerin rolü, ikincisi ise yansıtıcı günlüklerin içeriğidir.Yansıtıcı günlüğün rolü analiz edildiğinde; içgörü elde etmek, detaylı değerlendirme ve geleceğe yönelik strateji geliştirme temalarının ortaya çıktığı görülmüştür. Bu çalışmanın katılımcıları olan öğretmen adayları günlük yazmanın onların uygulamalar sırasında yaptığı hataları farketmelerine ve güçlü ve zayıf yanlarını değerlendirmeleri için içgörü kazanmalarına destek olduğunu belirtmişlerdir. Yansıtıcı günlük yazma alanyazında önerildiği gibi, öğretmen adayları için bir farkındalık aracı olarak işlev görmüştür. Katılımcılar ayrıca yansıtıcı günlüklerin normalde yaptıkları üç boyutlu değerlendirmeye duygu boyutunu da eklediğini belirtmişlerdir. Son olarak, katılımcılar yansıtıcı günlük yazmanın uygulanacak öğretim stratejilerin belirlenmesinde ve değerlendirmesinde önemli bir rol oynadığını ve özellikle hatırlatma işlevi gördüğünü vurgulamışlardır. Yansıtıcı günlüklere odaklanan bazı araştırmalarda, günlük yazmanın gelecek öğretmenlik deneyimlerini şekillendirecek yönde desteklediğini göstermektedir. Yansıtıcı günlüklerin içeriği analiz edildiğinde ise bulguların; gerçek sınıf ortamı ile karşılaşma ve alandan olumlu deneyimler edinme şeklinde iki tema olarak belirdiğini ortaya koymaktadır. Çalışmanın katılımcıları günlüklerinde gerçek sınıf ortamı ile karşılaşma ile ilgili durumlara yer vermiştir. Özellikle gerçek sınıf ortamında yaşadıkları sınıf yönetimi ile ilgili

zorluklar ve kuramsal bilgiyi uygulamaya aktaramama ile ilgili endişeleri ele almışlardır. Alanyazındaki araştırmalarda sınıf yönetiminin en çok belirtilen problem olmasının yanısıra yansıtıcı günlüklerde de en sık yansıtılan endişe olduğu bulunmuştur. Öğretmen adaylarının kuramsal bilgiyi uygulamaya aktarma sorunları olduğu da belirtilmektedir. İçerik açısından incelemede yansıtıcı günlüklerinde öğretmen adayların elde ettikleri olumlu deneyimlere de yer verdikleri saptanmıştır.

Araştırmanın Sonuçları ve Önerileri: Bu çalışma göstermektedir ki yansıtıcı günlük yazma, okul öncesi öğretmen adayları için özdeğerlendirme ve profesyonel gelişimde önemli bir araç olarak ele alınabilir. Bundan sonra yapılacak çalışmalarda öğretmenin profesyonel gelişiminde yansıtıcı günlük yazmanın rolüne ve özellikle farklı yansıtıcı stratejilerin öğretmen eğitiminde önemine odaklanabilir.

Anahtar Kelimeler: Yansıtıcı Günlükler, Yansıtıcı Uygulamalar, Okul Öncesi, Öğretmen Eğitimi

Eurasian Journal of Educational Research 84 (2019) 115-134

Eurasian Journal of Educational Research
www.ejer.com.tr

Comparison of Results Obtained from Logistic Regression, CHAID Analysis and Decision Tree Methods*

Gokhan AKSU[1], Cigdem REYHANLIOGLU KECEOGLU[2]

ARTICLE INFO

Article History:
Received: 31 Jul. 2018
Received in revised form: 01 May 2019
Accepted: 20 Aug. 2019
DOI: 10.14689/ejer.2019.84.6

Keywords
CHAID Analysis, Logistic Regression Analysis, Data Mining, PISA

ABSTRACT

Purpose: In this study, Logistic Regression (LR), CHAID (Chi-squared Automatic Interaction Detection) analysis and data mining methods are used to investigate the variables that predict the mathematics success of the students.

Research Methods: In this study, a quantitative research design was employed during the data collection and the analysis phases.

Findings: The findings obtained in this study showed that the variables, which had significant effects on the mathematical success of the students in each method, differ from each other. Although the independent variables with a significant effect on the dependent variable were different according to different methods, the findings indicated that the importance order of the variables did not change according to the method used. In this study, the correct classification ratios obtained by the class concerning PISA mathematics literacy differed by different methods.

Implications for Research and Practice: CHAID analysis and REPTree algorithm may be an alternative for one another in the studies that aimed to classify individuals concerning their success. However, LR analysis should not be considered as an alternative method since it will provide significantly different results compared to the other two methods.

© 2019 Ani Publishing Ltd. All rights reserved

*This study was partly presented at the 5th International Eurasian Educational Research Congress in Antalya, 2 – 5 May, 2018

[1] Aydın Adnan Menderes University, TURKEY, ORCID: 0000-0003-2563-6112
[2] Gaziantep College Foundation Private Schools, TURKEY, ORCID: 0000-0002-6168-6662

Introduction

Many contexts are considered to direct the education policies of the countries. Policymakers around the world use the results of international practices to compare the knowledge and skill levels of the pupils in their own countries with the knowledge and skill levels of the pupils in other countries to set standards to raise the level of education (such as average scores achieved by countries, countries' educational outcomes and their capacity to achieve equality in education opportunities at the highest level) and to determine the strengths and weaknesses of education systems (International Student Assessment Program [PISA], 2015). The data obtained from international examinations, such as the International Student Assessment Program (PISA) applied by the Organization for Economic Co-operation and Development (OECD) to the 15-year-old students, and the International Mathematics and Science Trends Survey (TIMSS) applied to students at the fourth and eighth grade by the International Education Achievement Assessment Organization (IEA), are extremely important for the direction of the education policies of the countries (International Mathematics and Science Trends Survey [TIMSS], 2015). In these applications, which are realized with the participation of different countries, achievement tests, and various questionnaires, are used to gather information about students' performances in science and mathematics, education systems, curriculum, student characteristics, characteristics of teachers and schools (TIMSS, 2015). Thanks to this information, countries are able to evaluate their educational processes according to an international perspective.

The findings obtained from international examinations, which play an important role in shaping the countries' educational policies, are derived from a large-scale database where variables in different areas are measured. Very large-scale data and large-scale databases in different areas can be considered as a data mine, including valuable data. From this data mine, which has a complex structure, to generate meaningful information that is not known beforehand, process management with different operations is required. This process management takes place with data mining. Data mining performs this process using a computer, machine learning, database or data warehouse management, mathematical algorithms and statistical techniques (Albayrak & Koltan-Yılmaz, 2009). Data mining is basically defined as the use of software techniques for accessing useful information through the relationships or patterns within the large data sets (Can, Özdiland Yılmaz, 2018). Thanks to data mining software and techniques, large scale data can be decomposed, and useful information can be revealed.

There are many processing steps that must be performed in the data mining process. Larose and Larose (2014) emphasize that the data mining process takes place in five stages as follows: definition of the task, recognition of data, preparation of data, modelling and evaluation. The most troublesome of these stages are the stages of recognition and preparation of the data (Özkekeş, 2003). The data obtained from international applications, such as PISA, can be considered as data that are complex, and therefore, suitable for arrangement and modeling with data mining stages. Using data mining methods, maximum information can be obtained about the independent variables predicting the dependent variable on the complex data obtained from the applications that direct the educational policies of the countries.

Determining independent (predictive) variables that influence the dependent variable is one of the main focuses of scientific research. In these studies conducted for this purpose, various methods are used to determine predictor variables that have relationships with the dependent variable. The common feature of these methods is to test the significance of the effects of independent variables on the dependent variable. The methods used have different characteristics, as well as their common characteristics. The most important of these are the assumptions required by the methods.

The methods are generally divided into parametric and non-parametric methods concerning assumptions that must be met to be applied. In cases where parametric conditions do not occur (such as quantitative variables come from a multivariate normal distribution assumption is not established, homogeneity of variance/covariance matrices is not established), it has been a great convenience for researchers to develop and use nonparametric methods, which can be used for the same purpose with a parametric method (Baştürk, 2016). However, if the need to make a choice among these alternative nonparametric methods arises, it is necessary to compare the methods to decide which method to be used concerning the accuracy of the results. The comparison studies performed for this purpose are important concerning ensuring the validity of the decision. Thus, it has great importance to determine the method which is based on regression analysis is used for estimating the dependent variable with the help of independent variables. In this way, researchers will contribute to science using the method that produces the most accurate and most consistent results.

Another feature that separates the methods used is the type of data that the method can be applied to. Some of the statistical methods can only be applied to continuous data, while some can also be applied to categorical data. Categorical data analysis is a method commonly used in educational applications (Azen & Walker, 2011). Although the results of the measurement are obtained as continuous scores by accepting measurement tools used to determine the academic achievement of the students as equal intervals on the scale level, the success scores in the decision-making process are converted into categorical data in the form successful/unsuccessful according to a certain criterion score (Baştürk, 2016). Thus, the students are classified as successful/unsuccessful according to their achievement score.

Although a criterion score is often used in determining student achievement, there are many factors affecting student achievement. At this point, statistics is concerned with identifying those who have a significant impact on these factors, and these factors need to be considered in the process of assessing student achievement.

Statistical methods can be classified as descriptive and predictive methods according to the intended purpose (Tütek & Gümüşoğlu, 2008). In general, predictive methods are used to determine the factors affecting success score methods (Zuckerman & Albrecht, 2001). One of these methods is the logistic regression analysis. Logistic regression analysis can be considered as a special case of regression analysis methods (Peng, Lee & Ingersoll, 2002). The regression analysis is a strong statistical method which aims to explain the relationship between two variables, one of the two

or more variables are taken as dependent and the other as independent variables using a mathematical equation (Çokluk, 2012).

The strong assumptions of linear regression analysis do not allow to be implemented when its parametric conditions are not available. In such cases, regression-based, non-parametric multivariate statistical methods are used. One of the methods that can be used in cases where the dependent variable is categorical or classified and an assumption is not required for the distribution of independent variables is Logistic Regression analysis (Mertler & Vannatta, 2005; Tabachnick & Fidell, 2001). Logistic regression analysis has an important place in categorical data analysis concerning requiring fewer assumptions than methods that have regression logic and used to determine predictive variables (Kılıç, 2000). In the application phase of the method, users important have advantages because it requires fewer assumptions (Park, 2013). Besides, the results of the model can be interpreted easily. One of the methods that can give similar results with regression analysis and do not take into account the assumptions of regression analysis is the CHAID analysis method. The method can use algorithms, user-defined rules, criteria specified via an interactive graphical user interface, or a combination of these methods. This enables users to try various predictors and splitting criteria in combination with almost all the functions of automatic tree building (Nisbet, Miner & Yale, 2017). Thanks to the tree diagrams, the independent variables predicting the dependent variable and the importance levels of these variables can be seen (DíazPérez & Bethencourt-Cejas, 2016).

As a result, the results of two methods, which are nonparametric, logistic regression analysis and CHAID analysis methods, can be used to determine the factors that have a significant effect on student achievement as a dependent variable. The common feature of all three methods is to focus on determining the independent variables that have a significant effect on the dependent variable. However, the most basic feature that separates these three methods is the learning algorithm that runs in the background. The CHAID algorithm, proposed by Kaas in 1980, was formed by combining the predictive variable in the category pairs with no significant difference (SPSS, 1999). REPTree algorithm is used in data mining. In data mining, there is the C4.5 algorithm, which is called the statistical classifier (Witten and Fransk, 2005). An extension of the C4.5 algorithm is REPTree algorithm) is used to construct a decision tree (Quinlan, 1993). This study aims to determine the independent variables which are thought to have a significant effect on mathematics achievement and to reveal the order of importance of these variables. Moreover, another focus of the study is that whether the order of importance of variables differs according to the methods used. In this study, it was also investigated how the students were categorized according to variables of their interest, attitude, motivation, perception, self-efficacy, anxiety and working discipline towards mathematics course. In this way, it is thought that researchers working in national and international fields will obtain more precise and more consistent measurement results by working with the best data analysis method they need in the analysis stage. It is of great importance to determine how similar or different results logistic regression analysis, which is frequently used in estimating the categorical dependent variable, and CHAID analysis and data mining methods, which have been used more recently, will show from the same data set. There are studies comparing these methods in the literature (Antipov & Pokryshevskaya, 2009; Şata & Çakan, 2018; Rudd &

Priestley, 2017). Some researchers have proposed CHAID as an aid for better specifying and interpreting a logit model. In this study, the CHAID, data mining approach and logistic regression were used for finding whether independent variables significantly have a lower or higher effect on the dependent variable according to the used analysis method. This approach is employed for diagnostic purposes, as well as for improving the initial model. We demonstrated that the proposed method could be used for splitting the dataset into several segments, followed by building separate models for each segment, which led to a significant increase in classification accuracy both on training and test datasets and, therefore, enhanced logistic regression.

The problem statement of the research within the framework of specified purposes is as follows: "Does statistical significance of the features, such as the students' interest, attitude, motivation, perception, self-efficacy, anxiety and work discipline differ according to the method used?" In accordance with the determined basic problem statement, the following questions were raised within the scope of this research:

1. Do the significance levels of the independent variables differ according to the method used?
2. Do the accurate classification rates of independent variables differ according to the method used?
3. Is the order of importance of the independent variables in classifying the students concerning mathematics achievement differ according to the method used?

Method

Research Design

In this study, logistic regression (LR), CHAID analysis and data mining methods were used to investigate the predictors of student achievement. This study aimed that the relationship between two or more variables is examined in any way without any interference from these variables. Due to examining the relationship between variables, this study is correlational research (Büyüköztürk, Çakmak, Akgün, Karadeniz and Demirel, 2016).

Research Sample

The data used in this study were obtained with the help of the responses, which were about the subscales of interests, attitudes, self-efficacy, perception, motivation, anxiety and study discipline of students who took part in the PISA 2012 Student Questionnaire. The data file used in the study was obtained from the official OECD website, http://www.oecd.org/pisa/pisaproducts/pisa2012database-downloadabledata.htm. The data file in the format of the text document was converted to the appropriate format for analysis in SPSS program using the syntax.

The universe of the study consisted of 4818 students participating in PISA 2012 student survey and was determined by a stratified random sampling method. However, it was decided that the missing data should be excluded from the analysis because the loss data rate was high for the seven different affective features used in this study and the missing data were not randomly distributed, which may lead to bias in the statistical analysis results (Garson, 2015; Groves, 2006; Tabachnick & Fidell,

2014). After the missing data analysis, the results of this study were obtained from the data collected from 1000 participants using systematic sampling from the universe. In the study, a systematic sampling method was used, which is one of the probabilistic sampling methods given that the boundaries of the universe are certain and the universe is relatively large (Cohen, Manion & Morrison, 2007). The population can be represented with a high degree by a systematic sampling method (Koç Başaran, 2017).

Data Analysis

The independent variables of this study consisted of the variables which are investigated whether they have a significant effect on mathematics achievement. In the variable selection stage, the findings of the study conducted by Aksu and Güzeller (2016) were used. In the study, it was stated that PISA 2012 dataset consisted of seven different sub-scales to determine the affective qualities of the students. These are the variables of the students' interest in mathematics, mathematics motivation, attitude towards mathematics, self-efficacy in mathematics, math anxiety, mathematics study discipline and student's math perception. The mathematical achievement in which the effects of independent variables are investigated is the dependent variable of the study.

For the analysis of the data, dependent and independent variables were first analyzed according to Binary LR analysis, and consequently, the correct classification ratio was determined according to the mathematics achievement of the students with independent variables, which had a significant effect on mathematics achievement. However, in the first stage, the assumptions, which are required for LR analysis, were tested. According to Tabacknick and Fidell (2001), there are four assumptions that are to be tested for LR analysis. First, binary logistic regression requires the dependent variable to be binary, and ordinal logistic regression requires the dependent variable to be ordinal. In this study, dependent variables had an ordinal scale. Second, logistic regression requires observations to be independent of each other. In other words, the observations should not come from repeated measurements or matched data. In this study, the observations, which come from repeated measurements or matched data, were not determined. Third, logistic regression requires there to be little or no multicollinearity among the independent variables, which means that the independent variables should not be too highly correlated with each other. In this study, the Pearson Correlation between independent variables was under the critic level (<0,70) and was not statistically significant. Fourth, logistic regression assumes the linearity of independent variables and log odds. Although this analysis does not require the dependent and independent variables to be related linearly, in this study, the linear relationship between independent variables was specified clearly via a scatter chart. Finally, logistic regression typically requires a large sample size. A general guideline is that you need a minimum of 10 cases with the least frequent outcome for each independent variable in your model (Bush, 2015). In this study, more than 10 cases were used for each independent variable. After the assumptions were tested, dependent and independent variables were analyzed according to Binary LR analysis.

In the second stage, the same variables and the correct classification ratio were analyzed using CHAID analysis. As a result of CHAID analysis, a decision tree was

obtained from the dependent variable and independent variables, which had a significant effect on the dependent variable. In the third stage, the analysis was carried out using the REPTree algorithm in the weka program, and independent variables that had a significant effect on mathematics achievement were determined. In addition, as in the other two methods, the classification result was obtained according to the success of the students. In the final stage, the common variables predicting mathematics achievement were determined according to the results obtained from each method. Moreover, it was tested whether there was a significant difference between the correct classification rates for each method. T and z statistics can be used to test this difference between ratios and the significance of this difference. If n> 30 for the calculation, the z statistic is calculated; if n <30 for the calculation, t statistic is calculated. In this study, the z test was used because the sample size was greater than 30 (Lehmann, 2006). The z test was performed with the help of the equation given below.

$$z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}}$$

This results in the standardized statistic, which, when both n1p1 and n2p2 are greater than 5, can be shown to approximately follow the standard normal distribution (Massey & Miller, 2006).

Results

LR was carried out by the comparison of CHAID analysis and REPTree algorithm methods, determining the variables that had a significant effect on the students' success level and by comparing the correct classification rates as successful and unsuccessful (1-0) concerning PISA mathematics achievement. In this study, the results obtained by LR analysis are given first.

Findings with LRA

As a result of logistic regression analysis, the variables that have a significant effect on the classification of the students regarding their success levels are shown in Table 1.

Table 1.

Logistic Regression Analysis Results

		B	S.H	Wald	sd	p.	Exp(B)
1. Stage	interest	.058	.032	3.289	1	.070	1.060
	motivation	.008	.030	.070	1	.791	1.008
	attitude	.107	.019	31.283	1	.000	1.113
	self-efficacy	.241	.018	177.447	1	.000	.786
	anxiety	-.096	.020	22.352	1	.000	1.101
	perception	.012	.032	.143	1	.705	1.012
	discipline	.057	.015	14.922	1	.000	1.059
	constant	-.806	.470	2.944	1	.086	.447

a. 1. Variables included in the analysis: interest, motivation, attitude, self-efficacy, anxiety, perception, discipline.

In the evaluation of students remained left or pass an average of the obtained success scores was taken ($\bar{x}$=449.00), and this value was determined as the cutting value. The students over the average were categorized as 1, while those below the average were categorized as 0. When the Table 1 is examined, it is observed that the variables of attitude (β = 0,107, p <.01), self-efficacy (β = -0,241, p <.01), anxiety (β = 0,096, p <.01) and study discipline (β = 0.057, p <.01) had a significant effect in the classifying student performance as successful and unsuccessful concerning total scores. β values given in the table are the values to be used in an equation where the probability of taking a sample in a given category is calculated. According to this, if students have high self-efficacy, attitudes and discipline scores, they would be more likely to be successful. According to the Exp (β), also known as Odds Ratio, self-efficacy (0.79), attitude (1.11), anxiety (1.10) and working discipline (1.06) show the values that are likely to be successful concerning science literacy in PISA. The significance levels of the independent variables on the dependent variables were self-efficacy (177,44), attitude (31,28), anxiety (22,35) and working discipline (14,92), respectively.

In the logistic regression analysis, while the SPSS package program classifies individuals as passed/failed as a result of an achievement test, it creates a classification percentage for a predicted variable by accepting all students as 'passed' or 'failed' in the initial model. Then, the predictive variables are added to the initial model, and the actual classification percentage is obtained concerning the success of the individuals. According to this, while the correct classification rate of the students was 53,50% in the initial model, this ratio was determined as 71,20% by including the variables in the model. Regarding the total variance explained of the model, Cox & Snell R2 value was calculated as..20, and Nagelkerke R2 was calculated as .,27. Accordingly, 27% of the variability in mathematics literacy is explained by the variables added to the model. As a result of the Omnibus test, it was determined that the first model obtained by the inclusion of both the initial model and the variables in the model was statistically significant (χ2=31028, sd=7, p<.01).

Findings by CHAID Analysis

As a result of logistic regression analysis, the results which were dependent on important statistics for independent variables that had a significant effect on the dependent variable were obtained. In CHAID analysis, the predictive variables that are significant can be seen through the nodes in the decision tree branching process. The variables that appear in the nodes of the tree from top to bottom provide information about the order of importance of the variable, respectively. Accordingly, the decision tree obtained by CHAID analysis is shown in Figure 1.

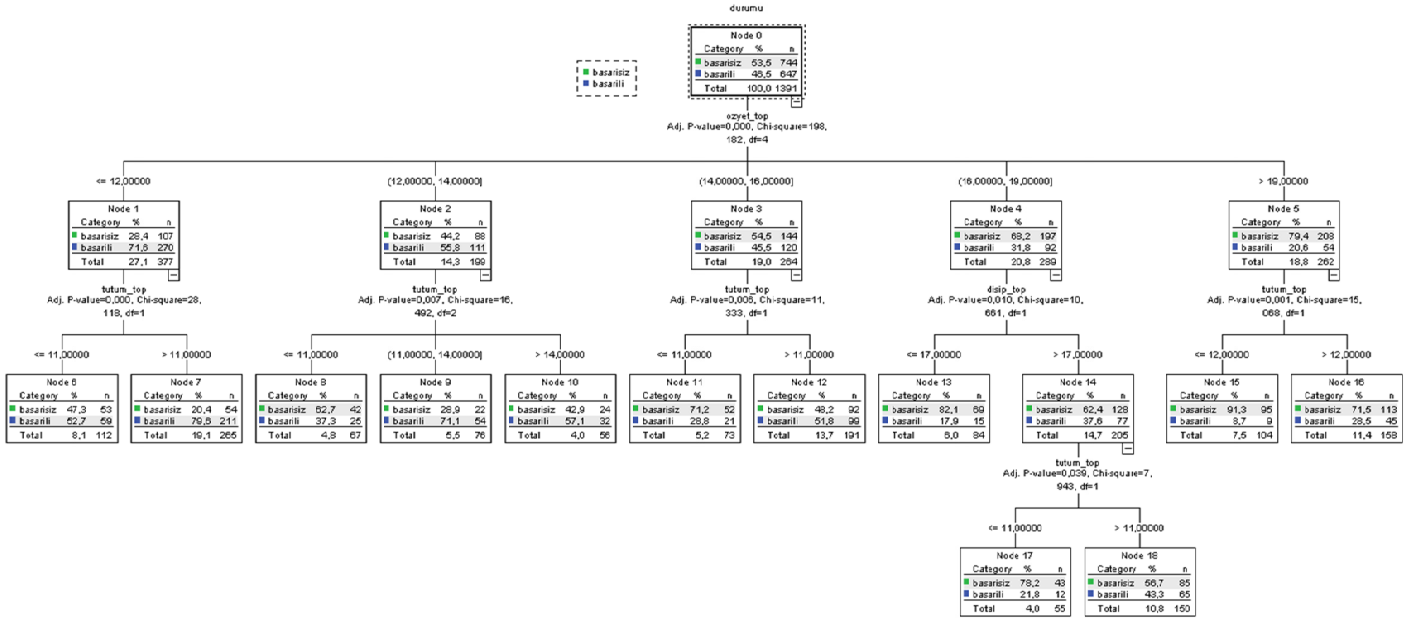


Figure 1. *Decision Tree for the Classification of PISA Mathematics Performance*

When Figure 1 is examined, the findings showed that mathematics self-efficacy was the best predictor of PISA literacy ($\chi 2=198.00$, df=4; $p<.01$). The most effective variable in a sub-branch of the tree was the attitude for 4 nodes while the most effective variable for the remaining node number 4 was the study discipline ($\chi 2=10.00$, df=1; $p<.05$). On the branching obtained in the third stage of the decision tree, the most effective variable was the attitude ($\chi 2=7.00$, df=1; $p<.05$). In addition to this, the amount of information gain (gain) in each node is shown in Table 2.

Table 2.

Knowledge Gain Quantities on Nodes in CHAID Analysis

Node	Node		Amount of Gain		Response ratio (%)	Indices (%)
	N	Percentage	N	Percentage		
7	265	19,10	211	32,60	79,60	171,20
9	76	5,50	54	8,30	71,10	152,80
10	56	4,00	32	4,90	57,10	122,90
6	112	8,10	59	9,10	52,70	113,30
12	191	13,70	99	15,30	51,80	111,40
18	150	10,80	65	10,00	43,30	93,20
8	67	4,80	25	3,90	37,30	80,20
11	73	5,20	21	3,20	28,80	61,80
16	158	11,40	45	7,00	28,50	61,20
17	55	4,00	12	1,90	21,80	46,90
13	84	6,00	15	2,30	17,90	38,40
15	104	7,50	9	1,40	8,70	18,60

When Table 2 is examined, it was seen that most information was obtained from node 7. In this node where 211 students were successful, and 54 of them were classified as unsuccessful, while the correct classification rate was 7960%, the overall success rate was determined as 19,0%. Based on these values, the amount of information gain obtained from node 7 was calculated as 32,60%, and it was observed that self-efficacy and attitude variables are effective in making classification, respectively. It was seen that the second node that provided the most information was the node number 12, which had the correct classification rate of 51,80%, by classifying 99 of 191 students correctly. Plus, the self-efficacy and attitude variables were respectively effective in the classification of this node, which had an information gain of 15.30% throughout the tree. The third most common node was nodes number 18, which had a correct classification rate of 43.30% by classifying 65 of the 150 students as successful. While

the categorization of this node with an information gain amount of 10.00% throughout the tree, it was observed that self-efficacy, work discipline and attitude variables were effective. It was seen that the fourth node giving the most information is node 6 with the correct classification rate by classifying 59 of 112 students as successful, and it had a 52,70% correct classification rate. Throughout the tree, it was seen that during classification, the variables of self-efficacy and attitude were effective in the tree, respectively. While the categorization of this node with 9.10% knowledge gain, when the results obtained by CHAID analysis were evaluated as a whole, the severity of the variables predicting success is respectively self-efficacy, attitude and study discipline. Accordingly, it was determined that the anxiety variable, which had a significant effect on logistic regression, had no significant effect on the three-level decision tree.

While the accurate classification rate of classifying the real successful students as successful was 70.30%, the rate of real failure students as failure was determined as 67.10%. Accordingly, the correct classification rate for all students in the decision tree obtained by CHAID analysis was determined as 68.60% with 0,314 risk value and with 0,012 standard error. The risk ratio shows that 31.40% of the classification can be misclassified. This rate was determined as 71.20% in LR.

Findings Obtained by REPTree Algorithm

The decision tree obtained with the aim of determining the variables which had a significant effect on classification as successful and unsuccessful in mathematics literacy with the help of REPTree classification algorithm from data mining methods is shown in Figure 2.

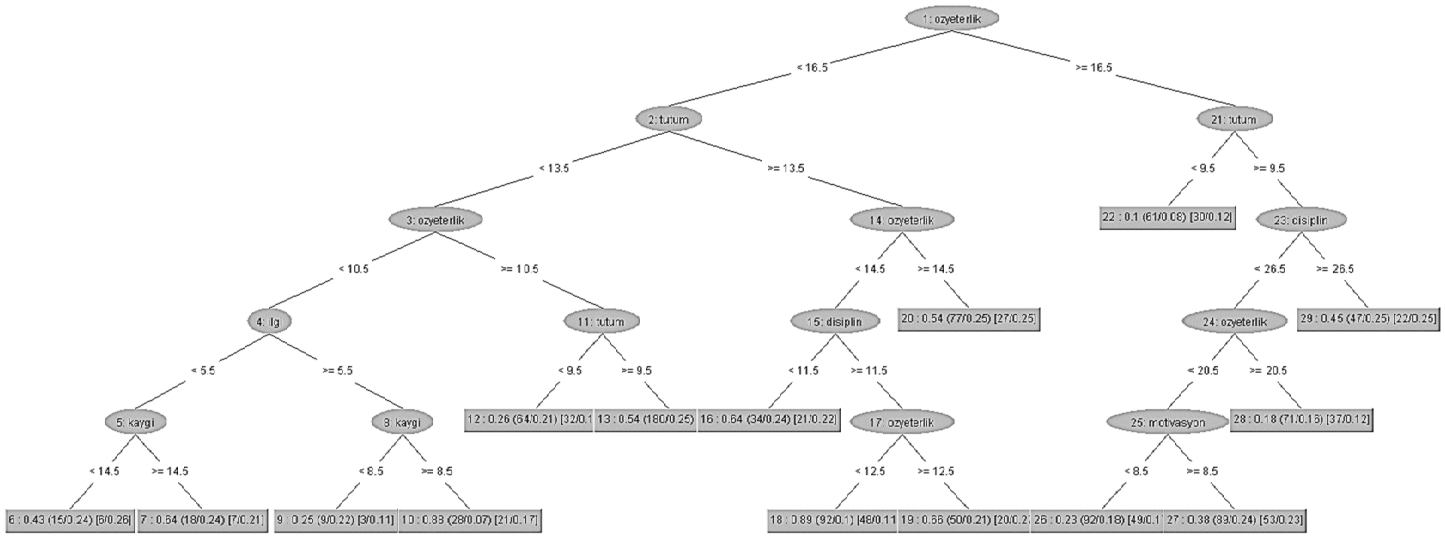


Figure 2. *Decision Tree Obtained with the help of the REPTree Algorithm*

When Figure 2 is examined, it was determined that the best predictor of PISA literacy was mathematics self-efficacy. In the decision tree obtained by the REPTree algorithm, the cut-off point concerning the self-efficacy level was determined as 16.50. This cut-off value was obtained due to the default settings of the program. If you change the properties of tree-like maximum tree dept or batch size the cut values, there will be minor changes in the cut point. It was determined that the best predictor variable was the self-efficacy for the students who scored equal to the cut-off point and who scored below/above this value. It was seen that regarding mathematics literacy, the most effective variable in tree branching at the third level was perception for 2 nodes, study discipline for 2 nodes and anxiety and motivation variables for the remaining nodes. It was also seen that in the fourth step of the decision tree, the most effective variables were anxiety for 2 nodes, interest for 2 nodes, motivation for 2 nodes, and attitude, self-efficacy and motivation for the remaining nodes. When the results obtained with the help of the REPTree algorithm were evaluated as a whole, the order of importance of independent variables was obtained in the following order: self-efficacy, attitude, working discipline, interest, motivation, and anxiety. According to the results obtained by the REPTree algorithm, the first three variables that affected the success were self-efficacy, attitude and working discipline, respectively.

When the confusion matrix of the classification process is examined by the REPTree algorithm, it was seen that the number of the correctly classified students was determined as 372 students were successful, and 523 students failed. The model made a mistake by classifying 275 students as successful who were unsuccessful in reality; and 221 students as unsuccessful who were successful in reality. According to this, 895 of 1391 students were assigned to the right classes, and the correct classification rate of the REPTree algorithm was determined as 64.34%. The mean square root of the errors was 0,513, and the kappa statistic was 0,279. There are no standard assessment criteria for the level of estimation of each learning method in data mining (Sokolova &Lapalme, 2009). In the analysis, the desired error and kappa statistics are as low as possible. In addition, one of the validity criteria obtained in data mining is the area under the ROC curve. When this value is close to 1, it is stated that an excellent classification is made. According to the results of the analysis, it was determined that the area under the ROC curve was .63, and the sensitivity value of the model was .642.

As a result of the analysis, the order of importance of independent variables of LR, CHAID analysis and REPTree algorithm and classification results related to all three methods according to the student success were obtained. When deciding which method to choose, the classification results obtained from the methods can be considered. After determining whether there was a significant difference between the classification results obtained, it can be decided which method to choose according to the size of the correct classification ratio. As a result of the analysis, the difference between the classification rates obtained from the three methods was tested in binary groups. In other words, the classification ratios obtained from LR and CHAID analysis were compared first and then the results of the LR and REPTree algorithm and finally, the classification results obtained from CHAID analysis and REPTree algorithm were compared.

The Z-statistic calculated for the comparison of the correct classification rates obtained as a result of the LR and CHAID analysis was smaller than the critical value of the Z-statistic

at the significance level of 0.05 (Zd calculated = 1.26 <Zcritical = 1.96). From this point of view, it was revealed that the difference between the two sizes was statistically significant. Considering the magnitude of the classification rates obtained from both methods, it can be concluded that this difference is in favor of LR analysis. In other words, LR analysis was more accurate than CHAID analysis. According to this, it is concluded that LR analysis gives a more accurate result than CHAID analysis in determining the independent variables that have a significant effect on the dependent variable.

Another comparison of the obtained classification ratios was made between LR analysis and REPTree algorithm. The Z statistic calculated for the comparison of the correct classification ratios obtained from LR analysis and REPTree algorithm was greater than the critical value of the Z-statistic at the level of 0.05 (Z calculated = 3.29> Zcritical= 1.96). According to this result, there was no statistically significant difference between LR analysis and correct classification rates obtained from the REPTree algorithm. Therefore, considering the correct classification results, it can be thought that both methods are the alternatives of each other. However, it should be kept in mind that the independent variables that have a significant effect on the dependent variable differ according to the two methods.

Finally, the Z statistic calculated for the correct classification ratios obtained according to the CHAID analysis and REPTree algorithm was higher than the critical value of the Z-statistic at the level of 0.05 (Zcalculated = 2.02> Zcritical = 1.96). As in the LR analysis, there was no statistically significant difference between the correct classification ratios obtained from the CHAID analysis and the REPTree algorithm. This shows that the comments made upon the LR and REPTree algorithm can be made for the CHAID analysis and REPTree algorithm, too. In other words, any of the two methods may be preferred according to the correct classification results. However, two methods had different results in determining independent variables, which have a significant effect on the dependent variable.

Discussion, Conclusion and Recommendations

In this study, Logistic Regression, CHAID and data mining methods are used to determine the variables that predict the students' mathematics success in PISA. This study also aimed to investigate whether the significance level and order of importance of the independent variables in classifying the students concerning mathematics achievement differ according to the method used. As a result of this study, in accordance with the findings related to the first subproblem, it was concluded that the significance of the independent variables of interest, attitude, motivation, perception, self-efficacy, anxiety and study discipline on mathematics achievement differed according to the method used. According to LR analysis, while independent variables having a significant effect on the dependent variable are listed as self-efficacy, attitude, anxiety and working discipline, whereas predictive variables having a significant effect on the dependent variable according to CHAID analysis and importance of these variables are self-efficacy, attitude and study discipline. The predictive variables determined according to the REPTree algorithm used in data mining and the order of importance of these variables were determined as self-efficacy, attitude and anxiety.

According to the findings obtained from the analysis of the second sub-problem, classification rate results concerning mathematics achievement according to the independent variables of interest, attitude, motivation, perception, self-efficacy, anxiety and study discipline related to the mathematics course differed in size according to the method used. The highest correct classification rate belongs to the LR analysis, the second is CHAID analysis and the smallest classification result belongs to the REPTree algorithm. This result is different from the findings of the study conducted by Abessi and Yazdi (2015). Similarly, in the study conducted by Baran-Kılıçalan (2018), it was observed that there were very close correct classification ratios like the C5.0 method was 75.90%, the CHAID analysis was 75.40%, and the LR analysis was 75.10%. In the relevant studies, the success sequence concerning correct classification rates is in the form of a learning method based on data mining, CHAID analysis and LR analysis.

It is thought that the use of C4.5 and C5.0 algorithms, which are considered to be the previous version of the REPTree algorithm, is the cause of this difference. There are studies about different results obtained by different algorithms in the literature. However, the findings of the study conducted by the researchers in the relevant literature showed that the most successful method was LR and then CHAID analysis, and this is similar to by Şata and Çakan's (2018) study. When the results of similar studies in the literature are evaluated as a whole, it is seen that the logistic regression analysis has a better classification rate compared to CHAID analysis (Duran, Pamukçu and Bozkurt, 2014; Heckerd and Gondolf 2005; Kurt, Türe and Kurum, 2008).

However, it is thought to be one of the reasons for the low rate of classification obtained by the REPTree algorithm is that the decision tree is not limited to three levels as in the CHAID analysis in the SPSS program, and the release of the number of levels to be obtained for the tree. It was determined that the classification rate obtained by the REPTree method was lower as more precise classification was performed by increasing the number of levels. In this respect, the findings suggest that the sensitivity of the measurement results obtained has increased in a sense. This difference between the classification results obtained for LR and CHAID analysis was statistically significant, while there was no statistically significant difference between LR analysis and REPTree algorithm and CHAID analysis and REPTree algorithm. However, this result differs from the McCarty and Hastak's (2007) findings. They found that CHAID tends to be superior to RFM (recency, frequency, and monetary value) and logistic regression. The difference between the classification rates obtained from CHAID analysis and LR analysis in each of four different sample sizes is not significant.

In a similar study, Güldal and Çakıcı (2017) compared 70 students with Naive Bayes, Decision Tree (C4.5) and k-nearest neighbor method for k = 1, 3 and 5 according to different evaluation criteria. In their study, the highest accuracy rates were obtained by the nearest neighbor for k=3, J48, k01 and the nearest neighborhood for k=5, respectively and Naive Bayes methods. The accuracy values of the classification algorithms discussed in the classification of students as successful and unsuccessful with the help of different algorithms varied between 55.7% and 64.3%. In a similar study conducted by Mehdiyev, Enke, Fettke and Loos (2016), the findings showed that the most accurate predictions were performed by artificial neural networks, Random forest, Logistic regression, Radial based

networks and C4.5 methods, respectively. Accordingly, it can be said that the findings of the research are similar to the studies conducted in the field (Almuniri & Said, 2017).

Finally, in line with the findings obtained for the solution of the third sub-problem, the importance of independent variables in classifying students concerning mathematics achievement showed similarity depending on the method used. According to the obtained results, although the independent variables having a significant effect on the dependent variable are different according to the different methods, the order of importance of the variables did not change according to the method used. The self-efficacy variable, regardless of the method used in the study, is the variable that describes the dependent variable best. Similarly, no matter which method is used, the attitude variable is the variable with the best predictive power after the self-efficacy variable. Anxiety variable was not determined as a significant predictor variable in CHAID analysis, but according to the results of the LR analysis and REPTree algorithm, the predictive power ranking was followed by the attitude variable. Finally, the study discipline variable, which is not significant according to the REPTree algorithm, is the last predictor among the significant variables. This result is similar to the findings of Vale (2012). In this study, it is seen that the variables that have a significant effect on both methods, according to both methods, are the same in estimating the rates of automobile insurance using the CHAID analysis and Logistics model.

Based on the findings of this study, it is recommended that because of the CHAID, LR analysis and the REPTree algorithm give different results in determining the independent variables, which have a significant effect on the dependent variable; it is recommended that the studies which aim to determine the predictor variable should not be limited to one method. Combining findings from different methods serving the same purpose may be stronger evidence for research results. In addition, in studies where it is aimed to reveal the importance of the independent variables that have a significant effect on the dependent variable, LR and CHAID analysis and any of the REPTree algorithm may be preferred. This study is limited to Turkey's sample with 1000 students. Similar studies can be carried out on the data sets of different countries to provide new insights. This study is limited to REPTree, one of the data mining classification methods. In addition to this, it is suggested that comparative studies should be conducted to determine the level of similarity between CHAID and LR rather than a single data mining method.

References

Abessi, M., & Yazdi, E. H. (2015). Marketing data mining classifiers: Criteria selection issues in customer segmentation. *International Journal of Computer Applications, 106*(10), 5-10.

Almuniri, I., & Said, A. M. (2017). School's performance evaluation based on data mining. *International Journal of Engineering and Information Systems*, *1*(9), 56-62.

Albayrak, A.S., & Koltan-Yılmaz, Ş. (2009). Veri madenciliği: Karar ağacı algoritmaları ve imkb verileri üzerine bir uygulama. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 14*(1), 31-52.

Antipov, E., & Pokryshevskaya, E. (2010). Applying CHAID for logistic regression diagnostics and classification accuracy improvement, *Journal of Targeting, Measurement and Analysis for Marketing*, *18*(2), 109 – 117. doi: 10.1057/jt.2010.3

Azen, R., &, Walker, C.M. (2011). *Categorical data analysis for the behavioral and social sciences* (1st Ed.), New York: Routledge.

Baran-Kılıçalan, M. (2018). *Hanehalkı işgücü araştirma verileri ile veri madenciliği yöntemlerinin uygulanmasi ve modellerin karşilaştirilmasi*. Yayımlanmamış Yüksek Lisans Tezi. Hacettepe Üniversitesi İstatistik Ana bilim Dalı, Ankara.

Baştürk, R. (2016). *Bütün yönleriyle SPSS örnekli nonparametrik yöntemler* (3. Baskı). Ankara: Anı Yayıncılık.

Bush S. (2015). Sample size determination for logistic regression: A simulation study. *Communications in Statistics - Simulation and Computation*, *44*, 360–373.

Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö.E., Karadeniz, Ş., & Demirel, F. (2016*). Bilimsel araştırma yöntemleri* (20. Baskı). Ankara: Pegem Akademi.

Can, Ş., Özdil, T., & Yılmaz, C. (2018). Üniversite öğrencilerinin ders başarısını etkileyen faktörlerin lojistik regresyon analizi ile tahminlenmesi. *International Review of Economics and Menagement, 6*(1), 28-49.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education (6. Baskı)*. London: Routledge.

Çokluk Ö., Şekercioğlu G., & Büyüköztürk Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik SPSS ve LISREL uygulamaları*. Pegem yayınları, Ankara.

Díaz-Pérez, F. M., & Bethencourt-Cejas, M. (2016). CHAID algorithm as an appropriate analytical method for tourism market segmentation. *Journal of Destination Marketing & Management*, 5, 275-282. Doi: http://dx.doi.org/10.1016/j.jdmm.2016.01.006

Duran, A. E., Pamukçu, A., & Bozkurt, H. (2014). Comparison og data mining techniques for direct marketing campaings. *Sigma*, 32, 142-152.

Garson, D. (2015). *Missing values analysis and imputation methods*. USA: Statistical Publishing Associates.

Guldal, H., & Çakıcı, Y. (2017) Ders yönetim sistemi yazılımı kullanıcı etkileşimlerinin sınıflandırma algoritmaları ile analizi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 21*(4),1355-1367.

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in house hold surveys. *Public Opinion Quartely, 7*(5), 646-675

Heckert, A., & Gondolf, E. (2004). Battered women's perceptions of risk versus risk factors and instruments in predicting repeat reassault. *Journal of Interpersonal Violence*, 19, 778–800.

Kilic, S. (2000). *Lojistik regresyon analizi ve pazarlama araştırmalarında bir uygulama*. Yayınlanmamış Yüksek Lisans Tezi. İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul.

Koc Basaran Y. (2017) Sosyal bilimlerde Örnekleme Kuramı, *Akademik Sosyal Araştırmalar Dergisi*, *5*(47), 480-495.

Kurt, I., Ture, M., & Kurum, A. T. (2008). Comparing performances of logistic regression, classification and regression tree, and neural networks for predicting coronary artery disease. *Expert Systems xith Applications*, 34, 366-374.

Lehmann, E. L. (2006). On likelihood ratio tests, In IMS Lecture Notes- 2nd Lehmann Symposium, 49, 1–8.

Larose, D. T., & Larose, C. D. (2014). *Discovering Knowledge in Data: An Introduction to Data Mining*. 2nd Edition. NewJersey, USA: John and Wiley Sons Incorporated,.

Massey, A., & Miller, S. J. (2006). *Tests of hypotheses using statistics*. Mathematics Department, Brown University, Providence, RI, 2912.

McCarty, J. A., & Hastak, M. (2007). Segmentation approaches in data-mining: A comparison of RFM, CHAID, and logistic Regression. *Journal of Business Research*, 60, 656–662.

Mertler, C.A., & Vannatta, R. A. (2005). *Advanced and multivariate statistical methods: Practical application and interpretation* (3rd Edition). Glendale, CA: Pyrczak Publishing.

Nisbet, R., Miner, G., & Yale, K. (2017). *Handbook of statistical analysis and data mining applications* (2nd Edition). Elsevier Science Inc., ISBN: 0124166326,9780124166325

Ozekes, S. (2003). Veri madenciliği modelleri ve uygulama alanları. *İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, 2(3)*, 65-82.

Park, H. (2013). An introduction to logistic regression: From basic concepts to interpretation with particular attention to nursing domain. *Journal of Korean Academy of Nursing*, *43*(2), 154–164.

Peng, C.Y.J., Lee, K.L., & Ingersoll, G.M. (2002). An introduction to logistic regression analysis. *The Journal of Educational Research, 96* (1), 3-14.

Rudd, J. M., & Priestley, J. L. (2017). A Comparison of Decision Tree with Logistic Regression Model for Prediction of Worst Nonfinancial Payment Status in Commercial Credit, *Grey Literature from PhD Candidates*. 5. http://digitalcommons.kennesaw.edu/dataphdgreylit/5

Sokolova, M., & Lapalme, G. (2009). A systematic analysis of performance measures for classification tasks, *Information Processing and Management*, 45, 427-437.

SPSS White Paper Inc. (1999). *Answer tree algorithm summary.* ATALGWP-0599, USA.

Sata, M., & Cakan, M. (2018). Comparison of results of CHAID analysis and logistic regression analysis. *Dicle University Journal of Ziya Gökalp Faculty of Education*, *33*, 48-56.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn& Bacon.

Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics.* USA: Pearson Education Limited.

Tutek, H., & Gumusoglu, Ş. (2008). *İşletme istatistiği,* İstanbul: Beta Basım Yayım Dağıtım A.Ş.

Mehdiyev, N., Enke, D., Fettke, P., & Loos, P. (2016). Evaluating forecasting methods by considering different accuracy measures. *Procedia Computer Science, 95*, 264 – 271.

Milli Eğitim Bakanlığı-Ölçme, Değerlendirme ve Sınav Hizmetleri Genel Müdürlüğü, (2015). Uluslararası Öğrenci Değerlendirme Programı PISA 2015 Ulusal Raporu, Ankara.

Milli Eğitim Bakanlığı-Ölçme, Değerlendirme ve Sınav Hizmetleri Genel Müdürlüğü, (2016). *Uluslararası Matematik ve Fen Eğilimleri Araştırması (TIMSS) 2015 Ulusal Matematik Ve Fen Ön Raporu*. Ankara.

Vale, J. B. (2012). *Using Data mining to predict automobile insurance fraud*. Dissertation of the degree of MSc in Business Administration. Universidade Católica Portuguesa.

Zuckerman, I., & Albrecht, D.W. (2001). Predictive statistical models for user modeling. *User Modeling and User Adapted Interaction*, *11*(1-2), 5-18.

Yordayıcı Değişkenlerin Belirlenmesinde Kullanılan Yöntemler: Lojistik Regresyon, Veri Madenciliği Yöntemleri ve CHAID Analizi

Atıf:

Aksu, G., & Reyhanlioglu Keceoglu, C. (2019). Comparison of results obtained from logistic regression, chaid analysis and decision tree methods. *Eurasian Journal of Educational Research*, *84, 115-134*, DOI: 10.14689/ejer.2019.84.6

Özet

Problem Durumu: Ülkelerin eğitim politikalarına yön vermek amacıyla göz önünde bulundurulan birçok durum vardır. Dünya genelinde politika belirleyicileri, kendi ülkelerindeki öğrencilerin bilgi ve beceri düzeylerini araştırmaya katılan diğer ülkelerdeki öğrencilerin bilgi ve beceri düzeyleriyle karşılaştırmak, eğitim düzeyinin yükseltilmesi amacıyla standartlar oluşturmak ve eğitim sistemlerinin güçlü ve zayıf yönlerini belirlemek amacıyla uygulanan uluslararası uygulamaların sonuçlarından yararlanılmaktadır. Ülkeler bu bilgiler sayesinde eğitim süreçlerini uluslararası bir perspektife göre değerlendirebilmektedir. Ülkelerin eğitim politikalarının şekillendirilmesinde önemli rol oynayan uluslararası sınavlardan elde edilen bulgular, farklı alanlarda değişkenlerin ölçüldüğü büyük ölçekli bir veri tabanından elde edilmektedir. Çok büyük ölçekli veriler, farklı alanlardaki büyük ölçekli veri tabanları içinde değerli verileri bulunduran bir veri madeni gibi düşünülebilir. Veri madenciliği yöntemleri sayesinde ülkelerin eğitim politikalarına yön veren uygulamalardan elde edilen karmaşık veriler üzerinden bağımlı değişkeni yordayan bağımsız değişkenlere dair maksimum bilgi elde edilebilir. Bağımlı (yordanan) değişkenin üzerinde etkili olan bağımsız (yordayıcı) değişkenlerin belirlenmesi bilimsel araştırmaların temel odağında yer alan konulardan bir tanesidir. Bu amaçla gerçekleştirilmiş çalışmalarda yordayıcı değişkenlerin belirlenmesinde çeşitli yöntemlerden yararlanılır. Bu yöntemlerin ortak özelliği bağımsız değişkenlerin bağımlı değişkenler üzerindeki etkilerinin anlamlılığını test etmesidir. Kullanılan yöntemlerin ortak özellikleri kadar birbirinden farklılaşan özellikleri de bulunmaktadır. Kullanılan yöntemleri birbirinden ayıran temel özelliklerden biri uygulanabildiği veri türüdür. İstatistiksel yöntemlerin bazıları sadece sürekli verilere uygulanabilirken, bazıları kategorik verilere de uygulanabilmektedir. Kategorik veri analizi eğitim uygulamalarında sıklıkla kullanılan bir yöntemdir. Her ne kadar öğrencilerin akademik başarılarını belirlemek için kullanılan ölçme araçları eşit aralık ölçek düzeyinde kabul edilerek, ölçme sonuçları sürekli puanlar olarak elde edilse de, öğrenciler hakkında karar verme sürecinde başarı puanları belli bir ölçüt puana göre başarılı/başarısız şeklinde kategorik verilere dönüştürülmektedir. Sonuç olarak bir bağımlı değişken olarak öğrenci başarıları üzerinde anlamlı etkiye sahip olan faktörlerin belirlenmesi için veri madenciliği ile parametrik olmayan iki yöntem olan Lojistik Regresyon analizi ve CHAID analizi yöntemlerinin sonuçlarından yararlanılabilir. Her üç yöntemin de ortak özelliği bağımlı değişken üzerinde anlamlı etkiye sahip olan bağımsız değişkenleri belirlemeyi hedeflemesidir. Bununla birlikte üç yöntemi birbirinden ayıran en temel özellik arka planda çalıştırdığı öğrenme algoritmasıdır. Tüm bunlara bağlı olarak başarı üzerinde anlamlı bir etkiye sahip olduğu düşünülen bağımsız değişkenlerin belirlenmesi ve bu değişkenlerin önem sırasının ortaya konulması birçok bilimsel çalışmanın ortak amaçlarından biridir. Ayrıca değişkenlerin önem sırasının kullanılan yöntemlere göre değişmesi çalışmalarda hangi yöntemin kullanılması gerektiği konusunda karışıklık yaratacaktır.

Araştırmanın Amacı: Çalışma kapsamında ele alınan üç farklı yönteme göre bağımsız değişken olarak kabul edilen matematik dersine ilişkin ilgi, tutum, motivasyon, algı, öz yeterlik, kaygı ve çalışma disiplini değişkenlerine göre öğrencilerin başarı durumları bakımından nasıl sınıflandıkları araştırılmıştır. Bu çalışmada öğrencilerin matematik

başarısını yordayan değişkenlerin belirlenmesi amacıyla Lojistik Regresyon (LR) ve CHAID analizi ile veri madenciliği yöntemlerinden yararlanılmaktadır. Mevcut bir durumun sonuçlarının belirlenmesi sebebiyle çalışma ilişkisel (korelasyonel) bir araştırma niteliğindedir. Çalışmada kullanılan veriler PISA 2012 öğrenci anketinde yer alan ve uygulamaya katılan öğrencilerin ilgi, tutum, özyeterlik, algı, motivasyon, kaygı ve çalışma disiplini alt ölçeklerine verdikleri yanıtlar yardımıyla elde edilmiştir. Çalışmanın evreni PISA 2012 öğrenci anketine katılan ve tabakalı seçkisiz örnekleme yöntemiyle belirlenen 4818 öğrenciden oluşmaktadır. Ancak analizler sistematik örnekleme yöntemi ile seçilmiş 1000 öğrenci üzerinden gerçekleştirilmiştir. Verilerin analizi LR ve CHAID analizi ile veri madenciliği yöntemlerinden REPTree algoritmasına göre gerçekleştirilmiştir. Böylece her üç yönteme göre öğrencilerin matematik başarısı üzerinde anlamlı etkisi olan bağımsız değişkenler belirlenmiştir. LR, CHAID analizi ve REPTree algoritması yöntemlerinin karşılaştırılması öğrencilerin başarı durumuna göre anlamlı etkisi olan değişkenlerin ve her bir yönteme ilişkin öğrencilerin matematik başarılarına göre doğru sınıflandırma oranlarının belirlenmesi ile gerçekleştirilmiştir.

Araştırmanın Bulguları: Elde edilen sonuçlara göre her bir yönteme ilişkin öğrencilerin matematik başarısı üzerinde anlamlı etkisi olan değişkenler birbirinden farklı çıkmıştır. Bunun yanı sıra her ne kadar farklı yöntemlere göre bağımlı değişken üzerinde anlamlı etkiye sahip olan bağımsız değişkenler farklı olsa da, değişkenlerin önem sırasının kullanılan yönteme göre değişmediği belirlenmiştir. Çalışmada ayrıca farklı yöntemler tarafından öğrencileri PISA matematik okuryazarlığı bakımından sınıflamada elde edilen doğru sınıflama oranlarının farklılık gösterdiği belirlenmiştir.

Araştırmanın Sonuçları ve Öneriler: LR analizine göre bağımlı değişken üzerinde anlamlı etkiye sahip olan bağımsız değişkenler özyeterlik, tutum, kaygı ve çalışma disiplini şeklinde sıralanırken, CHAID analizine göre bağımlı değişken üzerinde anlamlı etkisi olan yordayıcı değişkenler ve bu değişkenlerin önem sırası özyeterlik, tutum ve çalışma disiplini şeklindedir. Veri madenciliğinde kullanılan REPTree algortimasına göre belirlenen yordayıcı değişkenler ve bu değişkenlerin önem sırası ise özyeterlik, tutum ve kaygı şeklinde belirlenmiştir. En büyük sınıflandırma oranı LR analizi, ikinci olarak CHAID analizi ve en küçük sınıflandırma sonucu ise REPTree algoritmasına aittir. REPTree algoritması ile elde edilen sınıflama oranının düşük çıkma sebeplerinden bir tanesi karar ağacının SPSS programında gerçekleşen CHAID analizinde olduğu gibi 3 düzeyle sınırlandırmayarak ağaç için elde edilecek düzey sayısının serbest bırakılmasından kaynaklanabileceği düşünülmektedir. Çalışmada matematik başarısı bakımından öğrencileri sınıflandırmada bağımsız değişkenlerin önem sırası kullanılan yönteme göre benzerlik göstermiştir. Bağımlı değişken üzerinde anlamlı etkiye sahip olan bağımsız değişkenlerin önem sırasının ortaya konmasının amaçlandığı çalışmalarda LR ve CHAID analizi ile REPTree algoritmasından herhangi biri tercih edilebilir. Bireylerin başarı durumları açısından sınıflandırılmasının amaçlandığı çalışmalarda CHAID analizi ile REPTree algoritması birbirinin alternatifi olabilir. Ancak LR analizi diğer iki yönteme göre anlamlı derecede farklı sonuçlar vereceği için alternatif bir yöntem olarak düşünülmemelidir.

Anahtar Kelimeler: CHAID Analizi, Lojistik Regresyon Analizi, Veri Madenciliği, PISA

Eurasian Journal of Educational Research 84 (2019) 135-158

Eurasian Journal of Educational Research
www.ejer.com.tr

The Mediator Roles of Mothers in Father-Child Communications and Family Relationships*

Hilal CELIK[1]

ARTICLE INFO

Article History:
Received: 03 Jul. 2019
Received in revised form: 28 Oct. 2019
Accepted: 13 Nov. 2019
DOI: 10.14689/ejer.2019.84.7

Keywords
father-child relationship, mother-child relationship, communication, family-interactions, Turkish families.

ABSTRACT

Purpose: In many middle-class families in Turkey, mothers typically occupy a mediator role in father-child communications, meaning that messages between fathers and children (particularly regarding an important subject) are sent through mothers. This phenomenological study investigates Turkish father-child communication dynamics, the roles of mothers in this relationship, and the effects of mothers acting as mediators in communications between father and child.

Research Methods: This study used Interpretative Phenomenological Analyses to reveal the essence of the relationship of participants with their fathers and their shared experiences regarding the reflection of the mother's role in the father-child relationship and common meanings that have been established. Employing a homogeneous sampling method, we conducted semi-structured interviews with 15 middle-class undergraduate students (nine female and six male students) aged 19-24 (x=21.33) in Istanbul, Turkey.

Findings: Our analyses revealed the following three overarching themes that define the experiences of the participants: (i) an unsatisfactory father-child relationship, (ii) the mother: relational fulcrum of the father-child communications, and (iii) problematic emotional reactions to family-interactions.

Implications for Research and Practice: This study represents a critical step towards understanding the experiences of youths raised in families wherein mothers occupy a mediator role in father-child communications. It revealed that the father-child relationship does not represent a satisfactory relationship and that this relationship is associated with a sense of deprivation by the children. A comparative evaluation of the experiences of the fathers, mothers, and children would enrich the interpretations and help to obtain a more complicated view of these family relationships.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Marmara University, Department of Educational Sciences, Psychological Counseling and Guidance, Ataturk Education Faculty, Kadikoy, Istanbul TURKEY, e-mail: hilalcelik@marmara.edu.tr, celikhilal@gmail.com, ORCID: https://orcid.org/0000-0001-5923-4248

Introduction

As a crucial aspect of family relationships, communication (Noller & Callan, 1990) plays a key role in increasing the quality of relationships among the members, in maintaining the healthy functioning of the family as a whole, and in providing insights into the main underlying dynamics of family relationships (Olson, 2000). Affectionate communication patterns within the family help the members to feel a sense of belonging, love and being loved, appreciated, and accepted. Research studies report that members of families with strong communications can develop a positive sense of self, and be emotionally closer and affectionate towards each other (Barnes & Olson, 1985: Noller & Callan, 1990). They also can deal with familial conflicts more effectively.

Family members may communicate with each other in different ways. In general, the communication skills of female members are more advanced than those of male members, and fathers are perceived as more judgmental, authoritarian, and less willing to be involved in important discussions of feelings and problems (Morman & Floyd, 2002; Noller & Callan 1990). This type of inter-family communication pattern exists in several cultures and often can be found in Turkish families as well. A growing body of literature reports that in Turkey mother-child communications are stronger than father-child communications; adolescents communicate more with their mothers (Hortacsu, 1989); fathers are perceived as less affectionate and more authoritarian compared to mothers (Ataca, 2009; Boratav, Fisek & Ziya, 2017; Sunar & Fisek 2005); and mothers hold a primary position in areas concerning the child, while fathers hold an inferior or subordinate position (Anne Cocuk Egitim Vakfı [ACEV], 2017, Bozok, 2018).

In Turkey, it is common in middle-class families that mothers occupy a mediator role, meaning that children send their messages to their fathers through mothers. It is frequently observed in Turkish families that adolescents explain their situation to their mother first and ask the mother to convey these messages to the father instead of directly talking to him about ordinary or important issues, such as spending the night at a friend's house, asking for permission to go out, explaining a desire to change one's school/department, or announcing the existence of a boyfriend/girlfriend. This study investigates Turkish father-child relationship dynamics, the roles of mothers in this relationship, and perceptions regarding family relationships wherein mothers play a mediator role in communications between the father and child/ren.

Father-Child Relationships

In the 21st century, social transformations have led to a reconstruction of the identity of fatherhood. This development, in turn, has triggered new, in-depth scholarly investigations into family relationships. Numerous factors, such as the participation of women in the labor force, increased awareness of fathers regarding the well-being of their children, changes in the traditional family structure, and a trend to rearrange gender roles in a more egalitarian manner have altered fatherhood roles, and consequently, the perceived identity of fathers. Also, during the last five decades, academics interested in father-child relationships have helped to redefine fatherhood

by discussing themes, such as "nurturing" (Lamb, 2000, 2010) and "co-parenting" (Pleck & Pleck, 1997).

This new fatherhood identity has created the expectation that today's fathers should be more nurturing, affectionate, and involved in raising children compared to fathers in previous generations. Today, fatherhood is characterized by the parenting attributes, such as assuming an active role in child care, expressing love to the wife and child, providing emotional and social support, availability, responsibility, being a role model, offering affectionate communication, providing financial support, and showing authoritarianism. Whether a father is "good" or not is determined by assessing to what extent he presents these characteristics (Lamb, 2010; Morman & Floyd, 2006).

Acknowledged as one of the indicators of good fatherhood by both fathers and children, communication determines the quality of the father-child relationship today (Floyd & Morman, 2003, 2005; Morman & Floyd, 2006). Studies report that the father-child relationship and communications have changed compared to earlier generations; today's fathers have become more affectionate and open to communication (Borotav et al., 2017; Floyd & Morman, 2005; Sunar, 2009). However, studies also report that sometimes the new methods do not exactly meet the expectations of the children (Floyd & Morman, 2005; Morman & Floyd 2002). This can be explained by the concepts of a culture of fatherhood and the conduct of fathering. A culture of fatherhood is built upon shared norms, values, and beliefs concerning fatherhood. Conduct of fathering means what a father actually does as a parent. Studies note that fathers often experience difficulty displaying the characteristics of idealized fatherhood in real life; i.e., there is a gap between the culture of fatherhood and the conduct of fathering (Barutcu & Hidir, 2016; Brown, Callahan, Strega, Walmsleys, & Dominelli, 2008; Sunar, 2002).

Consequently, recent studies continue to report that mother-child communications are still stronger, closer, and more affectionate compared to father-child communications. Also, both sons and daughters feel closer to their mothers (Nielson, 2001; Noller & Callan, 1990), spend more time with their mothers, and feel that they know each other better than the child knows the father (Jacobs & Kelley, 2006; Mathew, Derlaga & Morrow, 2006). Vogel, Bradley, Raikes and Boller (2011) underscored that this pattern reflects the loss of relationship balance and that mothers are perceived as essential actors within the family, while fathers hold an inferior position.

This pattern can be clearly observed in middle-class Turkish families. It is also common in middle-class Turkish families to see that mothers assume an active role in father-child communications, and even hold a central position in it. Despite recent changes in family relations, fathers still are perceived as being less affectionate, more authoritarian, and more controlling compared to mothers in Turkey (Ataca, 2009; Borotav et al., 2017; Sunar, 2009). This study explored how youths, who raised in families wherein mothers occupy a mediator role in father-child communications, perceive:

(1) the father-child relationship,

(2) which roles are assumed by mothers in father-child communications, and

(3) the effects of the mother's mediator role within the family.

Method

Research Design

This study used Interpretative Phenomenological Analyses (IPA) to explore the relationships of youths with their fathers, their perceptions of the mother's role in their father-child relationship, and the effects of the mother's mediating communication role (Smith & Osborn, 2003). IPA was selected due to its emphasis on the double hermeneutic process, which refers to the two-ordered meaning-making process between the data, the participants, and the researcher.

Setting and Recruitment

The data were collected in accordance with the approval and permission received from the Ataturk Education Faculty at Marmara University in Turkey. The researcher made an announcement concerning the study during her lectures and offered general information about its purpose. Fifteen volunteer participants met the inclusion criteria as follows: (i) having biological parents, (ii) having lived with these parents during childhood or still living with them, (iii) having married parents, (iv) having a mother that plays a mediator role in father-child communications, and (v) having a family with medium SES. These participants were interviewed. The in-depth interviews were carried out by three doctoral students, who were supervised by the researcher during the entire process. This was done to ensure maintenance of the ethical boundaries between the lecturer and the students and also to ensure that the participants expressed themselves sincerely. All of the interviewers were well-trained in qualitative research methods at the postgraduate level and had conducted prior phenomenology studies.

Participants

A homogeneous sample was employed to focus on a particular context and specific time period. Similarities and differences in the participants' experiences were thoroughly examined with this sampling method. We conducted semi-structured interviews with 15 middle-class undergraduate students (nine females, six males) aged 19-24 (M=21.33) in Istanbul, Turkey. The demographic variables of the sample are illustrated in Table 1.

Interviews

After receiving each participant's informed consent, a demographic questionnaire was administered to each participant. Then, semi-structured interviews were conducted, which lasted approximately 1.5 hours. In these, grand tour questions were utilized (to ask about the phenomenon or cultural scene), as were follow-up questions (to ask for further details about an act, event, or category). The guiding research

questions were: "How is your communication and relationship with your father?" and "What kind of role does your mother assume in your communications with your father?" Examples of follow-up questions included: "What can you say about your father's parenting?" and "What can you tell us about your family life, regarding your relationship with both your parents?" All of the interviews were audio recorded then were transcribed verbatim.

Table 1

Sample Demographics (N=15)

Major	Psychological counseling	Special education
	9	6
Parents' Employment status	Mother	Father
Unemployed/Housewife	9	-
Employee	3	15
Working at spouses' workplace for free	3	-
Parents' Education	Mother	Father
Undergraduate	1	5
High school	6	9
Middle school	7	1
Elementary school	1	-
The place where family members live	City	Town /Rural area
	10	5

Data Analysis

Considering the importance of the double hermeneutic process, the researcher initiated the data analysis by focusing on how the explicit and implicit experiences and perceptions of the participants were shaped and interpreted. MaxQDA-11 software was used to facilitate the data management. The data were analyzed following the steps outlined in IPA (Smith & Osborn, 2003). First, the researcher read and re-read interview transcripts together with the field-notes, and took memos regarding the manner and content of the interviews, the use of language, and the contexts. Second, the researcher took discovery notes, focusing on the memos. These included descriptive (basic meanings of what was discussed), linguistic (pauses, intonations, stresses, etc.), and conceptual notes (comments and reflections). The researcher thereby defined themes which emerged from the statements of the participants. In the

third step, the researcher established connections between these themes and then grouped them according to conceptual similarities. In the fourth step, each theme was supported with samples from the participants' statements and the researcher's own analytic comments.

Trustworthiness

Various steps were taken to enhance the trustworthiness of the data. First, significant attention was paid to the data collection, analysis, and interpretation processes. Also, the interviews were transcribed verbatim by the researcher, with a sincere effort to accurately reflect the audio recordings. To enhance credibility and conformability, the researcher employed reflexive memoing to document her personal reflections on the research process. This process included the incorporation of direct quotations that reflect the feelings and opinions of the participants (thick description), as well as purposive sampling to support transferability. Finally, the researcher interviewed three participants face-to-face and received their confirmation that the themes reflected their real experiences (member checking) (Lincoln & Guba, 1985).

The Researcher's Role

Phenomenology researchers are always aware of the critical importance of the emic/etic position of the researcher in obtaining in-depth information concerning the studied phenomenon. Therefore, using a double hermeneutic process, the researcher presented an emphatic position to reflect the perceptions of people experiencing the phenomenon with the viewpoint of an insider, while taking a questioning stance as an outsider/stranger to examine the phenomenon from different angles. Being also a member of a couple and family therapist, the researcher possesses a comprehensive agenda, including attention to themes relating to family relationships, the father-child relationship, and ambiguous loss. In addition to the researcher's clinical and academic background, she also is the child of a middle-class family, and was born and raised in Turkey. This circumstance allowed her to be both an insider and an outsider while evaluating the experiences of the participants.

Results

This study obtained three overarching themes as folows: (i) an unsatisfactory father-child relationship, (ii) the mother: relational fulcrum of the father-child communication, and (iii) problematic emotional reactions to family-interactions. While each youth expressed a unique experience regarding his/her father-child relationship/communication pattern and role/s that the mother assumed in this communication, the findings showed that all of the participants had similar experiences.

Unsatisfactory father-child relationship

All participants stated that their relationship experiences with their fathers did not satisfy their emotional needs or expectations. Their narratives reflect that their father-

child relationships were relatively problematic, and far from a desired father-child relationship. The participants' answers to the question "how is your relationship with your father?" centered on the following terms: problematic, undefinable, distant/cold, and detached. One male participant living in a city presented a clear example of his unsatisfactory relationship with his father:

> *When I want to talk about something with my family, or when I have a problem, or I want something, I go to my sister or my mother. I never go to my father because we do not have such a relationship with him. I do not know how to describe our relationship, detached maybe. We barely talk or share something. We talk sometimes but only about daily stuff. We do not have a father-son relationship, as shown in the TV series.*

The participants' narratives demonstrate that this unsatisfactory father-child relationship is characterized by three main parenting attributes of the fathers: (i) distance, (ii) an uninvolved parenting style, and (iii) authoritativeness.

Distance

The participants' narratives demonstrate that the father-child relationship is defined by hierarchy, and that hierarchy is symbolized with distance. The participants emphasized that their relationship with their father was more formal and superficial. Eleven of the participants stated that they had a closer relationship with their fathers when they were a child; but after a certain age (especially after adolescence), their relationship changed and became distant. One participant said: *"My father used to pay a lot of attention to us when we were kids. We used to play together. As we grew up, he started to put distance between us."* The participants' narratives show that their distant father-child relationships were characterized by two basic features: (i) lack of communication, and (ii) lack of emotional and physical engagement.

Lack of communication was indicated in all of the participants' narratives. They noted that this was mainly caused by the behaviors of their fathers (e.g., not talking, not listening, criticizing, judging, etc.), and that this led to their reluctance to communicate with their fathers. One participant raised in a city by dual-earner parents said:

> *Even if I argue with my mother, I know that my mother takes me seriously and cares about me. But my father fails to do that. Sometimes, his voice, attitude, or behaviors tell me 'I can't deal with you anymore.' It feels as if he is actually trying not to listen to what I am trying to say. Probably he regrets in the end. But his attitude brings me to the point of thinking 'my father never listens to me.*

Seven participants stated that communication with their fathers was limited due to respect, and that mostly this arose from the behaviors of their father. One participant noted that respecting elders was a norm in their culture and added:

> *I cannot talk to my father. We should not get too close. That is the reason why I go to my mom first. My father does not listen a lot, relying on the experience he gained*

due to his age. This has nothing to do with me. There is an unwritten rule in our society saying that one should not tell everything to the father.

In addition, the participants revealed that their father-child relationships were superficial and that communication was generally focused upon household chores, academic achievement, giving and receiving pocket money, and controlling the child (especially the girls). Eleven of the participants, all of whom had moved out of their home to attend high school or university, stated that given that they lived far from their family did not lead to any change in their communication with their fathers. They did not call each other except in obligatory circumstances (to ask for pocket money, or for the father, to check on how the child is doing). Further, eight of the participants reported that their fathers did not call them very often though they lived apart from family, and that a call generally came only in a crisis (disease, death, etc.). The account of a female participant who lived with her family but could not go home due to her busy schedule stood out in this respect:

I could not go home due to my busy schedule. My father called. I was very surprised. Because if he is calling, this means that something happened: Either someone died or something else happened... I would feel uneasy if my father always called me because I am not used to this... For example, when I call my mother, my father picks up the phone if my mother is not there: He says, 'your mother is not here' and hangs up, so this is my relationship with my father.

Many of the participants stated that their communications with their father did not make them feel special or valuable. Their narratives also show that verbal messages with emotional content, such as missing each other, love, and valuing the child, were conveyed between the child and the father implicitly. One participant said:

Ten years ago, my father and I used to communicate and talk to each other... We can also talk now, but this is never happening. Maybe due to pride or arrogance. But I wish I could have a heart-to-heart talk with my father and tell him that I love him. But this is just a dream. We usually keep silent.

The emotional distance of fathers and the lack of a satisfactory emotional bond in the father-child relationship was the second common theme. Thirteen participants stated that they had not experienced emotional sharing, including physical contact, such as kissing and hugging, sufficiently enough since their childhood in their relationships with their fathers. Similarly, 12 participants said that they believed their fathers loved them, but they did not hear this very often verbally from them. The emotional distance between these fathers and children is an issue that arouses a feeling of deprivation among the participants. Ten of the participants expressed this deprivation with a feeling of longing:

My father does not display his love. He never kissed me or hugged me when I was a kid. I do not remember. I would remember if he did, I guess. I think I always miss this.

We also observed that lack of emotional and physical engagement with the father was excused by some of the participants due to various reasons (busy working

schedule or bad childhood experiences of the father himself): *"My father loves his children. We know this. But he can't express his love. Of course, it would be better if he could. Maybe I would not feel so distanced from him then... Probably that was his experience with his father. There was a lot of respect between them, but love was invisible. Our relationship looks like theirs."*

Eight of the participants stated that they could establish a temporary, closer emotional relationship with their father during a crisis (sickness, accident, loss of a family member, etc.) or successful achievement (getting into a university, ranking well in a competition, etc.), but that they would revert to their former relationship when the impact of the crisis or success faded:

> *I would normally see my father as a robot. I would never think he would get upset because he never showed his feelings. When my grandfather died, I saw my father crying. At that moment, I realized that my father had emotions. He always hides them. Of course, he loves us. We know it. But when it comes to feeling it, I cannot say I feel it."*

Uninvolved parenting

That the father did not assume an active role in child-care and the mother was the primary caring figure was also determined to be a common theme. Many of the participants stated that they found it normal that their fathers held a secondary position and their mothers assumed the main caregiver role, since they were women. The uninvolved parenting of the fathers was characterized by (i) providing only for material needs, (ii) being passive in housework and child care in the presence of the mother, and (iii) lack of interest. However, the participants also indicated that these behaviors inhibited father-child interaction and made it more problematic:

> *He never asks about my wellbeing. The common conversation we have is money. He takes care of me when he has to, I mean when my mother is sick or absent. I was surprised when I saw he took my sister to the hospital when she got sick because this is not something I would expect from my father. My father generally tells my mother, 'your daughter is sick, let's take her to the hospital'... He says, 'your daughter' instead of 'my daughter.' He always talks to my mom like 'your daughter is arguing with me, say something to her'. I cannot help but feel some kind of coldness between us when this is the case.*

The uninvolved parenting described using the term disinterest, in particular, was indicated as one of the obstacles that prevents the participants from getting emotionally closer to their fathers. They stated that their mothers were responsible for everything that mattered to them, and therefore, they developed a closer relationship with their mothers:

> *I do not want to call him disinterested, but he has never shown any interest in anything so far... My father only brings money and gives it to my mother. She takes care of very complicated stuff. He does not take on responsibilities sufficiently. Because he is disinterested, I cannot help but get closer to my mother and share everything with her. But I still feel I lack something.*

Authoritativeness

Developing in parallel with the hierarchy between parent and child in the family, the authoritarian father attitude was found to be another common attribute of the father in an unsatisfactory father-child relationship. The behaviors that the father (i) is stricter and more nervous, (ii) recognizes the family members in a limited manner, (iii) assigns particular importance to his own opinions when making decisions, and (iv) restricts communication compared to the mother were described as parenting characteristics that characterize authoritativeness:

> *You have to adapt to his idea of a child. This idea includes a do's and dont's list. And he wants us to follow this list. He does not give strong reactions, or yell or beat us. But he is very clear when he says no. My mother also says 'no' sometimes, but she changes her idea. If my father says 'no,' there is no way to convince him.*

Mothers: The relational fulcrum of the father-child communications

The participants' narratives demonstrate that motherhood and the mother-child relationship were defined by these youths using the themes of love and emotional closeness. All of the participants stated that their relationship with their mother was never broken off, although they occasionally had conflicts, and the first person they went to when they had a problem or something to tell was their mother, followed by their siblings, friends, and cousins. Their narratives show that the parenting characteristics of the mothers, such as (i) close emotional and physical engagement, (i) a tendency to engage in open communication, (iii) understanding, and (iv) unconditional love/acceptance, were among the reasons that the mothers were preferred as the first person to communicate with in the family: *"We are more close with my mother; we can speak more comfortably.... She is usually calm. I feel she loves me... She clearly expresses her feelings and calls me 'my son.'"*

The participants revealed that their mothers served as a relational fulcrum of the father-child communications in three ways: (i) functioning as a bridge, (ii) ensuring the sustainability of communication, and (iii) making the father more open to communication.

Functioning as a Bridge

Common phenomenon experienced by all of the participants were that their open and comfortable communication with the mother could not be established with the father, and they felt a need for the mother to act as a bridge for them to convey messages easily to the father. Thirteen participants stated that when they needed to communicate with their father about something (asking for permission to go somewhere, discussing academic issues, talking about the presence of a girlfriend/boyfriend, etc.), they tended to talk to their mothers first, so that she could convey the message to the father instead of them directly talking to him. The participants' accounts show that (i) cultural issues, such as an intimate relationship with the mother and a formal relationship with the father, (ii) the emotional distance of the father, (iii) not being listened to by the father, and the youths' concern about

being criticized were the reasons for lack of direct communication between father and child:

> *I think it is because it is a preconception in the society: They say, 'one shouldn't talk to his father; you should go to your mother first.' I have a boyfriend now. They both know about him. I told my mother, and she told my father. When I want to talk to my father, I usually ask my mother to mediate. We are not on bad terms, but I tend to ask my mother to mediate."*

Seven participants also stated that their fathers tended to communicate with them by asking their mothers to help, instead of directly communicating with them: "*I tell to my mother what I want to say to my father. As far as I have observed, this is the case in most families. Because it feels so difficult to go and talk directly to my father and ask something from him... I have tried a few times to consult him. He generally told me, 'ask your mother'.... My mother is the bridge between us...*"

Ensuring the sustainability of communication

Eleven of the participants stated that their mother assumed the roles of maintaining communications and improving their relationship with their fathers. The mothers thus contributed to the sustainability of father-child communications, especially in times of tension and emotional distance with the father:

> *My mother always says: 'You love your father, and he loves you back.' But sometimes our relationship can get really tense... because I sometimes happen to say something to him or give him hard feelings. My mother makes me sit and talks to me. When there is a problem, my mother prevents it from growing. We experienced this several times. She acts in a remedial manner.*

Making the father more open to communication

Eleven of the participants stated that they preferred to communicate with their fathers through their mothers in order to minimize the possibility of not being listened to and rejected by them when they wanted to ask for permission or demand something. The participants said that their fathers became softer and more open to communication in this way:

> *My mother tells this to my father in an appropriate way. My father reacts to my mother, and that reaction rebounds from my mother to us… when I need to ask for permission to go somewhere, I do not talk about it with my father. I would rather go to my mother and say: 'I will go out.' If she wants me to go out, she says, 'OK, go out; I will talk to your father,' and she says it in a roundabout way... That is, my mother does not have a certain role. She adapts to each situation. She calms down my father if it is necessary. She softens him up.*

Four participants emphasized that the mediator role of mothers in father-child communications might be a dynamic that limits the father-child relationship in some cases. They also stated that an obligatory communication might start between father and child when the mother did not act as a mediator. The same participants said that they were confused about this issue, and they were concerned that their father-child

communications might not be deep enough, and so could remain superficial without the mother acting as a mediator: *"Well, I communicate with my father in this atmosphere of arguing, and our communication improves in this way. We open our hearts towards each other during our arguments, even if indirectly. He expresses his anger, and so do I. But on the other side, I could have a more superficial relationship with my father if it wasn't for my mother. I don't know."*

Problematic emotional reactions to family-interactions

Many of the participants emphasized that their fathers were unable to be totally involved in the family system in an emotional sense, and therefore, they could not define their family as a real family:

> *We eat dinner all together. I do not remember a time when we ate it separately, but our conversation is limited. If you happen to ask, 'Do you have a solid family structure?' I would say no. It feels as if there is a separate family, including my mother, my sibling, and me. I feel attached to them in a different way. As I have said before, I do not count my father in the concept of our family as he is not really involved. But of course, he is my father.*

The participants' accounts indicate that this perception is common: *"It is actually very inconsistent. Sometimes I feel like I am not a real member of the family. And at other times, I feel like I am really 'inside this family.' There are times when I feel like they do not see or hear me at all. But in general, I feel like yes, I am from within this family. I know I am making contradictory statements, but I don't know the reason."*

Moreover, the participants' narratives indicate there is a common perception that a change in the emotional closeness and communications between father and child might lead to a positive change in their sense of family belonging:

> *If I had a different relationship with my father, I think my relationship with my family would also be different. I would feel more committed. I would most likely look forward to spending time with them.*

Discussion, Conclusion and Recommendations

Several important points were shared by the study participants, which have clinical and research implications for professionals working with families. Firstly, the participants' narratives demonstrate that these father-child relationships were not satisfactory from the viewpoint of the children when they communicated with their father through their mother. They perceived their fathers as distant, authoritarian, and less responsible in terms of household chores and childcare compared to their mothers, and these characteristics of the fathers led to the current unsatisfactory father-child relationship.

Our analysis shows that the most significant factor in these unsatisfactory father-child relationships is the perceived distance from one another within the relationship. This is characterized by lack of communication, and lack of emotional and physical engagement. The statements of participants demonstrate that the father-child

communications became distant after the participants turned a certain age (adolescence). The participants reported a communication gap and a lack of affectionate communication between father and child. These accounts reveal that lack of emotional and physical engagement represents a significant aspect of the distant father-child relationship. These findings indicate that these kinds of experiences between father and child are perceived as emotional wounds associated with a sense of deprivation. This is a strong indicator of the dissatisfaction felt by these youths regarding their relationship with their fathers.

Several researchers and theoreticians report that father-child (especially son) communications change with the onset of adolescence for the child; the time spent together declines, and less communication is maintained (Hosley & Montemayor, 1997; Kagitcibasi, 2010). Floy and Morman (2003) claimed that this is the result of pressure that arose from the masculine gender roles on the father and his son. On the other hand, Kagitcibasi (2010) argued that having relatively less communication with the father compared to the mother is one of the typical characteristics of Turkish families. The father, who is affectionate towards small children and plays with them, changes as the child grows up. Eventually, the father-child relationship starts to be characterized by authority and respect. A more distant relationship is established, which inhibits the father from communication communicating with the child as it is thought that compassion and intimacy may cause the child to become spoiled and disrespectful (Ataca, Kagitcibasi & Diri, 2007; Sunar & Fisek, 2005). Recently, researchers have reported that adolescents and young adults from cities have engage in less communication with their fathers compared to their mothers (Hortaçsu, 1989), and fathers usually do not talk to their young adult children; this leads to a two-way lack of communication (Boratav et al., 2017). Barutcu and Hidir (2016) concluded in their study that fathers could not be close to their own fathers, and they were always distant towards them. However, the quality of communication between father and child is more valuable than its quantity (Punyanunt-Carter, 2007), meaning that the quality of communication the child is having with the father defines the quality of the father-child relationship (Lamb, 2010; Pleck, 2010). The expression of verbal or non-verbal affection contributes to the strength of the emotional closeness between father and child, just like in any other relationship (Floyd, 2006). Floyd and Morman (2003) and Morman and Floyd (1999) found that affectionate communication (verbal, nonverbal, and supportive) was positively correlated with both fathers' and sons' self-disclosure, closeness, and relationship satisfaction. Boratav et al. (2017) found that the fathers had an intimacy problem with their own fathers, and they perceived this problem as resulting from their own father's inability to express their feelings, to not spending time with them, and to lack of communication and their fathers' disinterest. They also found that closeness with fathers is based on sharing activities rather than emotions; many of their participants experienced a sense of deprivation resulting from a lack of emotional closeness in their fraternal relationship.

This study showed the uninvolved parenting attitudes of the fathers as another important determinant of the unsatisfactory father-child relationship. The participants revealed that the main parenting tasks of the fathers were limited to providing for their

material needs, and that mothers were responsible for everything else (e.g., nurturing, caring, supervising school life, etc.).

A number of recent studies report that although the roles and identities of fathers have recently changed, mothers continue to be the main caring figure for children, while fathers hold a secondary position (Jacobs & Kelley, 2006; Mathew et al., 2006; Vogel et al., 2011). Recent family research in Turkey (ACEV, 2017; Ataca, 2009; Boratav et al., 2017; Sunar, 2002) demonstrates that the roles of males and females, thus of fathers and mothers, still are not equally balanced, despite a decline in gender hierarchy within modern urban families. The comprehensive Turkey report of ACEV (2017) reported that the majority of fathers do not assume responsibility in childcare, and that one of their main parenting responsibilities is maintaining the family [materially]. Ataca (2009) and Sunar and Fisek (2005) concluded that the expressive and childcare roles of mothers are greater than for the fathers and that the financial role of fathers is more significant than is the case for mothers despite recent changes in family relations in Turkey. However, neither mothers nor fathers have superiority in terms of childcare. Both parents engage in childcare activities so that they can get to know their children better, recognize their needs and problems, and become more sensitive towards them. When a parent takes an active role in childcare, the bond between the child and the parent gets stronger. This is because the process of childcare helps both the child and the parent get to know each other, recognize each other's limits, and learn balance to apply in their relationship (Lamb, 2010). The emotional bond between father and child may become problematic when the fathers assume a limited role in childcare compared to mothers, and do not get involved adequately in the lives of their children.

The authority of fathers is another important determinant in the unsatisfactory father-child relationship. The participants indicated that their fathers are stricter and more nervous, recognize the family members only in a limited manner, assign particular importance to their own opinions, and restrict communication compared to the mothers. These narratives also show that the fathers' authoritarian parenting attitudes make the emotional distance between them and their children bigger and cause their children to yearn for closeness.

Authoritarian parents usually attempt to arrange family relationships and responsibilities in a specific way: child care comes first, but is arranged according to gender roles (Lamb, 2010; Pleck & Masciadrelli, 2004); the parents barely express emotions and expect their statements to be accepted and followed without question by the child instead of resorting to negotiation and the parents keep a distance from the child and spend little time with him/her to maintain parental authority (Bulanda, 2004; Gaertner, Spinrad, Eisenberg & Greving, 2007).

Compared to Western cultures, it is reported in Turkey that male and female roles are clearly separate: mothers take the primary role in child care, while fathers financially maintain the family, represent it, and take an authoritarian and disciplinary role in which they do not establish any physical and emotional closeness (Fisek, 2018; Sunar & Fişek, 2005). Notably, Sancar (2011) stated that the "new fatherhood" in

Turkey represents a hybrid masculinity, including a mixture of the traditional and modern rather than an antithesis of conservative/traditional masculinity. After that study appeared, some researchers reported that fathers today are less authoritarian than the previous generation (Boratav et al., 2017; Barutcu & Hidir, 2016). However, fathers' roles are arranged according to patriarchal masculine codes even today, and fathers continue to maintain their authoritarian identities (ACEV, 2017; Bozok, 2018).

The second important result obtained in this study is related to the role of mothers in father-child communications. The participants' stated that their mothers were perceived as the family mediators in father-child communications. The mothers assumed roles such as functioning as a bridge, ensuring the sustainability of father-child communications, and making the father more open to communication. Our findings also show that motherhood was defined by these participants using the themes of love and emotional sharing, and that mother-child communications were never interrupted, despite conflicts. These findings are consistent with recent national and international research findings. Family research studies report that despite recent changes in family structure and functions, mothers hold a central position in family relations in several cultures, and in families today, mothers often assume a primary role in household chores and child care, while fathers occupy an inferior/subordinate/peripheral position (Paquette & Bigras, 2010; Vogel et al., 2011). Further, mothers assume a facilitating or inhibiting role in the father-child relationship (Puhman & Pasley, 2013). Some studies also report that mother-child communications are much stronger than father-child communications, and that the mother and child relationship is emotionally closer compared to that of father-child/ren (Jacobs & Kelley, 2006; Nielson, 2001; Mathew et al., 2006).

Recent family studies in Turkey indicate that the roles of males and females, thus of fathers and mothers, still are not equally balanced, despite a decline in gender hierarchy within modern urban families (ACEV, 2017; Kagitcibasi, 2010; Sunar & Fisek, 2005). Following an in-depth analysis of familial relationships, Fisek (1995) argued that mothers and fathers are different concerning closeness towards their children in Turkish culture. Fisek (1995) found that mothers' closeness towards their children was more expressive (childcare, kissing, touching, etc.), whereas fathers' closeness was instrumental (financial support, helping in decision-making etc.) also, there is a highly close boundary relation between mother and child. Boratov et al. (2017) reported that open communication exists between mothers and sons, and that they can express their love towards one another since there is no hierarchy between mothers and children. Boratov et al. (2017) also found that mothers occupy a mediator role in father-child communications, and that this is significant in maintaining that communication.

The final important result obtained in this study is that in a family environment wherein the mother occupies a mediator role in father-child communications, on an emotional level fathers are not perceived by their children as a real part of the family system, which brings about a problem regarding the sense of family belonging for the participants. This finding can be evaluated concerning the system theory and theoretical predictions of Kagitcibasi. According to the system theory, the family

system involving the father is a psychological system as well as a physical unit. The communications and relationship patterns among family members allow the family to be a psychological unit. Family members connect through verbal, nonverbal, and emotional exchanges and thereby become special individuals for each other. The psychological and physical adaptation level of the family is set by information about who is "present" and who is "absent" in the system. If it is not clear who is psychologically or physically absent or present in the system, the family system becomes unbalanced (Boss, 2006). Morman and Floyd (1999) reported that fathers who are technically "present" but functionally "absent" concerning parenting style (fathers who are physically present at home but do not get involved in the lives of their sons, or do not psychologically support them) cannot establish close relationships with their children.

In the Turkey sample, the uncertainty regarding the psychological or physical presence or absence of a family member may lead to a challenging situation in the family. This is because the modern Turkish family follows a family model that is built upon a combination of "individualism and group (family) loyalty" and is characterized by the emotional dependency of the members towards each other (Kagitcibasi, 2010). It is out of the question in Turkish culture to think an individual may create an identity independent of his/her family (Nauck & Klaus, 2005). Commitment to family is a significant value in Turkish culture (Kagitcibasi, 2010). In the family model as it is defined today in Turkey, distance based on power is reduced, while distance arose from respect and attention is maintained, and emotional closeness is high. In this model, family values are still more important than individual values, and the emotional bond between parent and child (mother and child in particular) is emphasized (Sunar & Fisek 2005). However, Fisek (1995) underscored that boundary relations in the Turkish family are multi-dimensional; there is a strong togetherness/mutuality between mother and child, which refers to an intense emotional exchange, love, support, loyalty, and closeness, while there is also a separation between father and child due to their relative distance within the structural hierarchy. Recent studies report that the emotional closeness between father and child is less compared to the mother, and that mothers are perceived as more affectionate compared to fathers (Ataca, 2009; Sunar 2002, 2009). Boratav et al. (2017) stated that the emotional closeness between father and child was not equivalent to the intimacy observed between mother and child. Additionally, Hortacsu (1989) reported that less communication was conducted between fathers and children. Given that the emotional closeness and level of communication between father and child are different than for mother and child, and that fathers are perceived as relatively distant, render the observed inconsistency in the sense of family belonging expressed by the participants in this study understandable.

This study is significant for its revelations that the father-child relationship in a family environment wherein mothers occupy a mediator role in father-child communications does not represent a satisfactory relationship for the child, and that this relationship is associated with a sense of deprivation by the children. The study is also important because it shows that the mother-child relationship is defined by the

children using the themes of love and emotional sharing, that mothers are seen as mediators in father-child communications, and this relationship with the parents leads to inconsistencies in perceptions of family belonging. These study findings can be taken as indicators that the reported characteristics of fathers are similar to "traditional" Turkish fatherhood characteristics, and thus the generational hierarchy between the father and child remains.

Another significant contribution of this study is that it reveals an inconsistency between the culture of fatherhood and the conduct of fathering. Recent studies report that the father identity in Turkey has changed from that of the previous generation; fathers are now allegedly more affectionate and caring. The majority of these studies are based on the self-evaluations of fathers. On the other hand, this study includes an evaluation of fathers' behaviors from the viewpoints of their children. Our findings show that fathers are still perceived as distant by the children, despite changes in the fatherhood identity in Turkey.

It is important to the father-child relationship that the themes of love and communication mentioned by the children are truly incorporated in the relationship, and that the fathers' parenting practices reach a more egalitarian level with those of the mothers. Recent observations about a developing dominance of authoritarian and oppressive behaviors in Anatolian cities, which inhibit individualism (Toprak, 2009), make this requirement more important. Meeting these requirements will contribute to the reduction of inconsistencies between the culture and conduct of fathers. The findings of this study can contribute to the evaluation of father-child and family relationships in the collectivist culture.

References

Anne Cocuk Egitim Vakfi [ACEV] (2017). *The involved fatherhood and its determinants in Turkey: Executive summary* Istanbul. Retrieved from http://www.en.acev.org/wp-content/uploads/2018/01/1_involved-fatherhood-and-its-determinants- in-turkey.pdf

Ataca, B. (2009). Turkish family structure and functioning. In S. Bekman & A. Aksu-Koc (Eds.), *Perspectives on human development, family and culture* (pp. 108-125). Cambridge: Cambridge University Press.

Ataca, B., Kagitcibasi, C., & Diri, A. (2005). Turkish family and the value of children:

Trends over time. In G. Trommsdorff & B. Nauck (Eds.), *The value of children*

in cross-cultural perspective (pp. 91-119). Lengerich, Germany: Pabst.

Barnes, H. L., & Olson, D. H. (1985). Parent-adolescent communication and the Circumplex Model. *Special Issue: Family Child Development, 56*(2), 438-447.

Barutcu, A., & Hidir, N. (2016). Turkiye'de babaligin degişen rolleri: (Pro)feminist babalar [The changing role of fatherhood in Turkey: (Pro)feminist fathers]. *Feminist Elestiri 8*(2), 27-45.

Boratav-Bolak, H., Fisek, G. O., & Ziya, H. E. (2017). *Erkekligin Turkiye halleri* [Turkish forms of masculinity]. Istanbul, Turkey: Bilgi University Press.

Boss, P. (2006). *Loss, trauma, and resilience: Therapeutic work with ambiguous loss.* New York: Norton.

Bozok, M. (2018). Ebeveynlik, erkeklik ve çalisma hayati arasinda Turkiye'de Babalik. *Tırkiye'de Babalıgı anlamak Serisi II* [Fatherhood in Turkey amongst parenting, masculinity, and working life: To understand the paternity series in Turkey II] Istanbul, Turkey: ACEV Press.

Brown, L., Callahan, M., Strega, S., Walmsley, C., & Dominelli, L. (2008). Manufacturing ghost fathers: The paradox of father presence and absence in child welfare. *Child and Family Social Work, 14*, 25-34.

Bulanda, R. E. (2004). Paternal involvement with children: The influence of gender ideologies. *Journal of Marriage and Family, 66*(1), 40-45.

Fisek, G. O. (2018) *Iliski icinde ben: Kultur, aile, bireysellesme ve psikanalitik arayıslar* ["I" into the relationship: Culture, family, individuation and psychoanalytic searches]. Istanbul, Turkey: Bilgi Unversity Press.

Fisek, G. O. (1995). Gender hierarchy: Is it useful concept in describing family culture? In J. van Lawick &M. Sanders (Eds.), *Family, gender and beyond* (pp. 63-72). Heemstede, Netherlands: LS Books.

Floyd, K., & Morman, M. T. (2003). Human affection exchange: II. Affectionate communication in father–son relationships. *Journal of Social Psychology, 143*(5), 599–612.

Floyd, K., & Morman, M. T. (2005). Fathers' and sons' reports of fathers' affectionate communication: Implications of a naïve theory of affection. *Journal of Social and Personal Relationships, 22*, 99-109.

Gaertner, B. M., Spinrad, T., Eisenberg, N., & Greving, K. A. (2007). Parental childrearing attitudes as correlates of father involvement during infancy. *Journal of Marriage and Family, 69*(4), 962-976.

Hosley, C. A., & Montemayor, R. (1997). Fathers and adolescents. In M. E. Lamb (Ed.), *The role of the father in child development* (pp. 162-178). Hoboken, NJ, US: John Wiley & Sons Inc.

Hortacsu, N. (1989). Targets of communication during *adolescence. Journal of Adolescence, 12*, 253-263.

Jacobs, J. N., & Kelley, M. L. (2006). Predictors of paternal involvement in childcare in dual-earner families with young children. *Fathering, 4*(1), 23-47.

Kagitcibasi, C. (2010). *Benlik, aile ve insan gelisimi kulturel psikoloji* [Family, self, and human development across cultures: Theory and applications]. Istanbul, Turkey: Koç University Press.

Lamb, M. (2000). The history of research on father involvement: An overview. *Marriage and Family Review, 29,* 23–42.

Lamb, M. E. (2010). How do fathers influence children's development? Let me count the ways. In M. E. Lamb (Ed.). *The role of the father in child development* (5th ed., pp. 1–26). New Jersey: John Willey & Sons.

Lincoln, Y. S. & Guba, E. G. (1985) *Naturalistic Inquiry*. Newbury Park, CA: SAGE Publications Inc.

Matthews, A., Derlega, V. J., & Morrow, J. (2006). What is highly personal information and how is it related to self-disclosure decision making? The perspective of college students. *Communication Research Reports, 23,* 85-92.

Morman, M. T., & Floyd, K. (1999). Affectionate communication between fathers and young adult sons: Individual- and relational-level correlates. *Communication Studies*, *50*, 294-309.

Morman, M. T., & Floyd, K. (2002). A 'changing culture of fatherhood': Effects on affectionate communication, closeness, and satisfaction in men's relationships with their fathers and their sons. *Western Journal of Communication, 66*(4), 395–411.

Morman, M. T., & Floyd, K. (2006). Good fathering: Father and son perceptions of what it means to be a good father. *Fathering, 4*(2), 113-136.

Nauck, B. & Klaus, D. (2005). Families in Turkey. In B. N. Adams and J. Trost (Eds.) *Handbook of World Families*, (pp. 364-88). Thousand Oaks, CA: Sage.

Nielsen, L. (2001). Fathers and daughters: Why a course for college students? *College Student Journal, 35,* 280-312.

Noller, P., & Callan, V.J. (1990). Adolescents' perceptions of the nature of their communication with parents. *Journal of Youth and Adolescence, 19*, 349-362.

Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy, 22,* 144-167.

Paquette, D. & Bigras, M. (2010). The risky situation: A procedure for assessing the fatherchild activation relationship. *Early Child Development and Care, 180*(1-2), 33-50.

Pleck, E., & Pleck, J. H. (1997). Fatherhood ideals in the United States: Historical dimensions. In M. E. Lamb (Ed.), *The role of the father in child development 3rd* ed. (pp. 33–48). New York: Wiley.

Pleck, J. H. (2010). Paternal involvement: Revised conceptualization and theoretical linkages with child outcomes. In M.E. Lamb (Ed.). *The role of the father in child development* (5th ed., pp. 58–93). New York: John Wiley & Sons, Inc.

Pleck, J. H., & Masciadrelli, B.P. (2004). Paternal involvement by U.S. residential fathers: Levels, sources and consequences. In M.E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 222-271). Hoboken, NJ: Wiley.

Puhlman, D. J., & Pasley, K. (2013). Rethinking maternal gatekeeping. *Journal of Family Theory & Review, 5*(3), 176-193.

Punyanunt-Carter, N. M. (2007). Using attachment theory to study satisfaction in father-daughter relationships. *Human Communication, 10*(2), 103 – 120.

Sancar, S. (2011). *Erkeklik: Imkânsiz iktidar: Ailede, piyasada ve sokakta erkekler* [Masculinity: Impossible potency, men in the family, on the marketplace and the street]. Istanbul, Turkey: Metis Press.

Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 51-80). Thousand Oaks, CA, US: Sage Publications, Inc.

Sunar, D. (2002). Change and continuity in the Turkish middle class family. In E. Ozdalga & R. Liljestrom (Eds.), *Autonomy and dependence in family: Turkey and Sweden in critical perspective* (pp. 217-238). Istanbul: Swedish Research Institute.

Sunar, D. (2009). Mothers' and fathers' child-rearing practices and self-esteem in three generations of urban Turkish families. In S. Bekman & A. Aksu-Koc (Eds.), *Perspectives on human development, family and culture* (pp. 126-139). Cambridge: Cambridge University Press.

Sunar, D., & Fisek, G. (2005). Contemporary Turkish families. In U. Gielen & J. Roopnarine (Eds.), *Families in global perspective* (pp. 169-183). Boston, MA: Allyn & Bacon.

Vogel, C. A., Bradley, R. H., Raikes, H. H., Boller, K., & Shears, J. K. (2006). Relation between father connectedness and child outcomes. *Parenting: Science and Practice, 6*(2-3), 189-209.

Baba-Çocuk İletişiminde Annenin Aracılık Rolü ve Aile İlişkileri

Atıf:
Celik, H. (2019). The mediator roles of mothers in father-child communications and family relationships. *Eurasian Journal of Educational Research,* 84, 135-158, DOI: 10.14689/ejer.2019.84.7

Özet

Problem Durumu: Üyeler arasındaki iletişim tarzı ve iletişim kalitesi aile ilişkilerin en önemli belirleyicilerinden biridir. Aile iletişimi üyelerin birbirlerine bağlanmasının ve ailenin sağlıklı bir şekilde işlevlerini getirmesinin ön koşullarından biri olarak işaret edilir. Ancak ailedeki her üyenin birbiriyle aynı şekilde iletişim kurmadığını gerek ebeveynlerin çocuklarıyla, gerekse çocukların da ebeveynleriyle iletişim kurma tarzları açısından belirgin farklılıkların olduğunu gözlemlenmektedir. Gözlemler özellikle ailedeki kadın üyelerinin iletişim becerilerinin erkek üyelerinin iletişim becerilerinden daha güçlü ve dolayısıyla anne-çocuk iletişiminin baba-çocuk iletişimine nazaran daha kaliteli ve doyum sağlayıcı olduğunu işaret eder. Gözlemler aynı zamanda baba-çocuk iletişim örüntülerinin 21. yüzyıldaki yeni babalık kimliğine göre yeniden şekillendiğini ve günümüz babalarının bir önceki kuşak babalara nazaran daha sevecen ve iletişime daha açık olduklarını göstermektedir. Ne var ki Türkiye'de anne-çocuk iletişimin baba-çocuk iletişiminden daha güçlü, babayla iletişiminin görece daha sınırlı olduğu ve çocukla ilgili konularda annelerin birincil, babaların ise daha daha ikincil konumda kaldığı gözlemlenmeye devam etmektedir. Aile ilişkilerinde ciddi değişimler gözlemlenmesine rağmen günümüz Türkiye'sinde orta sınıfa mensup birçok ailede baba-çocuk iletişiminde annenin aracılık görevi görmesi yani evladın babasına göndermek istediği mesajı annesi aracılığıyla babasına iletmesi ise sıklıkla rastlanan bir olgudur.

Amaç: Bu çalışmada baba-çocuk iletişiminde annelerin aracı olduğu aile ortamında büyüyen gençlerin (1)baba-çocuk ilişkisi nasıl algıladıklarını (2) baba-çocuk iletişimde annelerin hangi rolleri üstlendiklerini (3) baba-çocuk iletişiminde annelerin aracı olduğu bir aile ortamında büyümenin aile yaşamlarına nasıl yansıdığının özününün ortaya çıkarılması amaçlanmıştır.

Yöntem: Bu araştırmada katılımcıların babalarıyla olan iletişimlerinin ve bu iletişimdeki anne rolünün baba-çocuk ilişkisi ve aile yaşamı üzerindeki yansımalarına ilişkin ortak deneyimlerinin ve inşa edilen ortak anlamların özünü yakalamak amacıyla yorumlayıcı fenomonoloji deseninden (Interpretive Phenomenological Analyses- IPA) yararlanılmıştır. Homojen örnekleme yöntemi kullanıldığı çalışmanın örneklemini Marmara Üniversitesinde Psikolojik Danışmanlık ve Özel Eğitim Öğretmenliği bölümünde öğrenim gören 19-24 yaş aralığındaki (x = 21.33) 9 kadın, 6 erkek lisans öğrencisi oluşturmuştur. Veriler, derinlemesine görüşme yöntemiyle toplanmış ve görüşmelerde yarı-yapılandırılmış görüşme soruları kullanılmıştır.

Verilerin analizinde MaxQDA programı kullanılmış olup Smith ve Osburn'un (2003) dört aşamalı verilerin analiz adımları takip edilmiştir.

Bulgular: Bu çalışmada üç ana temaya ulaşılmıştır: (*1) tatmin edici olmayan baba-çocuk ilişkisi*, (*2) anneler: baba-çocuk iletişiminin ilişkisel dayanak noktası*, (*3) aile etkileşimlerinde sorunlu duygusal tepkiler*. Analiz sonuçları, tatmin edici olmayan baba-çocuk ilişkisinin babaların üç temel ebeveynlik özelliğiyle karakterize olduğunu göstermiştir: *(i) mesafe, (ii) sınırlı ebeveynlik rolü* ve *(iii) otoriterlik.* Katılımcı öyküleri baba-çocuk iletişiminin ilişkisel dayanak noktası olarak algılanan anneliğin ise sevgi ve duygusal paylaşım temalarıyla tanımlandığını ve baba-çocuk iletişimine annelerin üç açıdan hizmet ettiğini ortaya koymuştur: *(i) köprü görevi, (ii) iletişimin sürdürülebilirliğini sağlama, (iii) babayı iletişime açık hale getirme.* Son olarak analizler aile etkileşimlerinde algılanan sorunlu duygusal tepkilerin babaların duygusal açıdan aile sitemine tam olarak dâhil olamamalarıyla ilişkili olduğunu göstermiştir.

Sonuç ve Öneriler: Bu çalışma baba-çocuk iletişiminde annelerin aracı rol üstlendiği bir aile ortamındaki baba-çocuk ilişkisinin evladın gözünde doyum sağlayıcı bir ilişki olarak algılanmadığını ve deneyimlenen bu ilişkinin onlarda yoksunluk hissi yaratan bir tür ilişkisel yara olarak algılandığını ortaya çıkarması bakımından önemlidir. Katılımcı öyküleri babaların mesafeli, otoriter ve ev-çocuk bakımında anneye kıyasla daha az sorumluluk alan ebeveyn olarak algılandıklarını ve babaların bu özelliklerinin tatmin edici olmayan baba-çocuk ilişkisinin oluşumuna hizmet ettiğini işaret etmiştir. Çalışma anne-çocuk ilişkisinin sevgi ve duygusal paylaşım temaları üzerinden tanımlandığını açığa çıkarması ve annelerin baba-çocuk iletişimin temel ilişkisel dayanağı olarak algılandığını göstermesi bakımından ayrıca önemlidir. Bu çalışma annelerin baba-çocuk iletişiminde köprü görevi görme, baba-çocuk iletişimin sürdürülebilirliğini sağlama, babayı iletişime açık hale getirme gibi roller üstlendiklerini göstermiştir. Bu çalışma baba-çocuk iletişiminde annenin aracılık rolü üstlendiği aile ortamında babaların duygusal açıdan aile sistemin tam olarak bir parçası olarak algılanmadığını göstermesi ve ebeveynlerle olan ilişkilerin aile aidiyet duygusunda tutarsızlıklara yol açtığını göstermesi bakımından ayrıca önemlidir. Çalışma bulguları babaların sahip olduğu babalık özelliklerinin geleneksel babalık özellikleriyle ilişkili olabileceğini dolayısıyla baba-çocuk arasında kuşak hiyerarşisinin devam ettiğini göstergesi olarak değerlendirilebilir. Çalışma babalık kültürü ve babalık icrası arasında bir tutarsızlığa işaret etmesi bakımından önemlidir. Son dönem araştırmaları Türkiye'de babalık kimliğinin bir önceki kuşaktaki babalık kimliğine göre değiştiğini ve babaların daha sevecen ve daha ilgili olduklarını bildirmektedir. Ne varki ilgili çalışmaların çoğu babaların kendi babalık davranışlarını değerlendirmelerine dayanır. Bu çalışma ise evladın gözünden babalık davranışlarını değerlendirmesi içermektedir. Çalışma bulguları babalık kimliğinin değişime rağmen evladın gözünden hala daha uzak ve mesafeli ebeveyn olarak algılanmaya devam ettiğini işaret etmektedir.

Bu çalışma baba-çocuk ikili ilişkisinin, baba-çocuk özelinde gerçekleşmesine, ilişkideki sevgi ve iletişim temalarının çocuğun ihtiyaçlarına ve beklentilerine göre yeniden tanımlanmasına, ebeveynlik pratiklerinin daha eşitlikçi bir seviye taşınmasına duyulan ihtiyacı ortaya çıkarması bakımından önemlidir. Günümüzde Anadolu

kentlerinde bireyselliğe izin vermeyen yetkeci ve baskıcı bir kültürün egemen olmaya başladığına dair gözlemler bu ihtiyacı daha da önemli kılar. Bu ihtiyaçların karşılanması babalık kültürü ve babalık icrası arasındaki tutarsızlıklarında azalmasına katkı sağlayacaktır. Bu çalışmanın bulguları kollektivist kültürdeki baba-çocuk ve aile ilişkilerini değerlendirme katkı sağlayabilecek niteliktedir.

Bu yorumlayıcı fenomenoloji araştırması baba-çocuk iletişiminde annelerin aracı olduğu aile ortamındaki baba-çocuk ilişki dinamiğini ve bunun aile yaşamına olan yansımalarını anlaşılmasını sağlamak için tasarlanmıştır. Örneklemin büyüklüğü ve homojenliği yorumlayıcı fenomenoloji araştırmalarının belirli bir gurup insanın belli bir olay karşısında verdiği tepkilerin ayrıntılı bir şekilde açıklanmasını yapabilme vaadini karşılamaktadır. Elde edilen bulgular genelleme amacı taşımamaktadır. Bu çalışma orta sınıfa mensup ailelerde büyüyen gençlerin deneyimlerini anlamada önemli bir adımdır. Ancak araştırma yalnızca evlatların deneyimlerini yansıtmaktadır. Hem babaların, hem annelerin hem de evlatların deneyimlerinin karşılaştırmalı olarak değerlendirmesinin yapılması alan yorumların daha zenginleşmesini ve aile ilişkilerine yönelik daha bütünlükçü bir resmin elde edilmesine katkı sağlayacaktır.

Anahtar Kelimeler: Baba-çocuk ilişkisi, anne-çocuk ilişkisi, iletişim, aile etkileşimi, Türk aileleri.

Eurasian Journal of Educational Research 84 (2019) 159-176

Eurasian Journal of Educational Research
www.ejer.com.tr

Narcissism, Life Satisfaction, and Harmony: The Mediating Role of Self-Esteem and Self-Compassion

Ibrahim DEMIRCI[1], Halil EKSI[2], Fusun EKSI[3]

ARTICLE INFO

Article History:

Received: 28 Nov. 2018

Received in revised form: 12 Jun. 2019

Accepted: 18 Jul. 2019

DOI: 10.14689/ejer.2019.84.8

Keywords

Narcissistic admiration and rivalry, self-esteem, self-compassion, life satisfaction, harmony in life, positive psychology

ABSTRACT

Purpose: The present study aims to investigate the relationships between the two distinct faces of narcissism (admiration and rivalry), the two faces of self-perception (self-esteem and self-compassion) and the two faces of one's evaluation of life (life satisfaction and harmony in life).

Research Methods: The sample of this study consists of university students (N = 381). In this study, Narcissistic Admiration and Rivalry Questionnaire, Self-compassion Scale, Self-esteem Scale, Satisfaction with Life Scale, Life Harmony in Life Scale was employed as data collection tools. The relationship between variables was investigated using Structural Equation Modeling.

Results: The structural equation modeling used in this study revealed that self-esteem mediated the relationship between narcissistic admiration, harmony in life, and life satisfaction whereas self-compassion mediated the link between narcissistic rivalry, harmony in life, and life satisfaction.

Implications for Research and Practice: Based on the results of this research, it is suggested that additional empirical and longitudinal studies should be conducted. as In this context, individual and group counseling practices aimed at developing self-compassion and self-esteem, increasing life harmony and life satisfaction can be organized.

Conclusion: In light of the results obtained in this study, we argue that high levels of narcissistic admiration accompanied by self-esteem may lead to increased harmony in life and life satisfaction. As narcissistic rivalry increases, self-compassion, harmony in life, and life satisfaction decrease. Lower self-compassion may explain the tendency of people higher in narcissistic rivalry to report less harmony in their life and lower life satisfaction.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Sinop University, Turkey, e-mail: ibrahimdemircipdr@gmail.com ORCID: https://orcid.org/0000-0002-4143-3916

[2] Marmara University, Turkey, e-mail: h.eksi70@gmail.com ORCID: https://orcid.org/0000-0001-7520-4559

[3] İstanbul Medeniyet University, Turkey, e-mail: fusun.eksi@medeniyet.edu.tr ORCID: https://orcid.org/0000-0001-5741-2725

Introduction

One of the most important focal points of the efforts to understand human beings is self-concept. Self-concept can be described as the way that one perceives himself and one's beliefs about himself. Self-concept can simply be framed as mental schemes. Self-evaluation is expressed as the answer to the question: "What do I feel about who I am?" (Campbell & Lavallee, 2013). Answers to this question exhibit an enormous range of feelings, including glorious, confident, and compassionate. The grandiose representation of the self is called narcissism. Because of the individual and social consequences of narcissism, narcissism can often be perceived as an insult. However, it is emphasized that narcissism has short-term positive results (Back et al., 2013; Miller & Campbell, 2011). There is no single way of perceiving the self, and narcissism has no single aspect. It may be useful to investigate how the positive consequences of narcissism occur. At this point, self-esteem may be playing a key role. On the other hand, narcissism has an evil face (Lange, Crusius & Hagemeyer, 2015). How narcissism negatively affects psychological well-being is another subject of the study. Lack of self-compassion may also play an important role in this regard. This study aims to investigate the relationship between (i) narcissism, self-compassion, and self-esteem, all of which manifest different ways of self-perception, and (ii) harmony in life and life satisfaction, which are different manifestations of one's perception of life.

Different Ways of Self-perceptions: Self-esteem, Narcissism, and Self-compassion

While one's knowledge about himself forms an individual's self-concept, how one feels about himself constitutes an expression of self-esteem. In this context, self-esteem emerges as a result of one's self-evaluation (Campbell & Lavallee, 2013). One's experiences and his way of evaluating these experiences are what shapes this perception (Myers & Myers, 1992; Shavelson, Hubner & Stanton, 1976). In the literature, emotional evaluations about one's self are generally defined as self-esteem (Coopersmith, 1967; Rosenberg, 1965). High self-esteem is an individual's positive evaluation of himself, whereas this evaluation is either vague or negative in low self-esteem. People follow various strategies to achieve and maintain the desired level of high self-esteem (Zeigler-Hill, 2013).

People with high self-esteem and high narcissism share positive perceptions of their self, which include loving and admiring themselves. Narcissists can be said to have an extremely positive or inflated self-concept (Campbell, Rudich, & Sedikides, 2002). Associated with high self-esteem, narcissism is generally expressed as an excessive perception of the self and hypersensitivity to feedback received from others (Barry, Loflin & Doucette, 2015). Narcissism is not always pathological, and the features of normal and non-pathological narcissism may be connected to self-esteem (Miller & Campbell, 2011). In studies investigating the link between narcissism and self-esteem, two studies that are found to be positively related (see Bosson et al., 2008; Bosson & Weaver, 2011).

Research shows that it can be more useful to evaluate narcissism as a two-component model. One of the common two-component conceptualization is the

Grandiose and Vulnerable Narcissism model (Back, 2018; Back et al., 2013; Bosson & Weaver, 2011). Grandiose narcissism includes greatness, arrogance, aggression, dominance, exhibitionism, extraversion, and high self-confidence, whereas vulnerable narcissism reflects the characteristics of introversion, hostility, and low self-esteem (Miller & Campbell, 2011; Wink, 1991). The Narcissistic Admiration and Rivalry Model deployed in this study describes two different positively-related dimensions of grandiose narcissism. Narcissists use two different social strategies to protect their main objective, that is, the glorified self. One strategy is to make themselves known to ensure social admiration, whereas the other is to defend themselves to prevent social failure. The self-regulating processes of grandiose narcissism may be explained by admiration (narcissism's assertive aspect), which directs through one's desire for self-enhancement, and by rivalry (narcissism's antagonistic aspect), which is based in narcissistic self-protection. Although these two strategies follow different emotional-motivational, cognitive, and behavioral paths, both are positively related to each other, as they contribute to maintaining the primary goal, namely the glorified self. In this context, narcissistic admiration is the bright face of narcissism, whereas narcissistic rivalry represents its dark face (Back, 2018; Back et al., 2013; Leckelt et al., 2018).

There is no single way of perceiving the self positively. In contrast to self-esteem and narcissism, self-compassion offers an alternative way of perceiving the self and derives its origin from Buddhist psychology. Self-compassion is defined as self-judgment against self-consciousness following a person's encounter with pain, as the feeling of loneliness against a common shared feeling that all people live after experiencing a pain, by the interaction of extreme dilemmas of identity with each other, against the conscious awareness of what is happening (Neff, Whittaker & Karl, 2017). Self-compassion, similar to self-esteem, is an approach that involves self-acceptance rather than self-evaluation (Neff 2003, 2016). Studies show that not only is self-compassion more stable than self-esteem it is also more strongly related to psychological health. In this context, although self-compassion and self-esteem are interrelated, they are, in fact, different concepts entirely (Neff, 2011). In this regard, narcissistic rivalry employing self-defence as a self-regulatory mechanism of narcissism (Alicke & Sedikides, 2011; Back, 2018; Back et al., 2013) may exhibit a negative relationship with self-compassion. Moreover, narcissistic admiration employing self-enhancement as a self-regulatory mechanism of narcissism (Alicke & Sedikides, 2011; Back, 2018; Back et al., 2013) may exhibit a positive relationship with self-esteem.

Different Ways of Well-being: Life Satisfaction and Harmony in Life

Studies in psychology generally describe happiness as subjective well-being. According to the cognitive component of this approach, life satisfaction is inclusive of a person's positive evaluation of his life (Diener, 1984; Diener, Suh, Lucas & Smith, 1999). On the other hand, since intercultural studies indicate that the meaning of happiness may differ from culture to culture, the cognitive component of happiness may not always equate to life satisfaction. In Western cultures, a high level of

happiness, self-esteem, and autonomy are sought, whereas in Eastern cultures, dialectical happiness where good and evil coexist, social harmony, and being connected with others are regarded as important (Uchida & Ogihara, 2012).

Although several studies show that people are in a relationship with others and nature, evaluating the cognitive component of happiness solely on the individual level is, from time to time, deemed as incomplete (Kjell, 2011). On that note, harmony in life, which can be expressed as an alternative to life satisfaction, includes the sense of internally felt self-acceptance, inner peace, and balance. Harmony in life includes one's perception of harmony and balance in his life and a sense of being in harmony with the greater world. Harmony in life is regarded as an indicator of sustainable well-being (Kjell, Daukantaitė, Hefferon & Sikström, 2016).

The Present Study

Regarding the subject matter of the present student, various studies found that while narcissistic admiration was positively related to self-esteem, narcissistic rivalry showed a negative relationship with self-esteem (Back, 2018; Back et al., 2013; Leckelt et al., 2018). However, there are studies in which narcissistic rivalry does not correlate with self-esteem also exist (Geukes et al., 2017). In one study, the narcissistic rivalry was found to be unassociated with optimal self-esteem, whereas narcissistic admiration was a positive predictor of optimal self-esteem (Rogoza, Żemojtel-Piotrowska, Kwiatkowska, & Kwiatkowska, 2018). Based on these studies, narcissistic admiration may be positively related to self-esteem, and that narcissistic rivalry may be entirely unrelated to self-esteem.

Studies investigating the relationship between self-compassion and psychological health have consistently emphasized that self-compassion increases such characteristics as life satisfaction and happiness while reducing depression and anxiety (Neff, 2016; Neff et al., 2007; Deniz & Sümer, 2010; Deniz, Arslan, Ozyesil & Izmirli, 2012; Zessin, Dickhauser & Garbade, 2015). While narcissism is generally positively related to self-esteem, it is often found to be unrelated to self-compassion (Neff, 2011; Neff & Vonk, 2009). While self-compassion is unrelated to grandiose narcissism, it can show negative relationships with vulnerable narcissism (Barry et al., 2015) and pathological narcissism (Barnett & Flores, 2016). Self-compassion is positively related to self-esteem and life satisfaction (Deniz, Kesici & Sümer, 2008). Based on these studies, narcissistic rivalry may be negatively associated with self-compassion and that narcissistic-admiration may be unrelated to self-compassion.

Narcissistic admiration was negatively correlated with emotional instability and positively correlated with extroversion, openness to experience, and self-esteem. On the other hand, narcissistic rivalry was negatively associated with extraversion, mildness, responsibility, self-esteem, empathy, forgiveness, and gratitude and, on the other, positively correlated with emotional instability, revenge, interpersonal insecurity, impulsivity, and anger (Back et al., 2013; Leckelt et al., 2018). These studies reveal that admiration is an adaptive and that rivalry a maladaptive aspect of narcissism. In the previous studies, overt narcissism, which bears similarity to narcissistic admiration, was found to be positively associated with life satisfaction.

Covert narcissism, similar to the narcissistic rivalry, is negatively related to life satisfaction. Overt and covert narcissism have been shown to predict life satisfaction through self-esteem (Rose, 2002). Similarly, Sedikides, Rudich, Gregg, Kumashiro and Rusbult (2004) have revealed that narcissism is positively related to well-being and negatively related to depression and anxiety. In addition, the relation between narcissism and well-being is fully mediated by self-esteem. Also, Grove, Smith, Girard and Wright (2018) have found that life satisfaction, psychological well-being, and positive affect are positively correlated with narcissistic admiration and negatively correlated with narcissistic rivalry. In this regard, two hypotheses have been established: (1) Self-esteem plays a mediating role in the relationship between narcissistic admiration and harmony in life and life satisfaction. (2) Self-compassion plays a mediating role in the relationship between narcissistic rivalry and harmony in life and life satisfaction.

Understanding the self is one of the most fundamental topics of psychology research. Explaining how different ways of the self is effect well-being can provide useful information to researchers and practitioners. Examining these relationships can provide us with vital information to understand these personality dynamics.

Method

Research Design

In this study, the relational descriptive model was used to investigate the relationship between narcissism, self-compassion, and self-esteem, life satisfaction and harmony in life. The relationships were examined using structural equation modeling.

Research Sample

The sample of this research consisted of 381 voluntary university students in Istanbul, Turkey. Of the total, 310 (77.9%) were female and 71 (17.8%) male students. The study group was reached by convenience sampling. Participants' ages ranged from 21 to 24, with their average age being 23.1 (SD = 1.01). The participants were attending from the Faculty of Education. Of the total, 28 (7.3%) of them were juniors, 196 (51.4%) of them were seniors and 145 (38.1%) of them were graduate students. Of the total, 148 (39.3%) of them were first child, 117 (31%) of them were middle child, and 112 (29.7%) of them were the last child.

Research Instruments and Procedures

Narcissistic Admiration and Rivalry Questionnaire: The questionnaire was developed by Back et al. (2013). The questionnaire measures grandiose narcissism through the dimensions of admiration and rivalry. The scale consists of 18 items (e.g., I deserve to be seen as a great personality). Having a two-dimensional structure, the scale is scored using a 6-point Likert type (1= not agree at all to 6 = agree completely). Possible scores of the scale ranged from 9 to 54 for admiration and

rivalry subscales. The questionnaire adapted to Turkish by Demirci and Eksi (2017). The factor structure of the questionnaire was found to be at an acceptable fit as a result of the confirmatory factor analysis. The internal consistency coefficient of the scale was found to be .83 for admiration and .82 for rivalry.

Self-compassion Scale: The scale developed by Neff (2003) consists of six subscales and 26 items. Raes, Pommier, Neff, and Van Gucht (2011) developed a Short Self-Compassion Scale consisting of 12 items (e.g., When I fail at something important to me, I become consumed by feelings of inadequacy). The scale is scored using a 5-point Likert type (1= almost never to 5 = almost always) that could be used as a total score. The possible score of the scale ranged from 12 to 60. The scale was adapted to Turkish by Akca (2014). The test-retest correlation coefficient of the scale was found .75.

Self-esteem Scale: The scale was developed by Rosenberg (1965) and adapted to Turkish by Cuhadaroglu (1986). Having a one-dimensional structure, the scale consisted of 10 items (e.g., I take a positive attitude toward myself). The scale is scored using a 4-point Likert type (1 = very true to 4 = so wrong). The possible score of the scale ranged from 4 to 40. The scale was adapted to Turkish by Cuhadaroglu (1986). The test-retest correlation coefficient of the scale was found .75.

Satisfaction with Life Scale: The scale was developed by Diener, Emmons, Larsen and Griffin (1985). The scale consists of five items (e.g., In most ways, my life is close to my ideal). The scale has a one-dimensional structure and consists of five 7-point Likert type (1 = strongly disagree to 7 = strongly agree). The possible score of the scale ranged from 5 to 35. The scale was adapted to Turkish by Durak, Senol-Durak, and Gencoz (2010). In the confirmatory factor analysis of the Turkish versions of the scale, the one-dimensional structure was found to be an acceptable fit. The item-total test correlations for the items of the measure were found to vary between 55 and 63. Internal consistency of the scale was found .81.

Harmony in Life Scale: The scale composed of five 7-point Likert type items and one dimension, the Harmony in Life Scale was developed by Kjell et al. (2016). The scale has a one-dimensional structure and consists of five items (e.g., Most aspects of my life are in balance). The scale is scored using a 7-point Likert type (1 = strongly disagree to 7 = strongly agree). The possible score of the scale ranged from 5 to 35. The scale adapted to Turkish by Satici and Tekin (2017). The confirmatory factor analysis revealed that the one-dimensional structure of the scale gave an acceptable fit. Internal consistency of the scale was found .78, and test-retest reliability was found .89.

Data Analysis

The data obtained in the study were collected in a classroom environment at the university. Before the practice began, the purpose of this research and the importance of both privacy and sincere answers were explained to the participants. The application of the measuring tools took approximately 15-20 minutes. In our application of structural equation modeling, we established a measurement model in which all variables are included before developing the model describing the relationship between variables. When the measurement model showed a good fit, we tested the structural equation model. We then used item parceling to decrease the number of observed variables and to control for measurement errors (Little,

Cunningham, Shahar & Widaman, 2002; Nasser-Abu Alhija & Wisenbaker, 2006). Five-item parcels for self-esteem and six-item parcels for self-compassion were formed as a result. According to Kline's (2015) recommendation, χ^2/df ratio, SRMR, RMSEA, CFI, and TLI were calculated in order to present the adequacy of the structural models. To support the significance of the indirect effects of the variables included in SEM, a 95% confidence interval was selected, and the Bootstrap analysis was applied through 5000 re-sampling (Hayes, 2013).

Results

Correlation Matrix and Descriptive Findings

The descriptive statistics and correlations between scales, sub-scales, and parcels are shown in Table 1. These relationships formed the basis for the establishment of structural equation modeling.

Table 1

Descriptive Statistics and Correlation Analysis of Variables

		1	2	3	4	5	6
1	Admiration	1					
2	Rivalry	.32**	1				
3	Self-compassion	.06	-.24**	1			
4	Self-esteem	.36**	-.08	.40**	1		
5	Harmony in Life	.28**	-.17**	.35**	.45**	1	
6	Life Satisfaction	.16**	-.18**	.30**	.42**	.53**	1
	Mean	3.51	2.11	3.04	30.11	23.85	20.69
	SD	0.90	0.80	0.60	5.64	6.49	6.58
	a	.82	.80	.77	.85	.88	.85

Note. ** p < 0.01; * p < 0.05.

Measurement Models

Based on the theoretical background and the relations between variables, we tested the following two distinct structural models: (Model 1) The mediating role of self-esteem in the relationship between narcissistic admiration and harmony in life and life satisfaction. (Model 2) The mediating role of self-compassion in the relationship between narcissistic rivalry and harmony in life and life satisfaction. Both Measurement Model 1 and Model 2 consist of four latent variables and 15 observed variables. All the variables in the measurement model were found to be in a significant relationship with each other.

The factor loadings of the observed variables, which are explained by latent variables, range between .65 and .79 for Model 1. The model 1 ($\chi^2_{(84, N = 381)} = 190.570$, χ^2 / sd = 2.27, $p < .001$; CFI = .96; TLI = .95; SRMR =.048; RMSEA =.056 CI [.046 -

.067]) showed acceptable fit. These values indicate that the structural equation modeling can be established.

The factor loadings of the observed variables, which are explained by latent variables, range between .52 and .79 for Model 2. The model 2 (χ^2 $_{(84, N = 381)}$ = 217.27, χ^2 / sd = 2.58, p < 001; CFI = .94; TLI = .93; SRMR =.051; RMSEA =.063 CI [.053 - .074]) showed acceptable fit. These values indicate that the structural equation modeling can be established.

The Mediating Role of Self-Esteem

In Model 1, narcissistic admiration predicts harmony in life and life satisfaction through self-esteem. The mediation model shows acceptable fit: χ^2 $_{(87, N = 381)}$ = 229.878, χ^2 / sd = 2.64, p < .001; CFI = .95; TLI = .94; SRMR = .068; RMSEA = .064 CI (.054 - .074). Standardized path coefficients between the variables can be seen in Figure 1 for Model 1.

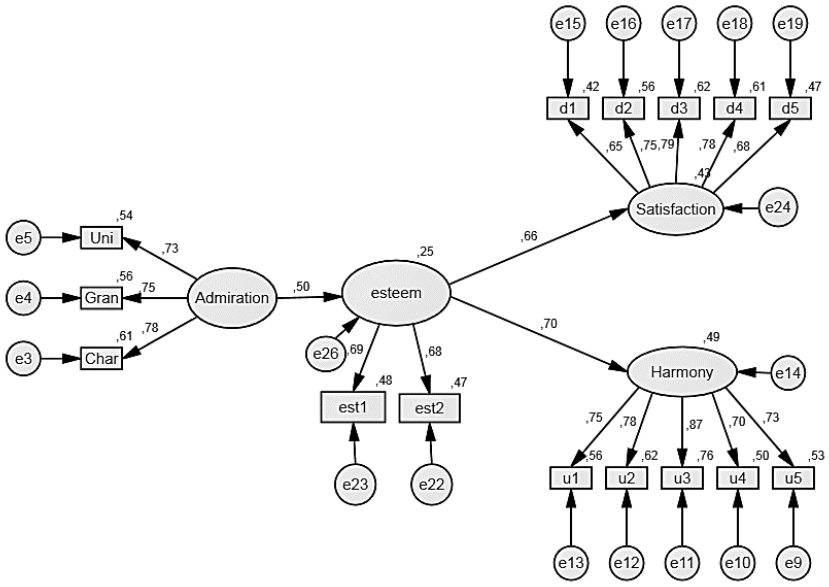


Figure 1. *Standardized Paths coefficients for Model I. Note. N=381; Char Charmingness; Gran Grandiosity; Uni Striving for Uniqueness; est1 and est2 Parcels of Self-esteem*

According to the SEM result for Model 1, narcissistic admiration predicts self-esteem (β = .50, p < .001, 95% CI = .38, .61), self-esteem predicts harmony in life (β = .70, p < .001, 95% CI = .58, .81) and life satisfaction (β =.66, p < .001, 95% CI = .55, .75). In addition, narcissistic admiration was found to indirectly predict harmony in life (β =.35, p < .001, 95% CI = .26, .45) and life satisfaction (β =.33, p < .001, 95% CI = .25, .42) through self-esteem. The findings concerning the standardized path coefficients for the Model 1 are shown in Table 2. The results of bootstrapping analyses conducted via 5,000 re-sampling to crosscheck significance of the indirect effects of the Model 1 revealed that the zero is not included in the lower and upper bounds of the 95% confidence intervals.

Table 2

Standardized Effects and 95% CI

					95% CI	
Direct Link				Estimated	Lower	Upper
Admiration	→	Self-esteem		.50	.38	.61
Self-esteem	→	Harmony in Life		.70	.58	.81
Self-esteem	→	Life-Satisfaction		.66	.55	.75
Indirect Link						
Admiration	→	Self-esteem →	Harmony in Life	.35	.26	.45
Admiration	→	Self-esteem →	Life-Satisfaction	.33	.25	.42

The Mediating Role of Self-Compassion

In Model 2, narcissistic rivalry predicts harmony in life and life satisfaction through self-compassion. The mediation model shows acceptable fit: χ^2 (87, N = 381) = 242.147, χ^2 / sd = 2.78, p < .001; CFI = .93; TLI = .92; SRMR = .056; RMSEA = .067 CI (.057 - .077). Standardized path coefficients between the variables can be seen in Figure 2 for Model 2.

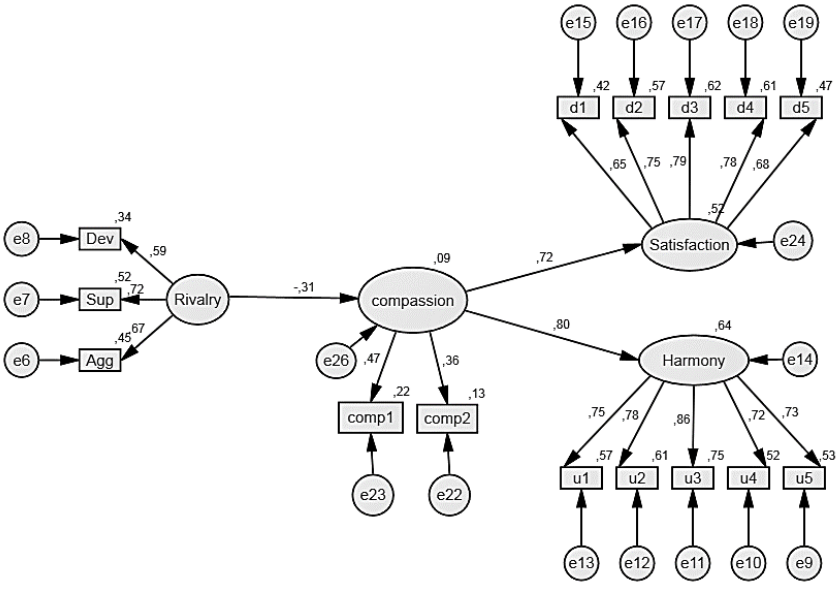


Figure 2. Standardized Paths Coefficients for Model II. Note. N=381; *Uni* Striving for Uniqueness; *Agg* Aggressiveness; *Sup* Striving for Supremacy; *Dev* Devaluation; *comp1 and comp2* Parcels of Self-compassion.

Model 2 illustrates that narcissistic rivalry negatively predicted self-compassion (β = -.31, p < .001, 95% CI = -.45, -.15) and that self-compassion predicts harmony in life (β = .80, p < .001, 95% CI = .69, .91) and life satisfaction (β =.72, p < .001, 95% CI = .61, .82). Furthermore, narcissistic rivalry indirectly predict harmony in life (β =-.24, p < .001, 95% CI = -.35, -.13) and life satisfaction (β =-.22, p < .001, 95% CI = -.33, -10) through self-compassion. The findings concerning the standardized path coefficients for Model 2 are shown in Table 3. The results of bootstrapping analyses conducted via 5,000 re-sampling to crosscheck significance of the indirect effects of the Model 1 revealed that the zero is not included in the lower and upper bounds of the 95% confidence intervals.

Table 3

Standardized Effects and 95% CI

				95% CI	
Direct Link			Estimated	Lower	Upper
Rivalry	→ Self-compassion		-.31	-.45	-.15
Self-compassion	→ Harmony in Life		.80	.69	.91
Self-compassion	→ Life-Satisfaction		.72	.61	.82
Indirect Link					
Rivalry	→ Self-compassion →	Harmony in Life	-.24	-.35,	-.13
Rivalry	→ Self-compassion →	Life-Satisfaction	-.22	-.33,	-.10

Discussion, Conclusion and Recommendations

In this study, positive relationships were, not surprisingly, found in the relationships between narcissistic admiration, self-esteem, harmony in life, and life satisfaction. Additionally, the relationships between narcissistic rivalry and self-compassion, harmony in life, and life satisfaction were found to have negative correlations. Significant positive correlations were found between self-compassion and harmony in life and life satisfaction. In the structural equation modeling, the two hypotheses [i.e., (1) Self-esteem plays a mediating role in the relationship between admiration and harmony and satisfaction. (2) Self-compassion played a mediating role in the relationship between rivalry and harmony and satisfaction hypotheses] were confirmed. The increase in narcissistic admiration increased self-esteem. As self-esteem increased, harmony in life and life satisfaction also showed an increase. Higher self-esteem statistically explains the tendency of people higher in narcissistic admiration to report more harmony in life and life satisfaction. Moreover, as narcissistic rivalry increases, harmony in life and life satisfaction decreased, while self-compassion reduced the adverse effects of narcissistic rivalry in this relationship. Lower self-compassion statistically explains the tendency of people higher in narcissistic rivalry to report less harmony in their life and lower life satisfaction.

Previous studies have also investigated the role of self-esteem in the relationship between narcissism and well-being. In this study, narcissism was measured using the

narcissistic admiration model. In addition to life satisfaction, harmony in life is also included while measuring well-being. In previous studies, self-esteem plays a fully mediating role between non-pathological narcissism and well-being (Rose, 2002; Sedikides et al., 2004; Zuckerman & O'Loughlin, 2009). Moreover, life satisfaction, psychological well-being, and positive affect positively correlated with narcissistic admiration and negatively correlated with narcissistic rivalry (Grove et al., 2018). Also, Demirci and Ekşi (2017) found that admiration positively predicted happiness and that rivalry negatively predicted happiness. Narcissistic admiration provides personal and social adjustment/advantage while narcissistic rivalry leads to personal and social maladjustment/conflict (Back, 2018; Back et al., 2013; Leckelt et al., 2018). Basing our conclusions on the self-concordance model (Sheldon & Elliot 1999), we assert that narcissism may increase life satisfaction and happiness as it allows people not only to choose goals consistent with their own self but also to perceive themselves as successful in achieving their goals (Rose & Campbell, 2004). It can be said that a person's positive perception of his self leads him to obtain satisfaction from life and increases his functionality in different contexts (Diener & Diener, 2009).

Self-enhancement (i.e., an increase in positive self-esteem) and self-protection (i.e., a protective measure against negative self-perception) are considered basic assumptions in personality research (Alicke & Sedikides, 2011; Back et al., 2013). Narcissistic admiration contributes to the success of social relationships using striving for uniqueness, grandiose fantasies and charmingness to achieve self-enhancement. These processes provide positive social results, such as social status, success, praise, being elected as a leader, obtaining social resources, attracting charm, and social interest (Back, 2018; Back et al., 2013). This contributes to an increase in self-esteem and, therefore, to life satisfaction and harmony in life.

The mediating role of self-compassion in the link between rivalry and life satisfaction/harmony in life has yet to be investigated in the literature. The narcissistic rivalry may culminate in social conflict as a result of an individual's use of self-protection, his struggle for superiority, his devaluation of others, and acts of aggression. These processes lead to such negative social results as rejection, violation of relations, unpopularity, criticism, and untrustworthiness (Back, 2018; Back et al., 2013), causing the person not to be satisfied with his life and to feel a lack of harmony with those around him. Self-compassion comes into play at this point and reduces the negative effects of narcissistic rivalry on both harmony in life and life satisfaction. In other words, people feeding narcissistic rivalries are less satisfied with life and experience less harmony in life because of their lower self-compassion. Concerning self-compassion and harmony in life, in accordance with social mentality theory (Gilbert, 2005), whereas narcissistic rivalry activates the Threat and Protection system, self-compassion activates the Satisfaction, Calmness and Trust system by neutralizing the Threat and Protection system. Self-compassion thus contributes to an individual's ability to lead a harmonious life.

Our research reveals that narcissistic admiration is positively related to self-esteem and not related to self-compassion. Contrary to this, the literature does support the notion that narcissistic rivalry is negatively related to self-compassion and not related to self-esteem. While narcissistic admiration is a predictor of high and stable self-esteem, the narcissistic rivalry is a predictor of vulnerable and

variable self-esteem (Geukes et al., 2017). It is emphasized that self-compassion is a protective factor against the negative effects of low self-esteem (Marshall et al., 2015). While self-compassion assumes a protective role against anxiety in a situation when the self of an individual is threatened, self-esteem does not assume this role (Neff et al., 2017). In addition, self-compassion is more strongly related to psychological health than to self-esteem (Neff 2003; Neff, 2011; Neff & Vonk, 2009). The psychopathologic characteristics of rivalry may explain the mediating role of self-compassion between rivalry and well-being.

This research has several limitations. Since the study group is composed of university students, these relationships can be tested in different samples in subsequent studies to generalize the results. Another limitation is that the data were collected solely through self-report measurement tools. Regarding the current study's variables, further studies on and observations of peer and family assessments may contribute to reaching more objective findings. Finally, conducting empirical and longitudinal studies on the variables used in this study, instead of cross-sectional patterns, may provide causal evidence.

Based on the results of this research, it is suggested that future researchers conduct studies seeking to increase self-compassion to reduce the adverse effects of narcissistic rivalry on life satisfaction and harmony in life. To balance the positive impacts of narcissistic admiration on harmony in life and life satisfaction, it is recommended that self-esteem development studies should be conducted. In this context, individual and group counseling practices aimed to develop self-compassion and self-esteem, reducing adverse effects of narcissism, and increasing life harmony and life satisfaction can be organized using the findings of the present study as a basis. We anticipate that the results of this and other such research will contribute to the literature of personality psychology and positive psychology.

References

Akca, E. (2014). *Personality and cultural predictors of the Quiet Ego: Comparing Turkey and the United States* (Unpublished Master's Thesis). Middle East Technical University, Ankara. Retrieved from http://etd.lib.metu.edu.tr/upload/12618059/index.pdf

Alicke, M. D., & Sedikides, C. (Eds.). (2011). *Handbook of self-enhancement and self-protection*. New York, NY: Guilford Press.

Back, M. D. (2018). The Narcissistic Admiration and Rivalry Concept. In Hermann A., Brunell A., Foster J. (eds) *Handbook of Trait Narcissism* (pp. 57-67). Springer, Cham. https://doi.org/10.1007/978-3-319-92171-6_6

Back, M. D., Küfner, A. C., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, *105*(6), 1013. http://dx.doi.org/10.1037/a0034431

Barnett, M. D., & Flores, J. (2016). Narcissus, exhausted: Self-compassion mediates the relationship between narcissism and school burnout. *Personality and*

Individual Differences, *97*, 102-108. http://dx.doi.org/10.1016/j.paid.2016.03.026

Barry, C. T., Loflin, D. C., & Doucette, H. (2015). Adolescent self-compassion: Associations with narcissism, self-esteem, aggression, and internalizing symptoms in at-risk males. *Personality and Individual Differences*, *77*, 118-123. http://dx.doi.org/10.1016/j.paid.2014.12.036

Bosson, J. K., & Weaver, J. R. (2011). "I love me some me": Examining the links between narcissism and self-esteem. In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 261-271). Hoboken, NJ, US: John Wiley & Sons.

Bosson, J. K., Lakey, C. E., Campbell, W. K., Zeigler-Hill, V., Jordan, C. H., & Kernis, M. H. (2008). Untangling the links between narcissism and self-esteem: A theoretical and empirical review. *Social and Personality Psychology Compass, 2*, 1415–1439. https://doi.org/10.1111/j.1751-9004.2008.00089.x

Campbell, J. D., & Lavallee, L. F. (2013). Who am I? The role of self-concept confusion in understanding the behavior of people with low self-esteem. Baumeister, R. F. (Ed.). In *Self-esteem* (pp. 3-20). Springer Science & Business Media.

Campbell, W. K., Rudich, E., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28*, 358–368. https://doi.org/10.1177/0146167202286007

Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco, CA: Freeman.

Cuhadaroglu, F. (1986). *Self-esteem in adolescence.* Unpublished doctoral dissertation, Hacettepe University, Ankara.

Demirci, İ., & Eksi, F. (2017). Büyüklenmeci narsisizmin iki farklı yüzü: Narsistik hayranlık ve rekabetin mutlulukla ilişkisi [Two different faces of grandiose narcissism: Relationship among narcissistic admiration and rivalry, and happiness]. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 46*, 37-58. https://doi.org/10.15285/maruaebd.330008

Deniz, M., Kesici, Ş., & Sümer, A. S. (2008). The validity and reliability of the Turkish version of the Self-Compassion Scale. *Social Behavior and Personality: an international journal, 36*(9), 1151-1160. https://doi.org/10.2224/sbp.2008.36.9.1151

Deniz, M. E., & Sümer, A. S. (2010). The evaluation of depression, anxiety and stress in university students with different self-compassion levels. *Egitim ve Bilim, 35*(158), 115.

Deniz, M. E., Arslan, C., Ozyesil, Z., & Izmirli, M. (2012). Öz-anlayış, yaşam doyumu, negatif ve pozitif duygu: türk ve diğer ülke üniversite öğrencileri arasında bir karşılaştırma [Self-compassion, life satisfaction, negative and positive affect: A comparison between turkey and other different countries' university students]. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, 1*(23), 428-446.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542-575. http://dx.doi.org/10.1037/0033-2909.95.3.542

Diener, E., & Diener, M. (2009). Cross-cultural correlates of life satisfaction and self-esteem. In E. Diener (Ed.) *Culture and well-being* (pp. 71-91). New York, NY, US: Springer Science. http://dx.doi.org/10.1007/978-90-481-2352-0_4

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale**.** *Journal of Personality Assessment*, *49*, 71-75. http://dx.doi.org/10.1207/s15327752jpa4901_13

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125,* 276-302. http://dx.doi.org/10.1037/0033-2909.125.2.276

Durak, M., Senol-Durak, E., & Gencoz, T. (2010). Psychometric properties of the Satisfaction with Life Scale among Turkish university students, correctional officers, and elderly adults. *Social Indicators Research, 99*(3), 413-429. http://dx.doi.org/10.1007/s11205-010-9589-4

Geukes, K., Nestler, S., Hutteman, R., Dufner, M., Küfner, A. C., Egloff, B., ... & Back, M. D. (2017). Puffed-up but shaky selves: State self-esteem level and variability in narcissists. *Journal of personality and social psychology*, *112*(5), 769. http://dx.doi.org/10.1037/pspp0000093

Gilbert, P. (2005). Compassion and cruelty: A biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (pp. 9–74). London: Routledge.

Grove, J. L., Smith, T. W., Girard, J. M., & Wright, A. G. (2018, January 31). Narcissistic admiration and rivalry: An interpersonal approach to construct validation. https://doi.org/10.31219/osf.io/erxy7

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, US: Guilford Press.

Kjell, O. N. E (2011). Sustainable well-being: A potential synergy between sustainability and well-being research. *Review of General Psychology*, *15*(3), 255. http://dx.doi.org/10.1037/a0024603

Kjell, O., N., E., Daukantaitė, D., Hefferon, K., & Sikström, S. (2016). The harmony in life scale complements the satisfaction with life scale: expanding the conceptualization of the cognitive component of subjective well-being. *Social Indicators Research, 126*(2), 893-919. http://dx.doi.org/10.1007/s11205-015-0903-z

Lange, J., Crusius, J., & Hagemeyer, B. (2016). The evil queen's dilemma: Linking narcissistic admiration and rivalry to benign and malicious envy. *European Journal of Personality, 30*(2), 168-188. https://doi.org/10.1002/per.2047

Leckelt, M., Wetzel, E., Gerlach, T. M., Ackerman, R. A., Miller, J. D., Chopik, W. J., ... & Richter, D. (2018). Validation of the Narcissistic Admiration and Rivalry Questionnaire short scale (NARQ-S) in convenience and representative samples. *Psychological Assessment, 30*(1), 86-96. http://dx.doi.org/10.1037/pas0000433

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: exploring the question, weighing the merits. *Structural Equation Modeling, 9*(2), 151-173. http://dx.doi.org/10.1207/S15328007SEM0902_1

Marshall, S. L., Parker, P. D., Ciarrochi, J., Sahdra, B., Jackson, C. J., & Heaven, P. C. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and Individual Differences*, *74*, 116-121. 10.1016/j.paid.2014.09.013

Miller, J. D., & Campbell, W. K. (2011). Addressing criticisms of the narcissistic personality inventory (NPI). In W. K. Campbell & J. D. Miller (Eds.), *The Handbook of Narcissism and Narcissistic Personality Disorder, Theoretical Approaches, Empirical Findings, and Treatments* (pp. 146–152). Hoboken, NJ: John Wiley & Sons, Inc.

Myers, G. J., & Myers, M. T. (1992). *The Dynamics of Human Communication: A laboratory approach*. New York: McGraw Hill, Inc.

Nasser-Abu Alhija, F., & Wisenbaker, J. (2006). A Monte Carlo study investigating the impact of item parceling strategies on parameter estimates and their standard errors in CFA. *Structural Equation Modeling, 13*(2), 204-228. https://doi.org/10.1207/s15328007sem1302_3

Neff, K. D. (2003). The development and validation of a scale to measure Self-Compassion. *Self and Identity, 2*(3), 223-250. https://doi.org/10.1080/15298860309027

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and personality psychology compass, 5*(1), 1-12. http://dx.doi.org/10.1111/j.1751-9004.2010.00330.x

Neff, K. D. (2016). The Self-Compassion Scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness, 7,* 264–274. http://dx.doi.org/10.1007/s12671-015-0479-3

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of personality*, *77*(1), 23-50. http://dx.doi.org/10.1111/j.1467-6494.2008.00537.x

Neff, K. D., Whittaker, T. A., & Karl, A. (2017). Examining the factor structure of the Self-Compassion Scale in four distinct populations: Is the use of a total scale score justified?. *Journal of Personality Assessment, 99*(6), 596-607. http://dx.doi.org/10.1080/00223891.2016.1269334

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy, 18*, 250-255. https://doi.org/10.1002/cpp.702

Rose, P. (2002). The happy and unhappy faces of narcissism. *Personality and individual differences*, *33*(3), 379-391. https://doi.org/10.1016/S01918869(01)00162-3

Rose, P., & Campbell, W. K. (2004). Greatness feels good: A telic model of narcissism and subjective well-being. In S. P. Shohov (Ed.), *Advances in psychology research,* Vol. 31, pp. 3-26). Hauppauge, NY, US: Nova Science Publishers.

Rogoza, R., Żemojtel-Piotrowska, M., Kwiatkowska, M. M., & Kwiatkowska, K. (2018). The bright, the dark and the blue face of narcissism: The spectrum of narcissism in its relations to the metatraits of personality, self-esteem, and the nomological network of shyness, loneliness and empathy. *Frontiers in Psychology*, *9*, 343. https://doi.org/10.3389/fpsyg.2018.00343

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Satici, S. A., & Tekin, E. G. (2017). Harmony in Life Scale-Turkish version: Studies of validity and reliability. *Psicologia: Reflexão e Crítica*, 30: 18. https://doi.org/10.1186/s41155-017-0073-9

Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy?: Self-Esteem matters. *Journal of Personality and Social Psychology, 87*, 400–416. https://doi.org/10.1037/0022-3514.87.3.400

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482–497. http://dx.doi.org/10.1037/0022-3514.76.3.482

Shavelson, R. J., Hubner, J. J., &Stanton, G. C. (1976). Self-Concept: Validation of Construct Interpratation. *Rewiew of Aducational Research, 46*(3), 407-441. http://dx.doi.org/10.2307/1170010

Uchida, Y., & Ogihara, Y. (2012). Personal or interpersonal construal of happiness: A cultural psychological perspective. *International Journal of Wellbeing*, *2*(4), 354-369. https://doi.org/10.5502/ijw.v2.i4.5

Wink, P. (1991). Two faces of narcissism. *Journal of personality and social psychology, 61*(4), 590-597

Zeigler-Hill, V. (2013). *Self-esteem*. Psychology Press.

Zessin, U., Dickhauser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being, 7*, 340–364. https://doi.org/10.1111/aphw.12051

Zuckerman, M., & O'Loughlin, R. E. (2009). Narcissism and well-being: A longitudinal perspective. *European Journal of Social Psychology, 39*(6), 957-972. https://doi.org/10.1002/ejsp.594

Narsisizm, Yaşam Doyumu ve Yaşam Uyumu: Öz-saygı ve Öz-anlayışın Aracı Rolü

Atıf:

Demirci, I., Eksi, H., & Eksi, F. (2019). Narcissism, life satisfaction, and harmony: The mediating role of self-esteem and self-compassion. *Eurasian Journal of Educational Research, 84*, 159-176, DOI: 10.14689/ejer.2019.84.8

Özet

Problem Durumu: İnsanı anlama çabalarının en önemli odak noktalarından biri benlik kavramıdır. Kişinin kendisi hakkındaki bilgisi benlik kavramını oluştururken kişinin kendisi hakkında ne hissettiği öz-saygıyı ifade etmektedir. Ancak benliği olumlu algılamanın tek bir yolu yoktur. Literatürde kişinin kendisi hakkındaki duygusal değerlendirmeleri genellikle öz-saygı olarak tanımlanmaktadır. Yüksek öz-saygı ve narsisizm özelliklerine sahip insanlar kendilerini beğenmeleri ve sevmeleri gibi benlikleriyle ilgili olumlu algıları paylaşmaktadırlar. Narsistlerin son derece olumlu veya şişirilmiş bir benlik kavramına sahip olduğu söylenebilir. Bu araştırmada kullanılan narsistik hayranlık ve rekabet modeli büyüklenmeci narsisizmin birbiriyle pozitif ilişkili ancak birbirinden iki farklı boyutu açıklamaktadır. Benlik kavramıyla ilişkili olan bir diğer kavram ise öz-saygının alternatifi ve narsisizmin antidotu olarak ifade edilebilecek öz-anlayış kavramıdır. Öz-anlayış, öz-saygıda olduğu gibi benliğin değerlendirmesi yerine benliğin kendi içinde kabul edilmesi içeren bir yaklaşımdır. Öz-anlayış kendini kabul ve farkındalık içeren bir bakış açısını yansıtmaktadır. İyi oluşun ise insanın ulaşmak istediği en temel hedeflerden biri olduğu söylenebilir. Psikoloji araştırmalarında mutluluk genel olarak öznel iyi oluş kavramıyla ifade edilmektedir. Öznel iyi oluşun bilişsel boyutu olan yaşam doyumu kavramı kişinin yaşamdaki beklentilerin ne derece karşılandığını ifade etmektedir. Öte yandan mutluluğun bilişsel bileşeni her zaman yaşam doyumunu ifade etmeyebilir. Çünkü kültürlerarası çalışmalar mutluluğun anlamının kültürden kültüre farklılık gösterebileceğini ifade etmektedir. Bu bağlamda yaşam doyumu kavramının alternatifi olarak ifade edilebilecek olan yaşam uyumu kavramı içsel olarak hissedilen kendini kabul, iç barış ve denge hissini içermektedir. Araştırmalar benlik algılamanın ve iyi oluşun farklı yolları olduğunu göstermiştir. Araştırmada bu farklı yollar arasındaki ilişkilerin belirlenmesi kişilik dinamiklerinin anlaşılması açısından önemli bilgiler sağlayabilir.

Araştırmanın Amacı: Bu araştırmada benliğin farklı algılanma biçimleri olarak ifade edilebilecek olan narsisizm, öz-anlayış ve öz-saygı kavramları ile yaşamı farklı algılama biçimleri olarak ifade edilebilecek olan yaşam uyumu ve yaşam doyumu kavramları arasındaki ilişkilerin incelenmesi amaçlanmıştır. Narsistik hayranlığın öz-saygı, yaşam uyumu ve yaşam doyumu ile pozitif ilişkili olacağı, narsistik rekabetin ise öz-anlayış, yaşam uyumu ve yaşam doyumu ile negatif ilişkili olacağı beklenmektedir. Bu araştırmanın amacı narsistik hayranlık ve narsistik rekabet ile yaşam uyumu ve yaşam doyumu arasındaki ilişkide öz-saygı ve öz-anlayışın aracı rolünü incelemektedir.

Araştırmanın Yöntemi: Araştırmanın örneklemi 381 katılımcıdan oluşmaktadır. Katılımcıların 310'u (%77,9) kadın, 71'i (%17,8) erkektir. Katılımcıların yaş ortalamaları 23,1 olarak hesaplanmıştır. Araştırmada veri toplama araçları olarak Narsistik Hayranlık ve Rekabet Ölçeği (Narcissistic Admiration and Rivalry Questionnaire), Öz-anlayış Ölçeği (Self-compassion Scale), Benlik Saygısı Ölçeği (Self-esteem Scale), Yaşam Doyumu Ölçeği (Satisfaction with Life Scale), Yaşam Uyumu Ölçeği (Harmony in Life Scale) kullanılmıştır. Narsisizm, öz-anlayış ve öz-saygı ile yaşam doyumu ve yaşam uyumu arasındaki ilişkiler yapısal eşitlik modeli (structural equation modeling) ile incelenmiştir. Yapısal eşitlik modelinde değişkenler arasındaki ilişkileri açıklayan model kurulmadan önce bütün

değişkenlerin içinde olduğu ölçme modeli kurulmuştur. Ölçme modelinin iyi uyum verdiği görüldüğünde yapısal eşitlik modelinin test edilmesine geçilmiştir. YEM'de yer alan değişkenlere ait dolaylı etkilerin anlamlılığına desteklemek amacıyla %95 güven aralığı seçilerek 5000 yeniden örnekleme yoluyla Bootstrap Analizi uygulanmıştır.

Araştırmanın Bulguları: Yapısal eşitlik modeli narsistik hayranlık ile yaşam uyumu ve yaşam doyumu arasındaki ilişkiye öz-saygının ve narsistik rekabet ile yaşam uyumu ve yaşam doyumu arasındaki ilişkiye öz-anlayışın aracılık ettiğini göstermiştir. Bu çalışmada narsistik hayranlık ile yaşam uyumu ve yaşam doyumu arasındaki ilişkide öz-saygının aracı rolü; narsistik rekabet ile yaşam uyumu ve yaşam doyumu arasındaki ilişkide öz-anlayışın aracı rolü incelenmiştir. Analiz sonuçlarına göre beklendiği gibi narsistik hayranlık, öz-saygı, yaşam uyumu ve yaşam doyumu arasındaki ilişkilerde anlamlı düzeyde pozitif ilişkiler bulunmuştur. Ayrıca narsistik rekabet ile öz-anlayış, yaşam uyumu ve yaşam doyumu arasında negatif yönde; öz-anlayış, yaşam uyumu ve yaşam doyumu arasındaki ilişkilerde pozitif yönde anlamlı ilişkiler bulunmuştur. Kurulan yapısal eşitlik modelinde narsistik hayranlık ile yaşam uyumu ve yaşam doyumu arasındaki ilişkide öz-saygı; narsistik rekabet ile yaşam uyumu ve yaşam doyumu arasındaki ilişkide öz-anlayış aracı rol üstlenmektedir. Daha önceki çalışmalarda araştırma bulgularını destekleyecek bulgulara rastlanmıştır.

Araştırmanın Sonuçları ve Önerileri: Araştırma bulguları kişilik psikolojisi ve pozitif psikoloji bulguları bağlamında tartışılmıştır. Sonuçların narsisizmin, olumlu benlik algısının ve yaşamı algılama biçimlerinin ikişer yüzlü doğasının anlaşılmasına katkı sağlayacağı düşünülmektedir. Bu araştırmanın sonuçlarından hareketle narsistik rekabetin yaşam uyumunu ve yaşam doyumunu üzerindeki olumsuz etkilerini azaltmak için öz-anlayış düzeylerini arttıracak çalışmaların yapılması önerilmektedir. Narsistik hayranlığın yaşam uyumu ve yaşam doyumu üzerindeki olumlu etkisini dengelemek için ise öz-saygıyı geliştirici çalışmaların yapılması önerilmektedir. Bu bağlamda bulgulardan yola çıkarak narsisizmin olumsuz etkilerini azaltabilmeyi ve yaşam uyumu ve yaşam doyumunu arttırabilmeyi hedefleyen öz-anlayış ve öz-saygı özelliklerini geliştirmeye dayalı bireysel ve grupla psikolojik danışma uygulamaları düzenlenebilir. Araştırmanın sonuçlarının kişilik psikolojisi ve pozitif psikoloji literatürüne katkı sağlayacağı öngörülmektedir.

Anahtar Kelimeler: Narsistik hayranlık ve rekabet, öz-saygı, öz-anlayış, yaşam doyumu, yaşam uyumu, pozitif psikoloji

Eurasian Journal of Educational Research 84 (2019) 177-212

Eurasian Journal of Educational Research
www.ejer.com.tr

Problem-Posing Skills for Mathematical Literacy: The Sample of Teachers and Pre-Service Teachers*

Kemal OZGEN[1]

ARTICLE INFO

Article History:
Received: 06 Feb. 2019
Received in revised form: 29 Jul. 2019
Accepted: 15 Nov. 2019
DOI: 10.14689/ejer.2019.84.9

Keywords
mathematical literacy, pre-service teachers, problem-posing, teachers

ABSTRACT

Purpose: The present study aims to examine the mathematics teachers' and the pre-service teachers' problem-posing skills for mathematical literacy (ML). **Research Methods:** This research was carried out using the case study model. The study group consisted of 13 pre-service mathematics teachers and five middle school mathematics teachers who took ML courses in undergraduate and graduate education. In this context, three free problem-posing activities were asked to pose problems for ML from the participants. The problems posed by the participants were examined through descriptive analysis. The theoretical basis in the PISA study was accepted as the framework in data analysis. **Findings:** Analyzes showed that the problems posed by the participants were mostly open-ended problems. According to the context of the posed problems, occupational and personal context problems were found to be dominant. The findings showed that the posed problems were more about change-relationships and space-shape concerning mathematical content. Regarding mathematical processes, the average score of employing skills was higher than formulating and interpreting skills scores. The findings suggest that the teachers are more successful than pre-service teachers in problem-posing activities for ML. **Implications for Research and Practice**: It was understood that there was a need for theoretical and practical courses that clarify the application of ML in different problem types. Challenges to pose unstructured problems for ML should be removed. The situations and content of mathematics used in ML problems should be made more effective and diversified.

© 2019 Ani Publishing Ltd. All rights reserved

*This study was partly presented at the International Conference on Education in Mathematics, Science & Technology (ICEMST) in Kusadasi, 18-21 May 2017

[1] Corresponding author, Dicle University, Ziya Gokalp Faculty of Education, Department of Mathematics and Science Education, TURKEY, e-mail: ozgenkemal@gmail.com ORCID: https://orcid.org/0000-0002-7015-6452

Introduction

In recent years, the concept of literacy is one of the important topics discussed and researched in the field of education. It is possible to say that there are also changes in the meaning of the concept of literacy from the past to the present day. In the Programme for International Student Assessment [PISA] study conducted by the Organization for Economic Co-operation and Development [OECD], the concept of literacy is expressed as follows: "the ability to use, analyze, make logical conclusions, and communicate effectively when describing, interpreting, and solving problems that students encounter in various situations in key subject areas" (Ministry of National Education [MoNE], 2016, p. 1). There are different approaches to literacy, such as current and traditional approaches (Ozgen & Kutluca, 2013). The traditional literacy approach involves skills, such as reading, writing, and performing simple calculations, which require four operations. However, in current literacy approaches, field-specific competencies and skills are seen as the forefront. In particular, the concept of mathematical literacy (ML) is closely related to many other concepts discussed in mathematics education (Stacey, 2010). In the context of ML, the content of mathematics, process-based skills and the contexts in which it is used are handled.

The PISA 2000 report explained that the term literacy was used to clarify the mathematical knowledge and the ability to deliver functional use rather than merely mastering a school curriculum (OECD, 2000). According to Evans (2017), being literate involves using mathematical knowledge meaningfully in different contexts, allowing us to be better in our daily lives and being functional in a technology-rich learning environment. Addressing literacy in all disciplines of the curriculum from the first years of teaching is the key to lifelong learning and quality of life (Evans, 2017). In mathematics education, it is possible to see the importance and validity of ML in direct or indirect approaches, in mathematics curricula (MoNE, 2017) or in standards explained by institutions for school mathematics (National Council of Teachers of Mathematics [NCTM], 2000). In this respect, De Lange (2003) states that pure mathematics is important but insufficient to do mathematics in real life.

Mathematical problem-solving can be seen as a key feature and focus of ML's process skills. In this context, it is understood that the measurement of ML in PISA studies takes place using problem-solving (OECD, 2013). In the field of mathematics education, it is seen that there has been an increasing interest in problem-posing in recent years because problem-posing is accepted as the last step of the problem-solving process (Gonzales, 1998). In addition, problem-solving requires high-level cognitive skills (English & Sriraman, 2010; Silver, 1987) and is reported to be closely related to problem-posing skills (Cai, 1998; Kilpatrick, 1987). In this study, ML and problem-posing concepts will be emphasized because problem-posing and problem-solving skills can be seen as complementary elements. Moreover, while ML and problem-solving relationships have been examined in many studies (Memnun, Akkaya & Hacıomeroglu, 2012; Sumen & Calisici, 2012), there are limited studies on ML and problem-posing relationships (Ozgen, Ozer & Arslan, 2019; Sahin & Basgul, 2018). Various problem-posing studies have been conducted with pre-service teachers, but there are limited studies on problem-posing in the context of mathematics literacy.

Mathematics teachers have an important role and responsibility in ML, which is a framework for the mathematics learning-teaching process because mathematics teachers should be able to imagine many pedagogical practices to improve students' ML skills or competencies (Machaba, 2018). Teachers' awareness of the importance of strategies for ML positively reflected the development of mathematics teaching (McMillen, Del Prado Hill & Friedland, 2010). This study focuses on the teachers' mathematical literacy in problem-posing context since it is an important factor in improving students' competencies in ML. Thus, it is necessary to understand teachers' competencies in ML help to design effective ML development trajectories and to close the gap between in-service and pre-service teachers' problem-posing skills.

It was reported that Turkish students attending the PISA exams had a low achievement level in ML and tended to decline in the recent PISA (MoNE, 2012; 2016). Furthermore, it was reported that the teacher factor is an important component in these low results in PISA exams for ML. In line with these results, various reform steps have been taken by the MoNE to improve goals about ML. Actions, such as changes in instructional programs and teacher education, developing and renewing books, resources and materials, and simulating the types of questions in the transition exams to high school exams, were carried out. In mathematics education, the concepts of problem-solving and problem-posing are discussed with these changes made for ML. In addition, the ML courses were added as a compulsory course to teacher education programs at universities. In this study, mathematics teachers and pre-service teachers' problem-posing skills are presented after they have taken an ML course in their teacher education program at undergraduate and graduate levels.

In light of the literature, it is expected that in-service teachers and educated pre-service teachers should design or pose mathematical problems for ML and use them in their classes. This study focuses on mathematics teachers and pre-service teachers who have received ML education (undergraduate and graduate level) to pose problem activities for ML. For the purpose of the present research, the following problems were sought:

1. How are the mathematics teachers' and pre-service teachers' skills to pose problems for ML? What is the type of difficulty level, context, content and process skills of the problems posed by the participants?
2. Do mathematics teachers and pre-service teachers' problem-posing skills for ML differ concerning PISA process skills?

The present study aims to examine the mathematics teachers and pre-service teachers' problem-posing skills for ML. The problems posed by teachers and pre-service teachers for ML are examined concerning problem type, level of difficulty, context, mathematical content, topics and processes. In addition, the problems posed by the participants for ML are compared concerning defined criteria.

Theoretical Framework

Mathematical Literacy (ML)

ML is not only composed of pure mathematical knowledge, but it has complex structures and components (De Lange, 2001; Matteson, 2006; OECD, 2003). In one of the ML approach, Goos (2007) identified five components (context, mathematical knowledge, disposition, critical orientation and tools) for ML (cited in Bennison, 2015). In Pugalee's (1999) ML model, ML processes are described as representing, manipulating, mathematical reasoning and, problem-solving. In addition, facilitators for ML in the model are specified as communication, technology and values. In the PISA study, the measurement and evaluation of mathematics are shaped around the concept of ML. In the PISA 2012 study, ML is defined as follows:

> Mathematical literacy is an individual's capacity to formulate, employ, and interpret mathematics in a variety of contexts. It includes reasoning mathematically and using mathematical concepts, procedures, facts, and tools to describe, explain, and predict phenomena. It assists individuals to recognize the role that mathematics plays in the world and to make the well-founded judgments and decisions needed by constructive, engaged and reflective citizens (OECD 2013, p. 25).

As a consequence of this definition, PISA mathematics units start with a description of a situation that can be encountered in real-life (e.g. a map for a trip, original tables of data, plans for a house, a formula for calculating something practical). A series of questions require students to use this knowledge, calculate the quantities and interpret the results (Stacey, 2010).

There are some approaches to what skills and competencies should be in an individual with ML. Kilpatric (2001) states that mathematical ability includes conceptual understanding, operational fluency, strategic capabilities, adaptive reasoning and productive disposition. NCTM (2000) emphasized the importance of ML. There were five basic skills in learning mathematics: ability to solve mathematical problems, mathematical reasoning ability, mathematical relationship ability, mathematical communication ability and mathematical representation. It is stated here that ML means the complex ability required for students (NCTM, 2000).

Three mathematical processes were defined in the context of assessment and evaluation of ML in PISA 2012 (OECD, 2013, pp. 28-30): (1) mathematically formulating situations, (2) employing mathematical concepts, phenomena, processes and reasoning and (3) interpreting application and evaluation of mathematical output.

Mathematical sciences are interested in describing and analyzing quantities, space-shapes, change-relationships, and at the same time, uncertainty (Diaz, 2017). Steen (1990) suggested inspiration in the developmental power of five deep mathematical thinkers, such as dimensions, quantity, uncertainty, shape and change. Mathematical content knowledge is one of the important sub-dimensions that constitute the framework of measuring and evaluating in ML. In PISA, mathematical content and subject areas refer to subjects or parts that regulate the field of mathematics.

Accordingly, at PISA 2012, there are four subject parts or sections that form the mathematical content of ML (OECD, 2013, pp. 33-35): change-relationships, space-shape, quantity and uncertainty-data.

One of the important sub-dimensions that constitutes the framework for assessment and evaluation of ML in PISA is the context. Mathematical contexts, such as personal, occupational, societal and scientific contexts, are defined in PISA. Thus, the problem context is defined as follows: "Context is the information that is contained and, at the same time, surrounds the statement of a mathematical problem that needs to be mathematized. The context and surrounding information might be necessary or unnecessary for the mathematization of the problem but is independent of the problem's syntax and stimulus" (Salgado, 2016, p.111). To effectively transfer information from one application to another, students must have experience in solving problems in many different situations and contexts (De Lange, 1987). Steen (2001) categorized the context sub-dimension as personal life, school life, work and leisure and the local community.

In the PISA 2012 mathematics test, three types of items formations were used for the paper-pencil test as follows: (i) open-ended or unstructured items, (ii) structured items and (iii) multiple-choice items. In mathematics and science, test items are grouped into units that start by identifying the real-world situation or problem, which includes text, images, graphics, or information on the charts. Then, a few items are relevant to this situation (Stacey, 2010).

Problem Posing

Mathematical problem-solving plays an important role in many theoretical approaches for ML (Goos, 2007; Pugalee, 1999) and in the framework for assessment and evaluation in the PISA studies. Problems involving the modeling process, particularly the problems that require the use of the model, have a wide range in the PISA studies applied in recent years. Stacey (2015) reported that mathematical modeling was the key to ML, but most people rarely participated in the entire modeling cycle. Brown and Schafer (2006) used a modeling approach in teacher education for ML. Modeling approach used as a tool for ML teaching, formulating, analyzing the model to answer the mathematical questions formulated, interpreting and validating mathematical results concerning context, and finally, consolidation elements. ML focuses on students' ability to effectively analyze, validate, communicate, formulate, solve and interpret ideas in different forms and situations of problems (Lailiyah, 2017). Teachers should integrate content and/or skills to solve problems (Machaba, 2018). Activities developed by PISA provide problem-solving skills, that is, efforts to provide mathematical understanding and development of the student. It also needs to relate contextual problems to mathematical situations in the problem that the student solves with mathematical knowledge.

Problem-posing and problem-solving are of great importance for mathematics and mathematical thinking (Silver, 1987) because it can be said that problem-posing and problem-solving are considered as closely related and complementary process skills

and even basic problem-posing activities have positive effects on students (Silver & Cai, 1996). In addition, problem-posing activities help students to develop their problem-solving skills (English, 1997). In addition, it is stated that problem-posing activities positively affect students' problem-solving skills (Lowrie, 2002). The necessity of using problem-posing activities both as a goal and a tool in mathematics education emerges (Kilpatrick, 1987).

Stoyanova and Ellerton (1996) classify problem-posing activities as free, semi-structured and structured problem-posing situations. In this classification, it is important to what extent the problem maker is limited. In this study, free problem-posing will be emphasized because it can be said that free problem-posing is a suitable type of activity for individuals with a lack of knowledge and experience in problem posing. There is no limitation in free problem-posing activities. The problem-maker can pose a problem of his/her own choosing from a real or fictional situation. A problem condition is not given. It may be desirable to establish a problem on any subject. Limitations are as small as possible. "Pose a problem with patterns" or "Pose a problem for 6th-grade students" activities are examples of free problem posing.

Relationship between ML and Problem Posing

The use of ML and mathematical knowledge gives learners the ability to better understand the content of different curriculum content in many contexts. As a result, teachers need to have mathematics, pedagogical and curriculum knowledge to have a rich personal understanding of literacy, and to believe that teaching is an integral part of the subject (Bennison, 2015, p. 572).

In related literature, Malasari, Herman and Jupri (2017) stated that high school students should have ML skills in formulating, implementing and interpreting mathematics to solve real-world problems. It has been emphasized that teaching these students with ordinary mathematics problems is not enough and that teachers should create ML problems in the teaching of these students. In this context, it is expected that the awareness of mathematics teachers towards ML is high and problem activities are developed. In the related literature, various studies with teachers and pre-service teachers were found about ML concept. In a study by Lestari, Juniati and Suwarsono (2017), the views of high school teachers towards ML, their habits in mathematics teaching, and their beliefs in integrating ML's mathematics into learning-teaching were examined. In the study conducted by Pettersen and Nortvedt (2018), teachers' and pre-service teachers' competence needs in the activities were determined using an item analysis tool. Concerning competencies (communication, devising strategies, mathematization, representation, symbols and formalism, reasoning and argumentation), each of the teachers and pre-service teachers used a tool about mathematical efficiency and efficiency requirements of activities. Saenz (2009) examined the difficulties of Spanish pre-service teachers in solving PISA questions. In a study conducted by Colwell and Enderson (2016), perceptions of pre-service teachers about literacy in mathematics were examined. Pre-service teachers perceived communication, practice and language as literacy in mathematics.

In recent years, intense interest in the ML concept also appears in a variety of studies in Turkey. In particular, studies with mathematics teachers and pre-service teachers are also observed. The ML self-efficacy beliefs of the pre-service teachers were examined using the ML self-efficacy scale developed by Ozgen and Bindak (2008) in a large part of the studies (Memnun, Akkaya & Hacıomeroglu, 2012; Ozgen, 2015; Sumen & Calisici, 2016). ML performance of the pre-service teachers (Gurbuz, 2014; Kabael & Barak, 2016; Tekin & Tekin, 2004), their views and perceptions towards ML (Ozgen & Kutluca, 2013, Pilten, Divrik, Pilten & Ebret, 2016, Sefik & Dost, 2016) were examined. Also, Gurbuz (2014) determined that pre-service mathematics teachers were successful at selecting and categorizing questions similar to the PISA questions at the end of ML education, but failed to achieve the desired result in question writing.

In addition to intensive and comprehensive ML studies with pre-service teachers, it is seen that there are a limited number of studies with teachers in Turkey. Altun and Akkaya (2014) revealed the reasons for failure of Turkish students in PISA with the views of teachers. Genc and Erbas (2017) examined the views of high school mathematics teachers about the mathematics curriculum emphasizing on ML.

In recent years, there have been many studies with teachers, pre-service teachers and students about problem-posing. In one of these studies, Ulusoy and Kepceoglu (2018) investigated pre-service middle school mathematics teachers' problems posed in a semi-structured problem-posing context concerning contextual and cognitive structures. The results showed that most of the pre-service teachers used all quantitative data given in the semi-structured problem-posing task. Unlu and Sarpkaya-Aktas (2017) investigated the problems posed by the participants about equations and algebraic expressions in their study with the pre-service mathematics teachers. In their study, pre-service teachers were successful in posing problems for algebraic expressions and equations. Pre-service teachers generally posed verbal problems and frequently used daily language in their problems.

In the relevant literature, there are a limited number of studies dealing with ML and problem-posing together. In the study conducted by Ozgen et al. (2019), mathematics literacy and self-efficacy towards problem-posing were examined. The study was conducted with the participation of the mathematics teachers, it was observed that the mathematics literacy and problem-posing self-efficacy of the participants did not differ significantly according to variables, such as gender, graduation status, faculty graduated, and professional experience. The researchers stated that there was a significant relationship between mathematics teachers' mathematics literacy and self-efficacy towards problem posing. In another study, Sahin and Basgul (2018) investigated mathematics pre-service teachers' problem-posing skills appropriateness to the nature of PISA. Their findings showed that many of the problems that pre-service teachers posed are appropriate to the nature of PISA. In addition, it was seen that the pre-service teachers generally posed open-ended problems, but they less prefer to pose multiple-choice and short-answer problems. When pre-service teachers' problems are examined concerning the content, context and process skills, pre-service teachers' most posed problems were in the content of quantity, in the personal and occupational context and generative skill-oriented. To

our knowledge, there are no studies examining the problem-posing skills of teachers and pre-service teachers, together with ML.

It is understood that the teachers need training for knowledge and application skills for ML. In some studies (Gurbuz, 2014; Yenilmez & Ata, 2013), the development of problem activities for ML was not thoroughly examined, although ML performance, self-efficacy beliefs or views of mathematics teachers and pre-service teachers were examined within ML course or education. In most of the studies conducted, the activities in past PISA exams which were examined within the scope of the problem activities were applied and investigated. In this study, it is thought that the examination of problem-posing skills for ML after mathematics teachers and pre-service teachers' ML education is given important information for mathematics education.

One of the most important aims of mathematics education in schools is to improve students' ML competences. In this context, it is expected that mathematics teachers and pre-service teachers have knowledge, skills and experiences towards ML. The problems that are used in the learning-teaching process of developing students' ML are important. In this direction, mathematics educators need to pose mathematical problem situations to develop and measure ML.

Method

Research Design

This research was carried out using the case study. The multiple case (holistic) design was adopted in this study. This study contains more than a single case. Thus, this study used a multiple case study design (Yin, 2003, p. 46). In this study, problem-posing situations of teachers and pre-service teachers were accepted as multiple cases. This model is used because the present study aims to investigate the mathematics teachers and pre-service teachers' problem-posing skills for ML extensively.

It is understood that problem-solving and problem-posing are important factors in developing ML skills and experiences of students in their mathematics courses. In this respect, mathematics teachers should have theoretical knowledge about problem-solving for ML and should be able to reflect on practice. In the relevant literature, various quantitative studies have been conducted on the ML skills, awareness and beliefs of pre-service mathematics teachers and students. In this study, the problem-posing skills of mathematics teachers and pre-service teachers are discussed with a qualitative approach. Examining the mathematics teachers and pre-service teachers' problem-posing skills together and making comparisons reveal the important and original dimensions of this study.

Research Sample

This research was carried out under the ML course, which was an elective course in mathematics education undergraduate and graduate level programs. The study group consisted of 13 pre-service mathematics teachers and five middle school

mathematics teachers who took ML courses in undergraduate and graduate education. Pre-service teachers continued their education in the Faculty of Education. The mathematics teachers were graduated from the Faculty of Education. It is compulsory to take mathematics, mathematics education and general culture courses in teacher education in Turkey. Courses, such as teaching methods, material development, measurement and evaluation, teaching practice, history and philosophy of mathematics, are considered as mathematics education courses and graduates should be successful in these courses. Before this study, pre-service teachers had taken mathematics courses and general educational sciences courses related to the learning and teaching approach. Pre-service teachers did not take a course on mathematics education. In addition, mathematics teachers and pre-service teachers in this study did not take any course for mathematical problem-solving and problem-posing before this study. Since all participants needed to have an ML course history, the purposeful sampling method was applied. In the study, participants participated in the problem-posing process individually after the ML course. Participants did not receive any training or courses for ML before research. Thus, it is assumed that the participants have limited knowledge, skills and experience of ML.

Data Collection

Within the scope of the relevant ML course, theoretical foundations for ML were given and applied studies were carried out. In this context, participants were asked to pose three problems for ML. The data collection tool of this research was the mathematical problems that mathematics teachers and pre-service teachers individually posed for ML. To determine the level of knowledge, skills and experiences of teachers and pre-service teachers for ML, a free problem-solving activity was applied. Because of the lack of knowledge and experience of the participants in this study and their lack of training, it was preferred to apply free problem-posing activities to develop their problem-posing skills. Each participant was asked to pose three problems for ML. Problems posed by teachers and pre-service teachers were not subject to any mathematical concept or subject restriction. Participants were asked to pose mathematical problem situations for ML. Mathematics teachers and pre-service teachers were asked to develop problem-posing activities at the end of the ML course. The application with the teachers and pre-service teachers was made in the classroom environment. In practice, the participants were given sufficient time. It was also said that they could use resources, such as the internet, computer and books in problem posing.

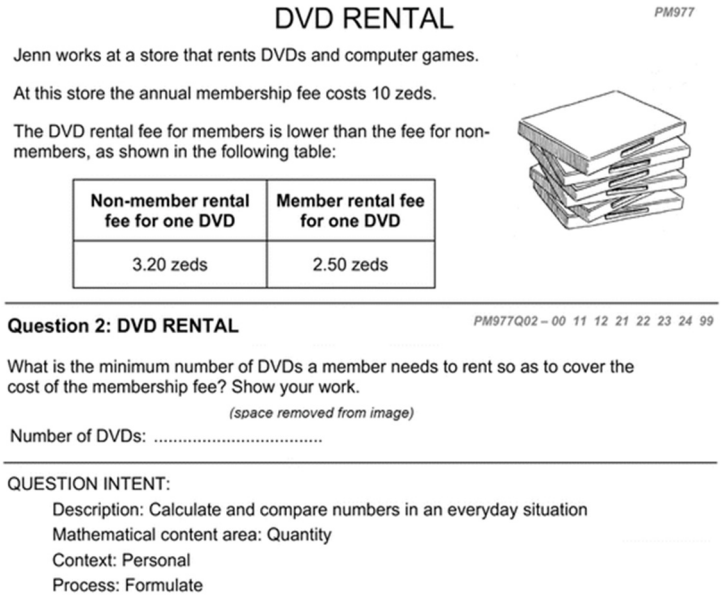
Data Analysis

The problems that participants posed for ML were analyzed by descriptive analysis technique in the scope of qualitative analysis. The data obtained from participants were summarized and interpreted according to the predefined theme and, findings were arranged by a direct citation of the problems (Yildirim & Simsek, 2005). The themes used as the theoretical framework in the analysis of the problems were determined by examining the PISA 2012 study (OECD, 2012).

In the data analysis, the theoretical basis in the PISA study was accepted as the framework. The mathematical problems that mathematics teachers and pre-service teachers posed in the research were classified as open-ended, multiple-choice, true-false and mixed. Moreover, when the mathematical problems posed by the participants were evaluated according to their difficulty levels, the criteria used in the PISA study were adopted. The mathematical problems posed in this context are considered at six levels concerning difficulty level: Level 1 (L1), Level 2 (L2), Level 3 (L3), Level 4 (L4), Level 5 (L5) and Level 6 (L6).

Mathematical problems were classified as personal, professional, social, and scientific when examined concerning context. In addition, the mathematical problems posed by the mathematics teachers and the pre-service teachers were considered under four components about mathematical content as follows: change-relationships, space-shape, quantity, uncertainty and data.

PISA 2012 provides four mathematical content areas for ML measurement and evaluation, and subheadings for them are also provided (OECD, 2003, p. 36): Functions, algebraic expressions, equations and inequalities, coordinate systems, relations between two and three dimensional geometric objects, measurement, numbers and number sets, arithmetic operations, percentage, rate and fractions, counting principles, estimation, data collection, presentation and interpretation, data diversity and definition of this diversity, sample and sampling, chance and possibility issues constitute the subtitle headings. The problems posed in this study were described concerning sub-topics within mathematical content.



DVD RENTAL

PM977

Jenn works at a store that rents DVDs and computer games.

At this store the annual membership fee costs 10 zeds.

The DVD rental fee for members is lower than the fee for non-members, as shown in the following table:

Non-member rental fee for one DVD	Member rental fee for one DVD
3.20 zeds	2.50 zeds

Question 2: DVD RENTAL

PM977Q02 – 00 11 12 21 22 23 24 99

What is the minimum number of DVDs a member needs to rent so as to cover the cost of the membership fee? Show your work.

(space removed from image)

Number of DVDs: .....

QUESTION INTENT:

Description: Calculate and compare numbers in an everyday situation
Mathematical content area: Quantity
Context: Personal
Process: Formulate

Figure 1. *PM977Q02 DVD Rental Question 2 with Categorization (OECD, 2013)*

Problems were investigated under three components concerning using mathematical processes: (i) formulating situations mathematically, (ii) employing mathematical concepts, facts, procedures, and reasoning employing mathematical concepts, facts, processes and reasoning, and (iii) interpreting, applying and evaluating mathematical outcomes.

There is an example of one item in the PISA framework in Figure 1. PM977 DVD rental was a three item-unit, which was used in the PISA 2012 field trial then released (OECD 2013). Figure 1 shows the stimulus, Question 2, and the categorization of this question. The item was of above-average difficulty.

In the analysis of the posed problems, descriptive statistics were used. It is possible to have more than one mathematical process skill in a mathematical problem. In other words, one or more of the skills of formulating, employing and interpreting can be found at different levels. Thus, the following points were applied to the problems when the posed problems were examined concerning process skills (formulating, employing and interpreting). A scoring framework to measure participants' formulating, employing and interpreting process skills are reflected in the problems posed by the participants is presented below. This scoring approach was adapted from PISA studies. As in the PISA study, it was accepted that each problem posed had a dominant process skill. In addition, this dominant process skill was scored according to the degree of reflection of that skill to the posed problem, as in the following rubric.

2 point: Related process skill at the appropriate level

1 point: Related process skill at partially seen

0 point: Empty or no related process skill at all

Participants' process skills (formulating, employing and interpreting) were examined and compared with the Mann-Whitney U test. Evidence is provided for the themes and categories indicated by the approach of direct citation from the problems of teachers and pre-service teachers. Codes, such as "T1, T2 ..." were given to mathematics teachers and "S1, S2 ..." to pre-service teachers. The data obtained from the posed problems were investigated by the researchers at different times and the reliability of the analysis of the data tried to be provided. Particularly to further refine the categories in the descriptive analysis, participants were directly quoted from the problems they had designed, and comments were presented.

Procedure

This research was conducted in ML courses that participants enrolled as a part of their undergraduate and graduate programs. Teachers and pre-service teachers did not have any interaction with each other. Course processes were conducted at different times and environments. The course practice was conducted by the researcher in a classroom setting and during a semester of three hours a week.

During ML courses, theoretical information was given firstly and then they were asked to make various applications both inside and outside the classroom. Sample

problems for ML were shown by the researcher, and various applications were made by the participants. The sample problems that had emerged in PISA studies in the past years were examined. The expectation at the end of this course was that the knowledge, skills and experience of ML of teachers and pre-service teachers were developed. Participants were expected to develop effective problem-posing skills for the ML. Table 1 provides explanations for what was done in the ML course.

Table 1

Contents of ML Course

Weeks	Contents
1	Definition of mathematical literacy.
2	The components of mathematical literacy.
3	In the context of mathematical literacy, situations, process and skills.
4	In the context of mathematical literacy, situations, process and skills.
5	The importance of mathematical literacy in real life.
6	The importance of mathematical literacy in society.
7	The importance of mathematical literacy at the teaching-learning process.
8	The assessment of mathematical literacy.
9	The assessment of mathematical literacy.
10	Studies towards to assessment to mathematical literacy.
11	Studies towards to assessment to mathematical literacy
12	The relationships between mathematical literacy and other multiple literacies.
13	Investigation of reflections which is related to mathematical literacy in the mathematics curriculum.
14	Investigation of reflections which is related to mathematical literacy in the mathematics curriculum.

Results

In this section, the data obtained in this study were analyzed and presented with tables and figures. The participants posed problems were examined concerning the types of problems and findings are shown in Table 2.

Table 2

Distribution of Types of Problems Posed by Participants

Group	Problem Types								Total	
	Open-ended		Multiple choice		True-false		Mixed			
	f	%	f	%	f	%	f	%	f	%
Pre-service Teacher	25	67.5	6	16.2	2	5.4	4	10.8	37	100
Teacher	10	71.4	1	7.1	-	-	3	21.4	14	100
Total	35	68.6	7	13.7	2	3.9	7	13.7	51	100

When the problems that the mathematics teachers and pre-service teachers who participated in this research were examined concerning problem types, they were

mostly open-ended problems and the least posed problem type was true-false problems were posed. This finding was found to be valid for both mathematics teachers and pre-service teachers. In the case of mixed problems, two or three problems presented depending on a given situation can cover open-ended, multiple-choice, or true-false types. The multiple-choice problem named "Restaurant", which the T1-coded teacher posed, is given below. This problem was considered to be mixed in structure because the participant developed both multiple-choice and open-ended problem examples depending on the situation given here.

Restaurant

A fish restaurant manager is looking for a place suitable for this job. He decides to rent one of the places he looks at. The empty area that he finds is 260 m2. The manager, who wants to fill the empty area as much as possible, has added as many tables as possible to the area. The dining tables are for four people and have dimensions of 90 cm and 120 cm.

Problem-1: Which of the following can be the number of customers on a day when the restaurant is full?

A) 80 B) 480 C) 2800 D) 4000

Problem-2: The restaurant has 12 kinds of fish, three kinds of salads and five kinds of appetizers. How many different options do customers have if they choose one portion from fish, salads and appetizers?

The example of the open-ended problem named "Discount", which the S10 pre-service teacher posed for ML, is shown below.

Discount

Suit dress price range: 50 – 500 TL

Jacket price range: 100 - 300 TL

Trousers price range: 30 – 100 TL

A clothing store plans to give a special discount on Christmas. The store team has planned different discounts on suit dress dresses, jacket and trousers. 30% discount on the suit dress, 50% discount on the jacket, and "Buy 3 pay for 2" campaigns on the trousers. Which type of dress has the highest discount rate?

In this study, the participants preferred to pose open-ended problems concerning the type of problems they posed for ML. This finding can be interpreted as a result of the positive effects of the course participants' course on ML. Because of the ML course, it can be said that they have developed a positive perception about the nature, structure, development and measurement of the problem type suitable for ML.

Findings for the analysis of the participants' difficulty level of the problems that they posed for the ML are presented in Table 3.

Table 3

Distribution of Posed Problems concerning *Difficulty Level*

Group	Difficulty Level												Total	
	L6		L5		L4		L3		L2		L1			
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Pre-service Teacher	-	-	6	16.2	13	35.1	9	24.3	9	24.3	-	-	37	100
Teacher	3	21.4	2	14.2	7	50	2	14.2	-	-	-	-	14	100
Total	3	5.8	8	15.6	20	39.2	11	21.5	9	17.6	-	-	51	100

Participants were found to have problems at most in L4 and L3, and at least L6 concerning the level of difficulty. In addition, there was no problem at L1 concerning the level of difficulty. The difficulty levels of the problems that mathematics teachers posed seem to be higher than the problems of the pre-service teachers. The problem named "Flora" evaluated at the 5th level developed by the S10 pre-service teacher is presented in Figure 2.

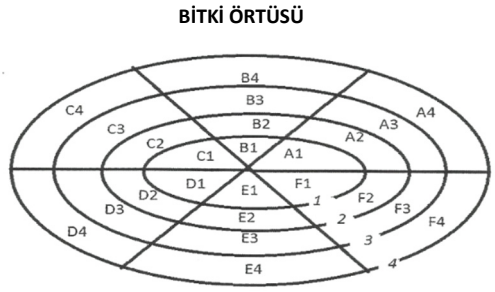


Figure 2. *Direct Citation from the Problem of S10*

Flora

The above figure symbolizes a mountain. The mountain area is divided into four areas. Various plant species are grown in these areas. As the oxygen rate is decreasing as you ascend up the mountain, the vegetation density gradually decreases, but the number of plant species is equal in all parts of the mountain.

Part 1 of the mountain ….. A1+A2+A3+A4=x

Part 2 of the mountain ….. B1+B2+B3+B4=x

…….

Part 6 of the mountain …… F1+F2+F3+F+=x

In addition, region 2 has more than 10 plant species in zone 1. Zone 3 has more than 30 plant species in zone 2 and zone 4 has more than 60 plants in zone 3. Accordingly, what is the minimum number of x?

S10's problem is related to the content of change-relationships and mathematical issues, such as algebraic expressions. In this problem, it can be said that the student must construct a model, think different mathematical concepts together and use different notations. In addition to making algebraic operations with the model that the learner will take the interpretation of the results, he finds as important points. This problem also aims to interpret the findings of the learners. If all these cognitive processes mentioned in this problem are taken into consideration, it can be said that the problem mentioned is a problem that is in accordance with L5 in terms of difficulty level because students at the 5th level can develop and employ models for complex situations. Students can also choose, compare and evaluate appropriate problem-solving strategies. They can communicate between their own interpretations and their conclusions based on their reasoning (OECD, 2013, p. 41).

The problem named "Sales", in which the S2 pre-service teacher posed was assessed in L2, is shown in Figure 3.

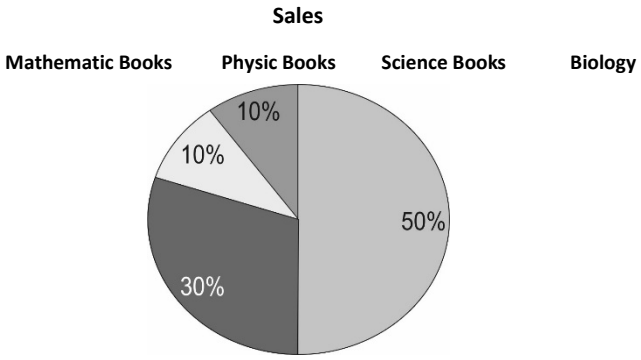


Figure 3. *Direct Citation from the Problem of S2*

Within one week, 1000 books were sold in a store. The percentage of books sold is shown in the chart above.

Problem: How many more physics books need to be sold so that the number of physics books sold equals the number of mathematics books sold in a week?

S2's Sales problem includes a graphical representation. In this context, the graph shows the percentage of sales of textbooks in one week. In the problem, it is stated that 1000 books are sold in one week, and according to this, the number of books in all courses can be found by reading the graph. Later, a relationship between the number of physics and mathematics books was questioned. In this case, students have the opportunity to reason about simple relationships in a given situation and to interpret the results in a limited way. Since this problem is not reflected in the upper-level cognitive process skills. It is thought that the problem is an L2 problem concerning the level of difficulty because the students in the second level can apply basic algorithms,

formulas, operations and familiar rules. It has reasoning capacity directly related to the simple relationships seen at first sight and can interpret the results in a limited way (OECD, 2013, p. 41).

To conclude, the participants posed problems with a moderate difficulty level for ML. In particular, participants developed fewer problems in L5 and L6, which suggests that participants have limitations and difficulties in developing high-level problems for ML. The findings of the participants in the survey concerning contexts of the problems they developed for ML are presented in Table 4.

Table 4

Distribution the Posed Problems concerning *Context*

Group	Context								Total	
	Personal		Occupational		Societal		Scientific			
	f	%	f	%	f	%	f	%	f	%
Pre-service teacher	8	21.6	19	51.3	2	5.4	8	21.6	37	100
Teacher	2	14.2	11	78.5	-	-	1	7.1	14	100
Total	10	19.6	30	58.8	2	3.9	9	17.6	51	100

The problems posed by the participants had the most occupational context and at least the social context regarding the context. Pre-service teachers posed more problems in scientific context than teachers. On the other hand, teachers posed more problems in occupational context than pre-service teachers. Besides, the number of problems in societal context is fewer than another context. The problems posed by the participants differed according to the type of context. In social and scientific contexts, participants developed fewer problems than personal and occupational contexts. These findings suggest that participants have some difficulties and limitations in posing contextual problems. It can be said that pre-service teachers prefer to pose more problems in scientific context due to their courses, training and current knowledge. On the other hand, the resistance of teachers to posing different problems may be influenced by the routines they use for a long time in their instructions. The problem of the S6 pre-service teacher posed in the personal context is given below.

Problem

> Entrance fees for a visit to a zoo with 170 kinds of animals are 5 TL for the students and 10 TL for the adults. This zoo has earned 3.000 TL a day and the number of students who come to the zoo is more than the number of adults. According to this, at least how many students came to the zoo?

The problem that the S6-coded pre-service teacher posed was handled as a personal context concerning the situations in which mathematics was used because, in the personal context, there are categories about the individual himself, his peers and his family. In this context, there are situations related to food preparation, shopping,

play, personal health, travel, personal budget and time management (MoNE, 2012). In this problem, there is an action or behavior in the routine life of the person concerned with the situations related to entrance fees to the zoo. For these reasons, the posed problem is considered as a personal context. The occupational context problem of the T3-coded teacher is given below.

Field

The farmer Mehmet has a field of 200 m and 100 m edge length in the form of a rectangle. Mehmet wants to plant wheat in this this field. The amount of seeds proposed by the agricultural engineers for the 1-acre field is a minimum of 20 kg and a maximum of 25 kg.

Problem -1: How many kilograms of seed will be used for Mehmet's wheat cultivation?

Problem-2: Mehmet plows the field with a 4 m long cultivator parallel to the long edge of the field. The second version runs parallel to the short edge.

Select "True" or "False" for the following proposals.

- The cultivator has made fewer round trips in the 1st round of farming

-In the 2nd version of the farm, the cultivator spent less fuel.

- The number of round trips in the 2nd version of the cultivator farm is half of the 1st crop.

There are a real dutiful occupation and related situations in T3's "Field" problem. This problem is particularly related to the professional situation of farmers and the use of mathematics. Because of this context, there are often situations that are related to a profession or business life. Topics, such as measurement, cost, ordering for buildings, accounting, quality control, time management, design/architecture, business-based decisions, are evaluated within the professional context (MoNE, 2012). In this problem, it can be said that the situations in the farming profession and the topics, such as length, area and measurement from traditional mathematics subjects, are related. It is considered that this problem developed due to these reasons is in the occupational context.

Some of the contexts were less involved in the problems posed by participants in this study for ML. This finding may be an indication of the participants' limited knowledge and beliefs about the use of mathematics. The participants in the research were more successful in writing problems in professional contexts. Pre-service teachers were able to establish problems in different contexts, while teachers were not able to establish problems in all contexts. Different experiences are needed to develop contextual problems for ML.

Mathematics teachers and pre-service teachers' problems that they posed for ML are analyzed in terms of mathematical content and the findings obtained are shown in Table 5.

Table 5

Distribution of Posed Problems concerning *Mathematical Content*

Group	Mathematical content								Total	
	Change-relationships		Space-shape		Quantity		Uncertainty-data			
	f	%	f	%	f	%	f	%	f	%
Pre-service teacher	21	56.7	6	16.2	3	8.1	7	18.9	37	100
Teacher	4	28.5	5	35.7	3	21.4	2	14.2	14	100
Total	25	49	11	21.5	6	11.7	9	17.6	51	100

Analysis of the participants' problems in terms of mathematical content, it was revealed that the content of the change-relationships was most frequently used, while the content of the quantity was the least frequently used. It can be said that teachers' and pre-service teachers' problems did not show similarity in terms of the problem content. In particular, it is seen that teachers place the most space-shape in their problems and at least the uncertainty-data content. The problem named "Desktop Computer Set", which S12-code pre-service teacher posed in the context of change-relationships, is given below.

Desktop Computer Set

Furkan wants to buy a desktop computer set, and, going to a store selling computers and parts. This store has a sales campaign. In this campaign, a monitor a case, a keyboard, a mouse, and two speakers can all be taken together with a more appropriate price tag. The prices of this store are given in Table 6.

Table 6

The Prices of Stores

Product	Price (TL)
Campaign products	1700 or 2100
Monitor	500, 645 or 900
Case	750
Keyboard and mouse	320 or 450
1 speaker	65 or 110

Problem-1: Furkan wants to buy these products separately or use the campaign. What is the lowest and highest price for this?

Problem-2: The store offers three different monitors, two different keyboards and a mouse, two different speakers. There is only one option for the case. How many different desktop computers can Furkan create?

Problem-3: Since Furkan can spend 1975 TL, he wants to buy the most expensive desktop computer set he can get with his money. So how can this selection be picked up?

In the problem named "Desktop computer set" posed by the pre-service teacher with S12 code, there are various computer parts and alternative prices for them. Here, if the student gets a desktop computer, the minimum or maximum wage account is asked. In addition, how many different combinations can be made is asked. This problem is directed at examining the changes and relationships within a situation that students may encounter in the real world because this problem emphasizes the changes and relationships between both the real world and the edited event, phenomenon, or situations. The contents of change-relationships include functions of algebraic expressions, equations, inequalities, table and graphical representations and algebraic topics from traditional mathematical subjects (OECD, 2013, pp. 33-35). In this direction, it can be said that the students are able to recognize the change-relationships in the given situation and transform them into a mathematical world, where the mathematical process skills are to be employed on and the interpretation of the findings obtained later is possible. This problem can be considered in the change and relationships in terms of mathematical content. The problem titled "Article" which S7 code pre-service teacher posed in space-shape content is given below.

Article

> The teacher wants students to write an article on rectangular paper with a short edge of 16 cm and a long edge of 35 cm. The teacher wants a space of 2 cm from the top, a space of 3 cm below, and a space of 1.5 cm from the right and left edges to be left blank. Considering these precautions, how many square centimeters are the areas of the smallest rectangular area to enclose the article to be written?

It is required to write an article under certain conditions on a paper with a rectangular shape given the length of the problem named "Article" posed by the S7 code pre-service teacher. In addition, the area of the smallest rectangle that can contain this article is questioned. In this problem, the smooth geometric shape deals with the situation of reflection in the real world. Since the problem is related to geometry, it can be said that this problem is related to the space-shape content in terms of mathematical content. This is because space-shape content deals with phenomena that appear frequently and are frequently encountered in the physical world. Phenomena, such as patterns, properties, locations and centers, representations, coding and recoding of visible information, directions of real shapes and dynamic interactions, are in the space-shape content. The space-shape content generally falls into the field of geometry. Space-shape content includes actions, such as perspective drawings, map drawings, drawing and transforming shapes, three-dimensional views, representation of shapes (OECD, 2013, pp. 33-35).

The problems posed by the participants in this study did not have a balanced distribution concerning mathematical content. Particularly, the participants did not mostly prefer to develop problems in terms of quantity and uncertainty-data content. This finding may be due to the difficulty of the nature of the mathematical concepts in these contents or the beliefs of the participants about these contents. It was understood that the participants in the research found and posed real-life problems more easily in

the fields of change-relationship and geometry. Participants may have difficulties in finding and establishing real-life problems in other content areas. Another reason might be the nature of PISA contents. Because participants have a course on PISA and ML, they may tend to pose a problem on change and relationship. PISA includes more problems with change and relationship than uncertainty.

The findings of the mathematics teachers and pre-service teachers in the study are examined in terms of the traditional mathematical subject in ML. The findings are shown in Table 7.

Table 7

Distribution of Posed Problems concerning *Mathematical Subject*

No	Mathematical subject	Group				Total	
		Pre-service teacher		Teacher			
		f	%	f	%	f	%
1.	Functions	-	-	1	7.1	1	1.9
2.	Algebraic expressions	1	2.7	-	-	1	1.9
3.	Equations and inequalities	8	21.6	2	14.2	10	19.6
4.	Coordinate system	-	-	-	-	-	-
5.	Relations between 2D and 3D geometric objects	5	13.5	5	35.7	10	19.6
6.	Measuring	1	2.7	1	7.1	2	3.9
7.	Numbers and number sets	2	5.4	1	7.1	3	5.8
8.	Arithmetic operations	6	16.2	1	7.1	7	13.7
9.	Percent, rate and fractions	5	13.5	1	7.1	6	11.7
10.	Counting principles	-	-	-	-	-	-
11.	Estimation	1	2.7	-	-	1	1.9
12.	Data, collection, presentation and interpretation	3	8.1	-	-	3	5.8
13.	Data diversity and identification of this diversity	3	8.1	2	14.2	5	9.8
14.	Sample and sampling	-	-	-	-	-	-
15.	Chance and probability	2	5.4	-	-	2	3.9
	Total	37	100	14	100	51	100

The problems posed by the participants included the most equations and inequalities and the relations between 2 and 3-dimensional geometric objects. Besides, sample and sampling, counting principles, coordinate systems, etc. have not been found to have any problems. Functions, algebraic expressions, estimation, etc. are seen to be the subjects that are included in the least number of problems.

In this study, the problems developed by participants in ML were different in terms of mathematical subjects. However, in parallel with the previous findings, the subjects of change-relationships and space-shape contents were more involved in the problems. It was found that the subjects included in the quantity and uncertainty-data contents were less involved in the problems.

Mathematics teachers and pre-service teachers' problems that they posed for ML are examined in terms of mathematical processes, and the findings obtained are presented in Table 8.

Table 8

Distribution *of Posed Problems* concerning *Mathematical Process*

Group	Mathematical processes							
	Formulating		Employing		Interpreting		Total	
	M	SD	M	SD	M	SD	M	SD
Pre-service teacher	2.15	1.21	4.38	1.60	2.46	1.56	9.0	3.62
Teacher	4.40	0.89	5.60	0.89	4.0	1.58	14.0	1.87
Total	2.77	1.51	4.72	1.52	2.88	1.67	10.38	3.92

The participants in this study used the most employing and least formulating mathematical processes in the problems they posed for ML. Teachers and pre-service teachers were found to have a higher average of employing than other process skills.

The problem of the S1's named "Competition", which includes the skills of employing and interpreting from mathematical process skills, is shown in Table 9.

Table 9

Competition

Criteria	Material Usage	Time	Cooking form	Nutritive value	Taste
Scores	20	20	15	30	25

In the food competition, which is given by the above table cooks, there are the highest scores for the five criteria. Ranking in the competition will be based on the sum of the points the competitors get from each criterion. In case of an equality of the total scores, the competition with a high score from nutritional value criterion will come forward. The scores of the five chefs at the end of the competition are given in Table 10.

Table 10

The Scores of the Five Chefs

Criteria Persons	Material Usage	Time	Cooking form	Nutritive value	Taste
Gizem	5	20	10	20	15
Damla	10	20	10	25	20
Fatma	5	20	10	10	20
Semih	10	20	15	15	10
Duru	5	20	10	30	10

Problem-1: If the competitor with the lowest total score had received a full score from the nutritional value criterion, what would be the ranking?

Problem-2: When we rank scores from highest to lowest, what happens to Semih in the competition?

Problem-3: Indicate "True" or "False" for each of the following statements.

a.) If Gizem received full marks from the criteria for material use, it would have passed the Damla.

b.) If Fatma took 5 points more than the nutritional value criterion, it would be in the same order as Semih.

c.) It would be in the same order as Semih if the score Gizem received from the taste criteria, and the score it received from the nutritional value were replaced.

It can be said that in the problem named "Competition" posed by the pre-service teacher with S1 code, the skills of employing and interpreting take place in terms of mathematical processes. In this problem, mathematical operations, such as arithmetic summing and table reading, are required, and these operations describe the mathematical ability to employ. Because employing describes the use of mathematical concepts, facts, processes, and reasoning of individuals to solve mathematically formulated problems to obtain a set of mathematical decisions (OECD, 2013, pp. 29-30). Moreover, it can be said that the results or decisions obtained as a result of the employing process reflect the interpreting skills in the context of the real-life i.e., the problem. Interpreting is defined as the capacity of individuals to interpret them in a real-life problem by showing mathematical solutions, conclusions, or decisions. This mathematical process can also be defined as an evaluation process (OECD, 2013, pp. 29-30). The "Gold Mine" problem, which is posed by the T2 code mathematics teacher and includes the skills of formulating, employing and interpreting, is given below.

Gold Mine

A company that tries to find a gold mine collects samples by making excavations. The depths in which the four collected samples are taken are given in Table 11.

Table 11

The Depths in Which the Four Collected Samples

Sample	Depth
K	120 m
L	50 m
M	98 m
N	80 m

Problem-1: How many meters do the average of the depths of gold samples taken according to the table?

Problem-2: The miners could go down to 90m deep in the first week of their work. According to which gold samples they reached?

A) K-L B) L-M C) M-N D) L-N

Problem-3: How many meters in depth could a miner who reached the M gold sample but could not reach the K sample?

A) 121 B) 119 C) 97 D) 90

It can be said that in the problem named "Gold Mine" posed by the teacher with T2 code, the skills of formulating, employing and interpreting take place in terms of mathematical processes. Students need to establish and formulate a mathematical structure to solve this problem. This is because formulating means that individuals can recognize situations in which they can use mathematical knowledge and skills and, after their definition, can make mathematical constructs for a problem presented or presented in the theoretical context. Formulation demonstrates the ability of individuals to analyze, construct and solve a problem and to reveal basic mathematical knowledge and skills (OECD, 2003, p. 28). Later, mathematical manipulation within the mathematical structure established by the students is considered as the ability to employ. Because mathematical concepts, facts, processes, and reasoning in problem-solving carry out many mathematical operations that require individuals to get results and find solutions in the process of employing. For example, arithmetic addition, equation solving, reduction based on mathematical assumptions, table and graph reading, data analysis can be seen as such mathematical operations (OECD, 2013, p. 29). The ability of the students to evaluate the results and decisions they have made for the given problem reflects the interpretation process. Assessment requires that certain results or solutions be produced. In the context of PISA ML, the interpretation process refers to the interpretation of these results or solutions as they are transferred to a real-life situation (OECD, 2013, pp. 29-30).

In this study, employing skills are given more concerning mathematical process skills of the problems developed by participants in ML. Formulation and interpretation skills are also very important for ML, but they have been less involved in developed problems. This finding may be interpreted as a result of the operational oriented viewpoints and beliefs of the participants in mathematics and mathematics education. Findings for comparison of mathematical process skill mean scores for the problems that teachers and pre-service teachers have developed are shown in Table 12.

Table 12

Mann Whitney-U Test Results of Mathematical Process Scores of Participants

	Group	n	Mean Rank	Sum of Ranks	U	p
Formulating	Pre-service teacher	13	7.15	93.0	2.00	.002*
	Teacher	5	15.60	78.0		
Employing	Pre-service teacher	13	8.35	108.50	17.50	.113
	Teacher	5	12.50	62.50		
Interpreting	Pre-service teacher	13	8.19	106.50	15.50	.086
	Teacher	5	12.90	64.50		
Total	Pre-service teacher	13	7.46	97.0	6.00	.009*
	Teacher	5	14.80	74.0		

*p<.05

It was found that there was a statistically significant difference in the total scores of the mathematical process skills (U = 6.00; p <.05) and the formulating scores (U = 2.00; p <.05) for the teachers and pre-service teachers. It seems that this difference in formulating and total points is in favor of the teachers. According to this finding, it can be said that teachers reflect mathematical process skills better in problems. Moreover, there was no significant difference between employing (U = 17.50; p> .05) and interpreting scores (U = 15.50; p> .05) of teachers and pre-service teachers from mathematical process skills. Thus, it can be said that teacher and pre-service teachers reflect the skills of employing and interpreting from mathematical process skills at similar levels in problems. Teachers were ahead of formulating skills and overall total process skills scores compared to pre-service teachers. An underlying reason for this finding may be explained that teachers are more experienced in formulating skills.

Discussion, Conclusion and Recommendations

In this study, the problem-posing skills of mathematics teachers and pre-service teachers who took the ML course were examined. The problems that participants posed for the ML were examined within the scope of the ML measurement and evaluation criteria of the PISA.

In the analysis of the obtained data, it was seen that the problems posed in general were open-ended problems according to problem type. The vast majority of the problems that mathematics teachers and pre-service teachers develop were open-ended problems. After open-ended problems, multiple-choice problems were developed more in number. There were very few problems in the true-false type. This is demonstrated by the participants that open-ended problems are important in the measurement and development of ML. This is because the process, content and context skills that are targeted within the ML are dependent on the nature of the problems and problems being addressed. Sahin and Basgul (2018) found that mathematics pre-service teachers usually posed open-ended problems, but they less preferred to pose multiple-choice and short answer problems after the ML training. Moreover, this result of this study can be seen as the positive reflections of the course that the participants take for ML because of the nature and assessment of ML are compatible with open-ended problems. It is also seen in the findings of this study that it would not be appropriate to use predominantly multiple-choice or true-false problems to develop or measure ML skills. In another study in related literature, factor analysis was carried out concerning the structural features of the ML questions in the study conducted by Altun and Bozkurt (2017). The six-factor structure of the question has been put forward in the form of algorithmic processing, the dominance of rich mathematical content, mathematical inference, mathematical proposal development and/or improved proposal interpretation, comprehension of vital state in mathematical language, the understanding mathematical language in life. It can be argued that the goals of the open-ended structure of the problems that are developed in the teaching, or measurement within the ML are one of the facilitating indicators.

In this study, the problems developed by the participants were mostly concentrated at L4 about the level of difficulty. It was understood that the problems posed by the participants were at the level of L4 and later on the L3. At the highest levels, L6 and L5, a limited number of problems posed by both teachers and pre-service teachers. However, it can be said that mathematics teachers are one step ahead of developing difficult problems concerning difficulty level. More structured problems were posed for ML by the participants. On the contrary, unstructured problems are also known to be needed. In other studies carried out in Turkey, the situation is seen similar to the results observed in this study. Ulusoy and Kepceoglu (2018) found that only 8% of the problems posed by pre-service middle school mathematics teachers at reasoning level. Pre-service teachers produce procedural questions at the application level that could be solved mostly by multi-step processes rather than by reasoning. The results of this study revealed that the pre-service teachers thought that as the operational load of problems increases, the difficulty and cognitive levels of problems also increase. In another study, Iskenderoglu and Baki (2011) classified the questions in one of the 8th-grade textbooks according to the PISA mathematics proficiency scale. According to the results of this classification, it was found that there were no questions at all levels in the 8th-grade textbook. In the book examined, questions, problems, exercises and examples were found to be at Levels 1, 2, 3 and 4. Questions are mostly at Level 2 in this study. Also, Iskenderoglu, Erkan and Serbest (2013) categorized and examined the mathematics questions used in transition to high school exams implemented in Turkey according to the PISA proficiency scale. The mathematics questions in the examinations in the study did not seem to be appropriate for all levels. The questions were generally taken on levels 2, 3 and 4. There was 1 question at the 5th level, which was the highest level and no problem in the 6th level. The results obtained in this study and the corresponding levels on similar results in the literature are similar to ML results of the PISA study in Turkey. The average of the ML scores of the Turkish students in the PISA 2012-2015 exams was in the range of 2 and 3 level (MoNE, 2012, 2016). When these results are considered together, the mathematics education in Turkey has manifestly failed to reach the top levels 5 and 6 in the PISA exams. In addition, it can be said that the mathematics education does not exactly coincide with the content, process and contexts targeted at these levels. The change in the beliefs of teachers and pre-service teachers in mathematics and mathematics education can be effective in developing problems that are appropriate to ML in high-level difficulty.

According to the contexts used, occupational and personal problems were more dominantly posed by the participants in this study. Problems involving scientific and social contexts were determined to be fewer in number. It can be said that the mathematics teachers and pre-service teachers participating in the study have not similar problems concerning the context. In a study by Sahin and Basgul (2018), it was found that pre-service mathematics teachers preferred to develop more mathematical problems in personal and occupational contexts. Concerning context, it is understood that the results in the relevant literature overlap with the results of this research. In addition, it can be said that they have difficulties in developing problems in scientific and social contexts. In the related literature, there are conclusions that pre-service

teachers have difficulty in developing contextual problems. In a related study, Ulusoy and Kepceoglu (2018) found the pre-service teachers mostly preferred limited number contexts that are familiar, such as money, diet and test-solving in their problems. In another study, Bennison (2015) emphasizes the importance of context for teachers' development of the ML. The ML should not be taught in the absence of everyday context, and teachers draw from the context which is familiar and unfamiliar to learners (Machaba, 2018). The positive aspects of the ML education given to participants in this study came from the use of various contexts in the problems. However, despite the training provided, it can be said that the contexts in the posed problems are not as effective and qualified as the problems in the PISA study. This can be attributed to that the given training is within a certain period and the participants do not have sufficient knowledge and experience about the context in which they are used. We should provide experience and training to teachers and pre-service teachers in developing different contextual problems. In mathematics teaching and method courses, pre-service teachers can be given theoretical and practical information about contextual learning and context types in which mathematics is used. Activities, such as in-service training, seminars, workshops, are provided to the in-service mathematics teachers about contextual learning.

The problems posed by the participants were found to be more in change-relationships and space-shape concerning mathematical content, but less in the uncertainty-data and quantity content. Teachers posed problems in the most space-figure content, at least in the uncertainty-data content. Pre-service teachers posed more problems in the content of change-relationships, at least in quantity content. It can be said that participants have difficulty in developing problems in uncertainty-data and quantity content. The difficulties of the participants may also arise from the nature of some mathematical concepts. Participants seem to feel more comfortable with developing problems in change-relationships and space-shape content. Sahin and Basgul (2018) showed that the results of this research conducted with pre-service mathematics teachers and the results of this research differ according to the content dimension of the problems. Also, quantity and uncertainty-data contents were more dominant in the problems posed by pre-service mathematics teachers (Sahin & Basgul, 2018). The different results in the studies may be the results of different sample groups and training for ML. A mathematically literate individual can predict, interpret, solve daily life problems, reason in numerical, graphical and geometric situations, and communicate using mathematics (Ojose, 2011). In this context, the interpretation and creation of information with mathematical content in ML should be among the qualifications aimed to be developed in mathematics teaching. In addition, competencies should be aimed to interpret and represent words, forms, symbols, numbers and materials, and mathematical explanations, processes and results (Alsina, 2015; cited in Diaz, 2017). Teachers should integrate their content and/or skills to solve problems and use basic mathematical content for ML (Machaba, 2018). In this study, participants were found to pose more comfortable and effective problems in some mathematics content after ML education. However, in mathematical content, such as uncertainty-data and quantity, fewer and less effective problems posed. This may be due to the beliefs and perceptions of the participants towards ML. It can also be based

on reasons, such as the difficulty and refusal of the participants to experience mathematical content. Mathematics teachers need to develop their skills in problem-posing for ML in different mathematical contents. Mathematics teachers can keep up-to-date and improve their mathematical content knowledge with the help of current journals, books and other related publications.

The problems posed by the participants in this study were higher than the average scores of the skills of employing concerning mathematical processes rather than formulating and interpreting. Mathematics teachers and pre-service teachers have been determined to have a similar situation. Participants seem to have limitations or difficulties in establishing situations involving formulating and interpreting process skills at developing problems. This result may have been influenced by the approach and understanding of problem-based learning and the teaching process in mathematics education. In the related literature, it was found that the problems developed by pre-service mathematics teachers had more productive skills and associative, especially reflective skills, were very low (Sahin & Basgul, 2018). This result can be seen as a direct reflection of the participants' beliefs about mathematics education because they perceive mathematics as more dominant in the operational dimension.

There were limitations and difficulties in the studies conducted with teachers and pre-service teachers within the scope of ML. In the study conducted by Kabael and Barak (2016), the development of ML of secondary school pre-service mathematics teachers was examined through some PISA questions. Participants were found to be at a disadvantage in mathematization, especially in creating relationships between variables in the problem and in graphical interpretation, while ML was not at the expected level. Lestari et al. (2017) found that many high school mathematics teachers did not have enough knowledge of what ML was and that the exercises included in books for specific topics were in the form of procedural solutions. In addition, many teachers had pessimistic considerations in integrating ML into learning-teaching mathematics. Gurbuz (2014) stated that pre-service teachers were more successful in classifying PISA questions than writing. Moreover, in the study, most of the pre-service teachers reported that they were not aware of the concepts of PISA and ML before teaching. Based on these and similar studies, it is understood that teachers and pre-service teachers have various difficulties concerning theoretical knowledge and application dimensions for ML.

In many countries, the aim of mathematics education is to improve the mathematical competencies of students beyond the operational and conceptual knowledge. Students need to engage in a wide variety of activities, such as reasoning, communicating, connecting, modelling and problem-solving. Teachers should be able to identify their competence needs in activities they want to use in teaching or measuring in mathematical activities (Pettersen & Nortvedt, 2018). In this context, the targeted process skills must be reflected in an effective approach to the problem activities used for the development or measurement of ML. For example, Brown and Schafer (2006) adopted the modeling approaches used as ML tools in their work: formulating, analyzing the model in answering mathematical questions, interpreting

and validating mathematical results concerning context, and reinforcing modeling approach. It was determined that there was a statistically significant difference in the comparison of the mathematical process scores of teachers and pre-service teachers in this research in favor of teachers in the formulation and total scores. It was found that the teachers had higher scores than the pre-service teachers in the total score of process skills. This can be interpreted as that the teachers are one step ahead of the pre-service teachers in reflecting the process skills with problem posing. Although the same ML course is taken, it can be said that this result is due to the richer life experiences of the teachers concerning knowledge, skills and experience than the pre-service teachers.

Ozgen and Kutluca (2013) examined the views of primary school pre-service mathematics teachers on the definition, importance and development of ML. Pre-service teachers had also identified a traditional literacy approach to the definition of ML. Some studies found that pre-service mathematics teachers had limited and incomplete knowledge of the concept of ML (Sefik & Dost, 2016; Yenilmez & Ata, 2013). In the study conducted by Genc and Erbas (2017), high school mathematics teachers stated that the necessity of mathematics education program emphasizing mathematical literacy, content categories, aimed to learn objectives should be defined more clearly. Moreover, in the study conducted by Altun and Akkaya (2014), teachers expressed the reasons for poor achievement in PISA mathematics examinations as a teaching system, examinations, program, teacher and physical environment. Steps should be taken to eliminate these reasons with mathematics educators.

The participants in this study had positive reflections on the problem-posing for ML after the course even though they did not have knowledge, skills and experiences for ML and problem-posing before the ML course. In their study, Sahin and Basgul (2018) stated that most of the problems posed by pre-service mathematics teachers after the training for ML were appropriate to the nature of the PISA study. In this respect, it can be said that the courses or training given to mathematics teachers and pre-service teachers improve their problem-posing skills positively. It can be said that it is especially difficult to develop ML activities based on mathematical problem-solving. Stacey (2005) argued that the important goal of mathematical problem-solving teaching was to understand the problem-solving processes of students, to design excellent tasks and to effective classroom practices. In this context, mathematics teachers' problem-posing activities for ML and using these problems in their classrooms can be seen as an important goal for mathematics education.

Recommendations

It can be said that the teachers in this study are one step ahead of that they are more successful than the pre-service teachers in posing ML problems. In related studies, it was known that teacher and pre-service teachers had various difficulties or limitations towards ML. Teachers and pre-service teachers' knowledge, skills and experiences for ML should be provided effectively and adequately. Targeted development can be achieved in training, courses, publications, projects, research and effective learning tools and materials for teachers and pre-service teachers. ML should be seen as a general framework or umbrella in mathematics education. With this approach,

increasing awareness about ML will highly likely to facilitate the targeted development more easily.

It was understood that there was a need for theoretical and practical training that demonstrate the application of ML in different problem types. Challenges to pose unstructured problems for ML should be removed. The situations and content of mathematics used in ML problems should be made more effective and diversified. The importance of teachers' skills to design different contextual problems should be emphasized. Difficulties in reflecting mathematical processes to ML problems should be eliminated. The importance, necessity and benefits of the ML course have been revealed once again with the results of this study. There were positive reflections on the relationship between ML and the mathematical problem and problem-solving.

This research has limitations in some aspects, such as the lack of pre-assessment, interviews, and reflective thinking writings. In addition, the number of participants in this study and the number of problems posed by the participants can be seen as a limitation. Considering these limitations, more comprehensive studies can be conducted in future studies.

References

Altun, M., & Akkaya, R. (2014). Mathematics teachers' comments on PISA math questions and our country's students' low achievement levels. *Hacettepe University Journal of Education, 29*(1), 19-34.

Altun, M., & Bozkurt, I. (2017). A new classification proposal for mathematical literacy problems. *Education and Science, 42*(190), 171-188.

Bennison, A. (2015). Developing an analytic lens for investigating identity as an embedder of numeracy. *Mathematics Education Research Journal, 27*(1), 1–19.

Brown, B., & Schäfer, M. (2006). Teacher education for mathematical literacy: A modelling approach. *Pythagoras, 64*, 45-51.

Cai, J. (1998). An investigation of US and Chinese students' mathematical problem posing and problem solving. *Mathematics Education Research Journal, 10*(1), 37-50.

Colwell, J., & Enderson, M.C. (2016). When I hear literacy: Using pre-service teachers' perceptions of mathematical literacy to inform program changes in teacher education. *Teaching and Teacher Education, 53*, 63–74.

De Lange, J. (1987). *Mathematics, insight, and meaning: Teaching, learning, and testing of mathematics for the life and social sciences.* Unpublished doctoral dissertation, Rijksuniversiteit Utrecht, The Netherlands.

De Lange, J. (2001). *Mathematics for literacy*. Paper Presented at the 2001 National Forum on Qualitative Literacy, National Academy of Sciences. Washington D.C. Retrieved 18 February, 2018 from

https://pdfs.semanticscholar.org/987f/4158fbe08bab5a0cc68cd51849f8bd05a612.pdf.

De Lange, J. (2003). Mathematics for literacy. In B. Madison & L. Steen (Eds.), *Quantitative literacy: Why numeracy matters for schools and colleges* (pp. 75–89). New Jersey: The National Council on Education and the Disciplines.

Diaz, L. D. E. (2017). The teaching and learning process of mathematics in the primary education stage: A constructivist proposal within the framework of key competences. *IEJME - Mathematics Education, 12*(7), 709-713.

English, L. D. (1997). The development of fifth-grade children's problem-posing abilities. *Educational Studies in Mathematics, 34*(3), 183-217.

English, L., & Sriraman, B. (2010). Problem solving for the 21st century. In Sriraman B., English L. (Eds.) *Theories of mathematics education* (pp. 263-290). Berlin: Springer.

Evans, D. (2017). Examining the literacy within numeracy to provide access to the curriculum for all. *International Perspectives on Inclusive Education, 11*, 35-51.

Genc, M., & Erbas, A.K. (2017). Lise matematik ogretmenlerinin matematik okuryazarligi baglaminda matematik ogretim programina iliskin gorusleri [High school mathematics teachers' views on the mathematics curriculum in the context of mathematics literacy]. *Turkish Computer and Mathematics Education Symposium - 3*, 17-19 May 2017, Afyon, pp. 547-551.

Gonzales, N. A. (1998). A blueprint for problem posing. *School Science and Mathematics*, *98*(8), 448-456.

Gurbuz, M.Ç. (2014). *PISA matematik okuryazarlik ogretiminin PISA sorusu yazma ve matematik okuryazarlik duzeyleri uzerine etkisi* [The effect of PISA mathematical literacy teaching on writing PISA questions and mathematical literacy]. (Unpublished Master's Thesis). Uludag University, Institute of Educational Sciences, Bursa.

Iskenderoglu, T.A., & Baki, A. (2011). Ilkogretim 8. sinif matematik ders kitabindaki sorularin PISA matematik yeterlik duzeylerine gore siniflandirilmasi [Classification of the questions in an 8th grade mathematics textbook with respect to the competency levels of PISA]. *Education and Science, 36*(161), 287-301.

Iskenderoglu, T.A., Erkan, I., & Serbest, A. (2013). 2008-2013 Yillari arasindaki SBS matematik sorularinin PISA matematik yeterlik duzeylerine göre siniflandirilmasi [Classification of SBS mathematics questions between 2008-2013 years with respect to PISA competency levels]. *Turkish Journal of Computer and Mathematics Education, 4*(2), 147-168.

Kabael, T., & Barak, B. (2016). Ortaokul matematik ogretmeni adaylarinin matematik okuryazarlik becerilerinin PISA sorulari uzerinden incelenmesi [Research of middle school pre-service mathematics teachers' mathematical literacy on PISA items]. *Turkish Journal of Computer and Mathematics Education, 7*(2), 321-349.

Kilpatrick, J. (2001). Understanding mathematical literacy: The contribution of research. *Educational Studies in Mathematics, 47*(1), 101–116.

Kilpatrick, J. (1987). Problem formulating: Where do good problems come from? In A. H. Schoenfeld (Ed.), *Cognitive science and mathematics education* (pp. 123-147). New Jersey, Lawrence Erlbaum Associates, Inc.

Lailiyah, S. (2017). Mathematical literacy skills of students' in term of gender differences. *The 4th International Conference on Research, Implementation, and Education of Mathematics and Science (4th ICRIEMS), doi: 10.1063/1.4995146.*

Lestari, N.D.S., Juniati, D., & Suwarsono, S. (2017). Preliminary study: Mathematics' teacher conception in supporting the ıntegration of mathematics' literacy and mathematics teaching and learning. International Conference on Mathematics: Education, Theory, and Application (ICMETA), Proceeding ICMETA: Vol. 1/2017, June 27th 2017, pp.76-83.

Lowrie, T. (2002). Designing a framework for problem posing: Young children generating open-ended tasks. *Contemporary Issues in Early Childhood, 3*(3), 354-364.

Machaba, F.M. (2018). Pedagogical demands in mathematics and mathematical literacy: A case of mathematics and mathematical literacy teachers and facilitators. *EURASIA Journal of Mathematics, Science and Technology Education, 14*(1), 95-108.

Malasari, P.N., Herman, T., & Jupri, A. (2017). The construction of mathematical literacy problems for geometry. International Conference on Mathematics and Science Education (ICMScE), pp.1-7. doi :10.1088/1742-6596/895/1/012071

Matteson, S. M. (2006). Mathematical literacy and standardized mathematical assessments. *Reading Psychology*, *27*(2), 205-233.

McMillen, S. E., del Prado Hill, P.; & Friedland, E. S. (2010). Literacy strategies in mathematics instruction: A look at New York State classrooms. *New York State Mathematics Teachers Journal, 60*(3), 101–110.

Memnun, D.S., Akkaya, R., & Hacıomeroglu, G. (2012). The effect of prospective teachers' problem solving beliefs on self-efficacy beliefs about mathematical literacy. *Journal of College Teaching & Learning, 9*(4), 289- 298.

Ministry of National Education [MoNE]. (2012). *PISA Türkiye* [PISA Turkey]. Ankara: EARGED Yayinlari.

Ministry of National Education [MoNE]. (2016). *Uluslararasi ogrenci degerlendirme programi - PISA 2015 ulusal raporu* [International student assessment program. PISA 2015 national report]. Ankara: EARGED Yayinlari.

Ministry of National Education [MoNE]. (2017). *Mathematics curriculum and guidance (grades 9-12)*. Ankara: Author.

National Council of Teachers of Mathematics [NCTM]. (2000). *Principles and standards for school mathematics*. Reston, VA: Author.

Ojose, B. (2011). Mathematics literacy: Are we able to put the mathematics we learn into everyday use? *Journal of Mathematics Education, 4*(1), 89-100.

Organization for Economic Co-operation and Development (OECD). (2000). Measuring student knowledge and skills: The PISA 2000 assessment of reading, mathematical and scientific literacy. Paris: PISA, OECD Publishing. Doi:10.1787/9789264181564-en.

Organization for Economic Co-Operation and Development [OECD]. (2003). *The PISA 2003 assessment framework – mathematics, reading, science and problem solving knowledge and skills*. Paris: Author.

Organization for Economic Co-Operation and Development [OECD]. (2013). *PISA 2012 assessment and analytical framework: Mathematics, reading, science, problem solving and financial literacy.* Paris: OECD Publishing. Doi: 10.1787/9789264190511-en.

Ozgen, K., & Bindak, R. (2008). Matematik okuryazarligi oz-yeterlik olceginin gelistirilmesi [The development of self-efficacy scale for mathematics literacy]. *Kastamonu Education Journal, 16*(2), 517-528.

Ozgen, K., & Kutluca, T. (2013). Ilkogretim matematik ogretmen adaylarinin matematik okuryazarligina yonelik goruslerinin incelenmesi [An investigation of primary mathematics pre-service teachers' views towards mathematical literacy]. *Dicle University Social Sciences Institute Journal*, *5*(10), 1-21.

Ozgen, K. (2015). Ilkogretim matematik ogretmen adaylarinin matematik okuryazarligina yonelik oz yeterlik inancları [Primary prospective mathematics teachers' self-efficacy beliefs towards mathematical literacy]. *Electronic Journal of Education Sciences, 4*(7), 1-12.

Ozgen, K., Ozer, Y., & Arslan, E. (2019). Ogretmenlerin matematik okuryazarligi ve problem kurma oz yeterlik inançlarinin incelenmesi [Investigation of teachers' mathematical literacy and problem posing self-efficacy beliefs]. *Journal of Kırsehir Education Faculty, 20*(1), 33-51.

Pettersen, A., & Nortvedt, G.A. (2018). Identifying competency demands in mathematical tasks: Recognizing what matters. *International Journal of Science and Mathematics Education*, *16*(5), 949-965.

Pilten, P., Divrik, R., Pilten, G., & Ebret, A. (2017). Sınıf ogretmeni adaylarinin matematiksel okuryazarlik kavramina iliskin metaforik algilari [Prospective primary teachers' metaphorical perceptions about the concept of mathematical literacy]. *Trakya University Journal of Education, Special Issue*, 47-67.

Pugalee, D. K. (1999). Constructing a model of mathematical literacy. *The Clearing House*, *73*(1), 19-22.

Saenz, C. (2009). The role of contextual, conceptual and procedural knowledge in activating mathematical competencies (PISA). *Educational Studies in Mathematics, 71*(2), 123–143

Salgado, F.A. (2016). Developing a theoretical framework for classifying levels of context use for mathematical problems. In White, B., Chinnappan, M. & Trenholm, S. (Eds.). *Opening up mathematics education research* (Proceedings of the 39th annual conference of the Mathematics Education Research Group of Australasia), pp. 110–117. Adelaide: MERGA.

Silver, E. A. (1987). Foundations of cognitive theory and research for mathematics problem- solving instruction. In *Cognitive Science and Mathematics Education* (Ed. Schoenfeld H. A.). New Jersey: Routledge.

Silver, E. A., & Cai, J. (1996). An analysis of arithmetic problem posing by middle school. *Journal for Research in Mathematics Education, 27*(5), 521-539.

Stacey, K. (2005). The place of problem solving in contemporary mathematics curriculum documents. *Journal of Mathematical Behavior, 24*(3-4), 341-350.

Stacey, K. (2010). Mathematical and scientific literacy around the world. *Journal of Science and Mathematics Education in Southeast Asia, 33*(1), 1-16.

Stacey, K. (2015). The real world and the mathematical world. In K. Stacey & R. Turner (Eds.), *Assessing mathematical literacy: The PISA experience* (pp. 57-84). Cham, Switzerland: Springer International Publishing.

Stoyanova, E., & Ellerton, N. F. (1996). A framework for research into students' problem posing in school mathematics. In P. Clarkson (Ed.), *Technology in mathematics education* (pp.518–525), Melbourne: Mathematics Education Research Group of Australasia.

Steen, L.A. (1990). *On the shoulders of giants. New approaches to numeracy*. Washington, DC: National Academy Press.

Steen, L.A. (2001). *Mathematics and democracy: The case for quantitative literacy*. Princeton, NJ: National Council on Education and the Disciplines.

Sumen, O.O., & Calisici, H. (2016). The relationships between teachers' mathematical literacy self-efficacy beliefs, metacognitive awareness and problem solving skills. *Participatory Educational Research, Special Issue 2016-II*, 11-19.

Sahin, O., & Basgul, M. (2018). Matematik ogretmeni adaylarinin PISA problemi kurma becerilerinin incelenmesi [Investigation of PISA problem posing skills of mathematics teacher candidates]. *International Journal of Field Education, 4*(2), 128-148.

Sefik, O., & Dost, Ş. (2016). Ortaogretim matematik ogretmen adaylarinin matematik okuryazarligi hakkındaki gorusleri [Secondary preservice mathematics teachers' views on mathematical literacy]. *Necatibey Faculty of Education Electronic Journal of Science and Mathematics Education, 10*(2), 320-338.

Tekin, B., & Tekin, S. (2004). Matematik ogretmen adaylarinin matematiksel okuryazarlik duzeyleri uzerine bir arastirma [A research on mathematical literacy levels of preservice mathematics teachers]. *MATDER*, Retrieved 18 February, 2018 from http://www.matder.org.tr/Default.asp?id=85.

Ulusoy, F., & Kepceoglu, İ. (2018). The contextual and cognitive structure of prospective middle school mathematics teachers' problems in semi-structured problem-posing context. *Journal of Kırsehir Education Faculty, 19*(3), 1937-1963.

Unlu, M., & Sarpkaya-Aktas, G. (2017). Ortaokul matematik ogretmeni adaylarinin cebirsel ifade ve denklemlere yonelik kurduklari problemlerin incelenmesi. [Examination of pre-service elementary mathematics teachers' problems posed about algebraic expressions and equations]. *Turkish Journal of Computer and Mathematics Education, 8*(1), 161-187.

Yenilmez, K., & Ata, A. (2013). Matematik okuryazarligi dersinin ogretmen adaylarinin matematik okuryazarligi ozyeterligine etkisi [Effects of mathematical literacy course on pre-service mathematics teachers' self-efficacy levels of mathematical literacy]. *The Journal of Academic Social Science Studies, 6*(2), 1803-1816.

Yildirim, A., & Simsek, H. (2005). *Sosyal bilimlerde nitel arastirma yontemleri* [Qualitative research methods in the social sciences]. Ankara: Seckin Yayincilik.

Yin, R. (2003). *Case study research: Design and methods*. Thousand Oaks, California: Sage Publication.

Matematik Okuryazarlığına Yönelik Problem Kurma Becerileri: Öğretmen ve Öğretmen Adayları Örneği

Atıf:

Ozgen, K. (2019). Problem posing skills for mathematical literacy: The sample of teachers and pre-service. *Eurasian Journal of Educational Sciences, 84*, 179-212, DOI: 10.14689/ejer.2019.84.9

Özet

Problem Durumu: Okullarda verilen matematik eğitiminin en önemli amaçlarından biri de öğrencilerin matematik okuryazarlığı becerilerini geliştirmektir. Bu çalışmada, öğrencilerin matematik okuryazarlığı becerilerini geliştirmede önemli faktörlerden birisi olan öğretmen faktörü üzerinde durulacaktır. Bu bağlamda, matematik öğretmen ve öğretmeni adaylarının matematik okuryazarlığına yönelik bilgi, beceri, deneyim ve pedagojik yaklaşımlara sahip olması gerekir. Bunun için meslekteki öğretmenler ve yetiştirilen öğretmen adaylarının matematik okuryazarlığına yönelik problem etkinlikleri tasarlamaları ve sınıflarında uygulamaları beklenmektedir. Bu çalışmada, Matematik Okuryazarlığı eğitimi (lisans ve lisansüstü düzeyde dersi almış olmak) almış olan matematik öğretmen ve öğretmeni adaylarının matematik okuryazarlığına yönelik problem etkinliği tasarlama becerileri üzerinde odaklanılacaktır.

Araştırmanın Amacı: Bu araştırmanın amacı, matematik öğretmeni ve öğretmen adaylarının matematik okuryazarlığına yönelik problem geliştirme becerilerini incelemektir. Araştırmada öğretmen ve öğretmen adaylarının matematik okuryazarlığına yönelik geliştirdikleri problemlerin türü, zorluk düzeyi, matematiğin kullanıldığı durumlar (bağlam), matematiksel içerik, konular ve süreçler açısından incelenecektir. Ayrıca öğretmen ve öğretmen adaylarının matematik okuryazarlığına yönelik geliştirdikleri problemlerin belirlenen kriterler açısından karşılaştırılması yapılacaktır.

Araştırmanın Yöntemi: Bu araştırma, özel durum çalışması modeli ile gerçekleştirilmiştir. Araştırmanın çalışma grubu, lisans ve lisansüstü eğitimde matematik okuryazarlığı dersini alan 13 matematik öğretmeni adayı ve 5 ortaokul matematik öğretmeninden oluşmaktadır. Katılımcıların belirlenmesinde matematik okuryazarlığı dersini almış olmaları kriter olarak seçildiğinden amaçlı örnekleme yöntemine başvurulmuştur. Çalışmada katılımcılar ders sürecinden sonra bireysel olarak problem geliştirme sürecinde bulunmuşlardır. Matematik okuryazarlığı dersi kapsamında öncelikle kuramsal bilgiler verilmiş ve daha sonra onlardan sınıf içi ve dışında çeşitli uygulamalar yapmaları istenmiştir. Matematik okuryazarlığına yönelik somut örnek problemler araştırmacı tarafından gösterilmiştir ve katılımcılar tarafından da çeşitli uygulamalar yapılmıştır. PISA çalışmalarında geçmiş yıllarda çıkmış örnek problemler incelenmiştir. Bu ders sonunda beklenti öğretmen ve öğretmen adaylarının matematik okuryazarlığına yönelik bilgi, beceri ve deneyimlerinin gelişmiş olması yönündedir. Bu bağlamda etkili problemler geliştirme becerilerinin gelişmiş olması beklenen bir durumdur. Bu kapsamda katılımcılardan matematik okuryazarlığını ölçmeye yönelik üç adet problem geliştirmeleri istenmiştir. Öğretmen ve öğretmen adaylarının geliştirdikleri problemlerde herhangi bir matematiksel kavram ya da konu kısıtlamasına gidilmemiştir. Bu bağlamda matematik okuryazarlığına yönelik matematiksel problem durumları tasarlamaları sorgulanmıştır. Katılımcıların geliştirdikleri problemler betimsel analiz yöntemi ile incelenmiştir. Veri analizinde PISA çalışmasında geçen kuramsal temeller çerçeve olarak kabul edilmiştir. Buna göre geliştirilen problemler; tür, zorluk düzeyi, bağlam, matematiksel süreç ve içerik açısından ele alınmıştır.

Araştırmanın Bulguları: Elde edilen verilerin analizinde geliştirilen problemlerin tür açısından genelde açık-uçlu problemler olduğu görülmüştür. Matematik okuryazarlığı kapsamında yapılan öğretim ya da ölçmelerde geliştirilen problemlerin açık-uçlu yapıda olması hedeflerin bir bakıma kolaylaştırıcı belirteçlerden biri olduğu söylenebilir. Problemler zorluk düzeyi açısından ise genelde 4. düzeyde yoğunlaştığı görülmüştür. En üst düzey olan 6. ve 5. düzeylerinde ise hem öğretmen hem de öğretmen adayları tarafından sınırlı sayıda problem geliştirilmiştir. Ancak öğretmenler zorluk düzeyi açısından zor problemler geliştirmede bir adım daha önde oldukları söylenebilir. Matematik okuryazarlığına yönelik daha çok yapılandırılmış problemler geliştirildiği görülmüştür. Aksine yapılandırılmamış problemlere de ihtiyaç duyulduğu bilinmektedir. Matematiğin kullanıldığı durumlara göre ise mesleki ve kişisel soruların daha baskın olduğu belirlenmiştir. Bilimsel ve toplumsal bağlamları içeren problemler ise sayıca daha az olduğu görülmüştür. Bu durum

matematik öğretmeni ve öğretmen adaylarında farklılaştığı söylenebilir. Katılımcıların almış oldukları matematik okuryazarlığı dersinin etkilerinden bu bağlamların ortaya çıktığı söylenebilir. Ayrıca bilimsel ve toplumsal bağlamlarda problem geliştirebilmenin güçlüklerini yaşadıkları söylenebilir. Katılımcılar tarafından geliştirilen problemler matematiksel içerik açısından değişim-ilişkiler ile uzay-şekil alanlarında daha fazla iken belirsizlik-veri ve nicelik alanlarında sayıca daha az olduğu görülmüştür. Öğretmenler en fazla uzay-şekil alanında en az ise belirsizlik-veri alanında problem geliştirmişlerdir. Öğretmen adayları ise en fazla değişim-ilişkiler alanında en az ise çokluk alanında problem geliştirmişlerdir. Katılımcıların belirsizlik-veri ve çokluk alanlarında problem geliştirmede güçlükleri olduğu söylenebilir. Değişim-ilişkiler ve uzay-şekil alanlarında problem geliştirmede kendilerini daha rahat hissettikleri görülmektedir. Matematiksel süreçler açısından işe koşma (yürütme) becerilerinin puan ortalamasının formülleştirme ve yorumlamadan daha yüksek olduğu bulunmuştur. Ayrıca öğretmen ve öğretmen adaylarının matematiksel süreç puanlarının karşılaştırılmasında formülleştirme ve toplam puanlarda öğretmenlerin lehine istatistiksel olarak anlamlı farklılık olduğu belirlenmiştir. Öğretmenlerin matematik okuryazarlığına yönelik problem geliştirmede öğretmen adaylarına göre daha başarılı oldukları söylenebilir. Katılımcıların problem geliştirmede formülleştirme ve yorumlama süreç becerilerini içeren durumları ortaya koymada sınırlılıklarının ya da güçlüklerinin olduğu görülmektedir. Bu durum probleme, problem odaklı öğrenme-öğretme sürecine ve matematik eğitimine yönelik yaklaşım ve kavrayışlarından etkilenmiş olabilir.

Araştırmanın Sonuçları ve Önerileri: Öğretmenlerin matematik okuryazarlığına yönelik problem geliştirmede öğretmen adaylarına göre daha başarılı oldukları yani bir adım daha önde oldukları söylenebilir. Matematik okuryazarlığı dersinin hem öğretmen hem de öğretmen adaylarında da ürün boyutu açısından olumlu sonuçlar verdiği görülmüştür. Bunlar matematik okuryazarlığına yönelik bilgi, beceri, deneyim ve en önemlisi farkındalık olduğu anlaşılmaktadır. Matematik okuryazarlığının farklı problem türlerinde uygulamalarını gösteren teorik ve uygulamalı eğitime ihtiyaç duyulduğu anlaşılmaktadır. Matematik okuryazarlığına yönelik yapılandırılmamış problem geliştirmeye yönelik güçlükler ortadan kaldırılmalıdır. Matematik okuryazarlığı problemlerinde matematiğin kullanıldığı durumların ve içeriğin çeşitliliği ve niteliği daha etkin hale getirilmelidir. Matematik okuryazarlığı problemlerine matematiksel süreçleri yansıtmadaki güçlükler giderilmelidir. Matematik okuryazarlığı dersinin önemi, gerekliliği ve faydaları bu çalışmanın sonuçları ile bir kez daha ortaya çıkmıştır. Matematik okuryazarlığının matematiksel problem ve problem çözme ile olan ilişkisine yönelik olumlu yansımalar ortaya çıkmıştır. Eğitim fakültesinde yetiştirilen öğretmen adaylarına ve okullarda görevde bulunan öğretmenlere matematik okuryazarlığına yönelik kapsamlı ve etkili eğitim verilmesinin faydaları, gereği ve önemi de ortaya çıkmıştır.

Anahtar Sözcükler: Matematik okuryazarlığı, Öğretmen, Öğretmen adayları, Problem Kurma.

Eurasian Journal of Educational Research 84 (2019) 213-236

Eurasian Journal of Educational Research
www.ejer.com.tr

The Impacts of a University's Organizational Reputation and Organizational Attraction on Students' Intention to Pursue

Soner POLAT[1], Gizem GUNCAVDI[2], Yaser ARSLAN[3]

ARTICLE INFO

Article History:
Received: 26 Dec. 2018
Received in revised form: 24 Aug. 2019
Accepted: 11 Oct. 2019
DOI: 10.14689/ejer.2019.84.10

Keywords
university reputation, organizational attraction, intention to pursue, international students

ABSTRACT

Purpose: This study aims to identify the impacts of a university's organizational reputation and organizational attraction on international students' intention to pursue post-graduate education in the university they study their bachelor's degree. **Research Methods:** This study is in the model of descriptive quantitative research method. The sample of this study included 231 students from 67 countries who enrolled in Kocaeli University in the 2015-2016 academic year. The data were gathered using a questionnaire that included the scale of intention to pursue and the scale of organizational attraction developed by Highhouse et al. (2003); and the scale of organizational reputation developed by Alessandri, Yang and Kinsey (2006).
Findings: The findings revealed that there were positive relationships between perceptions of international students towards the organizational reputation of the university, intention to pursue university and organizational attraction. Their perception of organizational reputation of university seemed to affect perceptions of intention to pursue university and organizational attraction directly. Also, the results showed that organizational attraction mediated the relationship between the organizational reputation and intention to pursue.
Implications for Research and Practice: The results show that the organizational reputation of university affects international students' intention to pursue post-graduate e education, and organizational attraction is a mediating variable. Thus, university administrators are suggested to be sensitive to increase the university's organizational reputation to increase the perceptions towards attraction. In addition, other researchers can conduct this study with international students at other universities to reach a more comprehensive result.

© 2019 Ani Publishing Ltd. All rights reserved

[1] Kocaeli University, Faculty of Education, Department of Educational Sciences, spolat@kocaeli.edu.tr , TURKEY, ORCID: 0000-0003-2407-6491
[2] Kocaeli University, Faculty of Education, Department of Educational Sciences, gizem.guncavdi@kocaeli.edu.tr , TURKEY, ORCID: 0000-0002-7340-145X
[3] Kocaeli University, Faculty of Education, Department of Educational Sciences, yaser.arslan@kocaeli.edu.tr, TURKEY, ORCID: 000-0001-6625-6066

Introduction

For organizations, it is vitally important to impress applicants who have many desired qualities and performance to maintain organizational success (Jiang & Iles, 2011). In today's competitive conditions, an organization's ability to survive depends on attracting highly qualified applicants, motivating them and making them continue working for the organization. Thus, organizations should attract qualified individuals among target groups and try to keep them. Through the process of doing this, organizational reputation and attraction are important factors. Thus, this study aims to define the impacts of organizational reputation and organizational attraction on students' intention to pursue university.

Intention to Pursue

The concept of intention to pursue or job pursuit intentions has become to be studied frequently in recent years in the field of business. The intention to pursue a job can be identified as "a person's desire to submit an application, to attend a site visit or second interview, a willingness to stay in the applicant pool without committing to a job choice" (Chapman et al., 2005, p. 929). In other words, the intention to pursue focuses on applicants' behavioural intentions and their interest in the organization (Dural, Aslan, Alince & Araza, 2014). The studies have shown that there are some factors that affect an individual's intention to pursue a job (Casper & Buffardi, 2004; Chapman et al., 2005; Rynes, Bretz & Gerhart, 1991). Type of work, the organizations' image, the organizations' familiarity to the applicant, the recruiter's sincerity, person-organization fit, dependent care assistance, such as health insurance or childcare facilities, work schedule flexibility, and salary, which are some of the factors that affect job pursuit intentions of employees (Casper & Buffardi, 2004; Chapman et al., 2005). Thus, it is possible to say that the factors that affect job pursuit intentions are related to the organizational and personal needs of employees.

The concept of intention to pursue has often been studied in business; however, it is also a concept which has been studied in educational organizations (To, Lai, Lung & Lai, 2014; To, Lung, Lai & Lai, 2014; Veloutsu, Lewis & Paton, 2004). Researchers conducted studies mostly about the factors that affected students' choice to pursue postgraduate education at a university (Lawley & Blight, 1997; Mazzarol & Soutar, 2002; To, Lai, Lung & Lai, 2014; Veloutsu, Lewis & Paton, 2004). The studies have put forward that university reputation, program reputation, program qualification, administrative aspects, characteristics of the country or the city where the university is located, environment, information availability, and their career plan are some of the factors that affect students' choice about where to pursue postgraduate education (Mazzarol & Soutar, 2002; To, Lai, Lung & Lai, 2014). In addition to these, a study on factors affecting international students' choices postgraduate education conducted by Kaur and Sidhu (2009) put forward that one of the reasons which affect international students' intention to pursue postgraduate education is having took an undergraduate degree in the same university. Thus, it can be suggested that

understanding whether international students would like to continue postgraduate education in the same university they took undergraduate education or not, which is the aim of this study, will contribute to the literature.

Organizational Reputation

There are different explanations about organizational reputation in the literature. Fombrun and Van Riel (2003) defined this concept as different partners' judgments about the organization's potential in terms of accomplishing its expectations. Bromley's (1993, 2000, 2002) definition of organizational reputation was that it is a system and this is made up of personal assumptions that belong to members of a social group. The organizational reputation can also be described as shared beliefs about an organization's identity and prominence (Rao, 1994; Rindova & Kotha, 2001), an organization's visibility and popularity on media (Deephouse, 2000), and mutual understanding about an organization in the minds of different communities (Grunig & Hung, 2002; Yang & Grunig, 2005). To sum up, the concept of organizational reputation refers to the impressions of an organization that members of a social group have, concerning the organization's potential to accomplish its expectations, visibility and popularity on media, and the organization's identity.

University Reputation

The concept of organizational reputation is generally studied in business; however, this concept can also be studied in educational organizations and universities are one of them. A university's reputation has been defined as aspects of a university's collective representations over time, and these aspects can be both internal and external ones, such as media (Alessandri, Yang & Kinsey, 2006). Various researchers that studied the concept of a university's reputation (Bromley, 1993, 2000; Caruana, 1997; Fombrun & Shanley, 1990; Gotsi & Wilson, 2001; Grunig & Hung, 2002) have claimed that the reputation of a university can be grounded on direct or indirect experiences, and information gained from symbols, such as logos and architecture, and lastly information gained from different channels of communication. Thus, it is possible to say that a university's reputation is mostly connected to the visual identity of the university.

In addition to the factors mentioned above, Ayoubi and Massoud (2012) highlighted the factors which are entry standards, research opportunities, job opportunities after graduation, staff/student ratio, utilities of library and information technologies as important variables that affect students' choice for a university regarding its reputation. Isik, Cicek and Almali (2016), on the other hand, stated that emotional attraction, ability to manage, being strategic, distinctiveness and social accountability as some of the main factors that determine a university's reputation. Apaydin and Seckin-Kapucu (2017) added the quality of education and social events to the factors that affect a university's reputation according to students' views.

Organizational Attraction

An organization's being evaluated as an attractive place to work by its prospective employees is described with the concept of organizational attraction. This concept is accepted as an important factor which affects individuals' choice for their workplace and their decision-making process on whether to apply for a job or not (Akcay, 2014). The concept of organizational attraction was firstly studied in terms of the characteristics of the job or of the organization (Ateg, Andersson, & Rosén, 2009; Cable & Graham, 2000; Carless & Wintle, 2007; Lievens et al., 2001; Rynes & Barber, 1990). Then, the studies about the organizational attraction started to include individual-organization harmony (Cable & Judge, 1996; Turban & Keon, 1993), organizational image and recognizability (Aiman-Smith et al., 2001; Turban & Greening, 1997).

As it was mentioned above, the concept of organizational attraction is an important aspect that affects an organization's prospective employees' decision–making process. Lievens and Highhouse (2003) claimed that prospective employees evaluate an organization concerning its instrumental and symbolic attributes before they apply for a job in that organization. While instrumental attributes include concrete benefits, such as salary and career opportunities offered by employers, symbolic attributes consist of inferences about an organization's being innovator, prestigious and sincere (Akcay, 2014). Lievens and Highhouse (2003) found out that these instrumental and symbolic attributions are closely related to an organization's attraction.

There are many individuals in the organizations' target group, and there are many organizations that can satisfy the needs of these individuals. The individuals make their choices among these organizations. In this process, many different variables affect the organization's target group's choices. One of these variables that affect individuals is the organizational attraction because individuals are thought to tend to choose organizations that they see as attractive (Turban & Keon, 1993). The organizational attraction is accepted as an important factor that affects individuals' choices and decision-making processes for deciding whether they interact with the organization or not (Akcay, 2014).

University Attraction

The concept of organizational attraction is a subject to be studied in educational organizations since this concept is effective for students to choose which university to go to and to pursue their postgraduate education. There are some studies conducted on university attraction (Drewes & Michael, 2006; Llewellyn-Smith & McCabe, 2008). Llewellyn-Smith and McCabe (2008) claimed that students choose the university they will attend by looking at the aspects, such as academic reputation, facilities, campus atmosphere, quality and availability of programs, social activities, sporting clubs, and accommodation which are close to university campus easily and campus attractiveness (Anderson, 1999; Arambewela & Hall, 2006; Lawley, 1998; Mazzarol & Soutar, 2002; Price, Matzdorf, Smith & Agahi, 2003; Soutar & Turner,

2002; Townsend & Lee, 2004; cited in Llewelyn-Smith et al., 2008). Students also preferred universities with low compulsory fees and high scholarships (Drewes & Michael, 2006).

In the literature, there have been some studies conducted in Turkey about universities' attraction for international students. For example, Kondakci (2011) conducted a study with international students to understand what attracts them to come to universities in Turkey. The results showed geographical proximity, academic quality, desire for learning, or experiencing a different culture; liking Turkish culture and Turkish people were important aspects that affected international students' decisions. In the light of these results, it can be said that students from neighbor countries or Turkic republics are more likely to come to Turkey, which is the case for Kocaeli University where this study was conducted. In addition, Gunduzyeli (2015) found that the reasons lying behind the choice of international students to choose universities in Turkey are tuition, living conditions, job opportunities, campus, the university's prestige and location, students' information about the university which they received from web sites related to Turkey, universities' websites, printed and visual media, and scholarship. The results of this study put forward that the international students find universities more attractive if tuition is low, job opportunities and university's prestige are high, getting a scholarship is easy, and they have an idea about all of these attraction factors with the help of information they receive through media.

The Relationship among Intention to Pursue, Reputation and Attraction

The relationship among organizational reputation, organizational attraction and intention to pursue the organization can be explained with "action theory" (Fishbein & Ajzen, 1975). Logical action theory claims that one of the determinants that define one's behavioral intention is the ideas of people about an object, organization, or behavior, and these constitute one's subjective norm about that object, organization, or behavior. Concerning this theory, it would not be wrong to say that organizational reputation and organizational attraction form subjective norms. The organizational reputation, a concept that defined all stakeholders' perceptions about an organization's performance (Fombrun, Gardberg & Sever, 2000), and organizational attraction define the social reference about an organization. If the reputation and recognition of an organization come to people's minds when they hear that organization's name, that organization can be considered as a prestigious one. Thus, organizational reputation reflects the consensus of society about an organization's qualities' being approved as positive or negative (Highhouse et al., 2003). This social reference may affect individuals' attitudes, beliefs, intentions and behaviors about an organization positively or negatively (Fishbein & Ajzen, 1975). In the light of this, students' perception of a university's reputation and attraction may affect their intention to pursue.

It has been claimed that the perceptions of potential applicants of an organization about that organization's instrumental and symbolic features affect their perception about an organization's attraction. While the concrete benefits that potential

organizations can offer to applicants, such as wage and career opportunities, are seen as instrumental features, the personality implications of an organization, such as being innovator, prestigious, and sincere, are evaluated as symbolic features (Lievens & Highhouse, 2003). As can be seen, one of the factors affecting organizational attraction is organizational reputation.

It was determined that if a prospective employee evaluated an organization's organizational reputation positively, her/his intention to apply to that organization was higher (Turban & Cable, 2003). Organizational reputation increases job satisfaction, improves organizational citizenship behavior, decreases intention to leave the job and quitting the job; as a result of this, an organization's productivity and performance increase (Carmeli & Freund, 2002; Freund, 2006; Herrbach & Mignonac, 2004; Sabuncuoglu, 1998). Organizational reputation is directly related to satisfying an organization's stakeholders' expectations. When their expectations are not satisfied, the organization's attraction decreases for stakeholders. Also, the inner stakeholders of the organization want to leave the organization. All of these conditions result in the organization's losing its social capital (Fombrun & Gardberg, 2000). It was found out that the number of qualified employees was higher, and these employees' rate of leaving the job was lower in the organizations with high level of perception of organizational reputation (Winkleman, 1999) since organizational reputation has the positive effect of attracting target group to the organization (Shamma, 2012).

There are many studies that analyze the relationship between organizational attraction and organizational reputation (Cable & Graham, 2000; Caligiuri et al., 2010; Turban & Cable, 2003; Williamson, King, Lepak & Sarma, 2010). When it is managed successfully, organizational reputation helps the organizations' familiarity increase for the target group and closeness to the organization increases. In this way, the individuals of the target group prefer organizations with a higher reputation (Brook et al., 2003). Similarly, it was emphasized that familiarity was one of the important premises of the level of organizational attraction, in the studies about the relationship between organizational familiarity and attraction (Gatewood, Gowan & Lautenschlager, 1993; Stevens, Dragoni & Collins, 2001; Turban & Greening, 1997; Turban et al., 2001).

Organizational reputation includes stakeholders' beliefs about the organizations' activities in the past and in the future, and it shapes what kind of interaction the stakeholders will have with the organization (Ponzi, Fombrun & Gardberg, 2011). Thus, it is believed that organizational reputation will be effective on organizational attraction and intention to pursue. In the light of these, this study aims to identify the impacts of a university's organizational reputation and organizational attraction on international students' intention to pursue post-graduate education in the university they study their bachelor's degree. Accordingly, the hypotheses of this study are formed as below:

Hypothesis 1: A university's reputation has a significant impact on students' perception of a university's attraction.

Hypothesis 2: Students' perception of a university's reputation has a significant impact on students' intention to pursue post-graduate education in the university they study their bachelor's degree.

Hypothesis 3: Students' perception of a university's attraction has a significant impact on students' intention to pursue post-graduate education in the university they study their bachelor's degree.

Hypothesis 4: Organizational attraction of a university has a mediator role on the impacts of a university's reputation on students' intention to pursue post-graduate education in the university they study their bachelor's degree.

Method

Research Design

This study aims to identify the relationship between a university's organizational reputation, organizational attraction and students' intention to pursue that university. The present study was designed in the descriptive quantitative research method. With the descriptive quantitative research method, this study aimed to examine and define an existing situation (Buyukozturk, Akgun, Demirel, Karadeniz & Cakmak, 2015). Through the use of this method in this study, researchers aimed to analyze average scores of each variable and identify any existent relationship between and among a university's reputation, organizational attraction and students' intention to pursue that university.

Population and Sample of this Study

This study was conducted at Kocaeli University. This university is located in Kocaeli, which is a city in the Marmara Region. The Marmara Region is the most industrialized and, as a result of this, a crowded region in Turkey. Istanbul is located in this region, and it is the most crowded city in Turkey, with almost 15,5 million people (TÜİK, 2018). Kocaeli is one of the neighboring cities to Istanbul. It is one of the metropolitan cities of Turkey. Thus, Kocaeli has many job opportunities. All of these factors are believed to affect international students' choice of university. Kocaeli University is also one of the most crowded universities with more than 81.000 students and 2000 academic staff. According to 2018 universities' ranking determined depending on the number of articles and citations of academic staff, the number of total scientific documents, the number of graduated students from PhD programs, and PhD students' ratio; Kocaeli University was the 30th university among 102 public universities (URAP, 2018). Also, Kocaeli University has Erasmus Mobility agreements with 168 universities from 24 countries. As a result of this agreement and scholarship supported by the Higher Education Council (YÖK) for international students, there were 1476 international students in 2015-2016 academic years at Kocaeli University, and 285 of them were postgraduate students. Most of the international students come from Turkic Republics, such as Turkmenistan, Azerbaijan, Kazakhstan, Kirghizstan, Tajikistan, Uzbekistan, and these countries are

followed by European (i.e.: Bulgaria, Montenegro, Greece, Macedonia, Kosovo, Russia and Germany) and African (i.e.: Djibouti, Niger, Uganda, Tunisia, Mauretania and Zambia) countries.

The population of this study included international students at Kocaeli University who enrolled and started their bachelor's degree in the 2015-2016 academic years. The sample of this study was determined through the use of a convenience sampling method, and it included 231 students from 67 countries who enrolled in Kocaeli University in the 2015-2016 academic years. Among 231 international students, 85 (36,8%) of them were female, 146 (63,2%) of them were male. One hundred thirty-four (58%) of them were bachelor's degrees, 71 (30,7%) of them were master's degree, and 26 (11,3%) of them were PhD degree students.

Research Instruments and Procedures

The Scale of Intention to Pursue University. To analyze international students' intention to pursue university, the scale which was developed by Highhouse et al. (2003) that included 5-Likert typed 15 items was used. In this scale, there are three sub-scales, and each sub-scale includes five items. In this study, the subscale of intention to pursue, which included five items, was used.

The scale measures students' intention to pursue with one-factor structure. An example item of the scale was "If this university invited me for a postgraduate (Ma, PhD, Post-Doc) interview, I would go to be a postgraduate student at this university". The participants were asked to evaluate the items by scoring them from "Strongly disagree" (1) to "Strongly agree" (5). When the scores from the scale increase, the students' intentions to pursue increase, as well. The Cronbach's Alpha reliability value of the original scale was α=0.82 (Highhouse et al., 2003: 995).

The confirmatory factor analysis (CFA) was conducted to verify the construct validity of the scale for this study's sample. The results of the analysis showed that Chi-square test was significant (p=.00), and other indexes (χ^2/sd= 3.33; RMSEA= 0.108; CFI= 0.98; GFI= 0.7 AGFI= 0.90) also met the criteria of good fit (Meydan & Sesen, 2011: 37). In the light of these results, the scale was found to be structurally valid. Cronbach's Alpha reliability test result was α=0.89, and the scale was evaluated as a reliable scale.

The Scale of Organizational Attraction. To analyze international students' perception of a university's organizational attraction, the scale which was developed by Highhouse et al. (2003) that included 5-Likert typed 15 items, was used. In this study, the subscale of General Attractiveness that included five items was used.

The scale measures organizational attraction with a one-factor structure. An example item of the scale was "Being a student at this university is very appealing to me". The participants were asked to evaluate the items by scoring them from "Strongly disagree" (1) to "Strongly agree" (5). When the scores from the scale increase, the organization's attraction increases as well. The Cronbach's Alpha reliability value of the original scale was α=0.88 (Highhouse et al., 2003: 995).

The CFA was conducted to verify the construct validity of the scale for this study's sample. The results of the analysis showed that Chi-square test was significant (p=.00), and other indexes (χ^2/sd= 4.8; RMSEA= 0.138; CFI= 0.94; GFI= 0.95; AGFI= 0.86) met the criteria of acceptable fit (Meydan & Sesen, 2011: 37). In the light of these results, the scale was found to be structurally valid. Cronbach's Alpha reliability test result was α=0.79, and the scale was evaluated as a reliable scale.

The Scale of Organizational Reputation. To measure the international students' perception of the university's reputation, the scale with Likert typed 10 items and developed by Alessandri, Yang, and Kinsey (2006) was used. This scale is made up of three dimensions, which are "quality of academic performance" (5 items), "quality of external performance" (3 items), and "emotional engagement" (2 items). Cronbach's Alpha reliability values of subscales were 0.78, 0.67, and 0.44, respectively. The levels of reliability value of "quality of academic performance" and "quality of external performance" were moderate, but the level of reliability value of "emotional engagement" was weak.

An example item of the scale was "The university offers highly qualified education". The participants were asked to evaluate the items by scoring them from "Strongly disagree" (1) to "Strongly agree" (5). When the scores from the scale increase, the organization's reputation increases as well.

The CFA was conducted to verify construct validity of the scale for this study's sample. The results of the analysis showed that Chi-square test was significant (p=.00), and other indexes (χ^2/sd= 6.66; RMSEA= 0,167; CFI= 0,91; GFI= 0,79; AGFI= 0,65) also met the criteria of good fit (Meydan & Sesen, 2011: 37). In the light of these results, the scale was found to be structurally valid. Cronbach's Alpha reliability test result was α=0.90, and the scale was evaluated as a reliable scale.

Data Analysis

The names and emails of international students were asked from Kocaeli University's International Relations Units. An invitation to attend this study was sent to international students through emails. Together with the invitation letters, a link for the online form of the questionnaire was sent, as well. Three hundred forty-eight international students were sent invitations, 258 international students filled in the online questionnaires. However, the data from 27 of these 258 international students were not analyzed due to missing items or reckless filling. As a result of this, data from 231 international students were used in this study. The means and standard deviation values were analyzed. Also, path analysis was conducted to identify the impacts of independent variables on dependent variables and their mediator roles.

Results

To test the hypotheses of this study, interrelations between variables were first examined. Mean scores and correlation coefficients between variables are presented in Table 1. These scores include university students' perception levels regarding

universities' organizational reputation, organizational attraction and intention to pursue university.

Table 1

Averages Scores and Correlation Coefficients between Variables and Perception Levels regarding Universities Organizational Reputation of University Students, Organizational Attraction and Intention to Pursue University

Variables	X	Sd	1	1.a	1.b	1.c	2
1. Organizational reputation of the university	3,93	.70					
1.a. Quality of the academic performance	4,04	.72	.94**				
1.b. Quality of the external performance	3,78	.82	.89**	.77**			
1.c. Emotional engagement	3,90	.95	.76**	.59**	.53**		
2. Organizational attraction	4,00	.68	.72**	.70**	.57**	.60**	
3. Intention to pursue university	4,05	.86	.69**	.67**	.58**	.54**	.68**

** p <0.01

International students' perceptions of all variables were at "agree (between 3.4 and 4.19)" level. While there was a high level of positive correlation between organizational reputation of university and organizational attraction (r=.72, p>.01), high levels of positive correlations were found between organizational attraction and quality of academic performance, a sub-variable of organizational reputation of university (r=.70, p>.01), a high level of positive correlation with emotional engagement (r=.60, p>.01), and a mid-level positive correlation with Quality of external performance (r=.57, p>.01).

While it was found that there was a high level of positive correlation between organizational reputation of university and intention to pursue university, a high level of positive correlation was found between intention to pursue university and quality of academic performance which is a sub variable of organizational reputation of university (r=.67, p>.01), a mid-level correlation was found between intention to pursue university and quality of external performance (r=.58, p>.01), a mid-level correlation was found between intention to pursue university and emotional engagement (r=.54, p>.01) and a high level of correlation was found between organizational attraction and intention to pursue university (r=.68, p>.01).

In the second phase of this study, AMOS 24 software was used to test the research hypotheses. Path analyses were applied via this program to figure out the effects of dependent variables on independent variables and the effects of the intervention. Based on the models set up, results of path analysis are given in Table 2. Table 2 reveals that the organizational reputation of the university predicts

organizational attraction (β=0.90, p=0.000) and intention to pursue university (β=0.74, p=0.000).

Among the sub-variables of the organizational reputation of the university, quality of academic performance (β=0.91, p=0.000), quality of external performance (β=0.73, p=0.000) and emotional engagement (β=0.74, p=0.000) predicted organizational attraction significantly. On the other hand, sub-variables of the organizational reputation of university seemed to predict intention to pursue university. Related coefficients are as follows respectively: quality of academic performance (β=0.73, p=0.000), quality of external performance (β=0.59, p=0.000) and emotional engagement (β=0.58, p=0.000).

Table 2

Path Analysis Results regarding Organizational Reputation of University and Intention to Pursue University and Organizational Attraction

	Path	Standardized β	Standard Error	p
Model 1	organizational reputation of university - organizational attraction	.90	.103	.000*
Model 2	Organizational reputation of the university- intention to pursue university	.74	.141.	.000*
Model 3	organizational attraction - intention to pursue university	.74	.155	.000*
Model 4	organizational reputation of university - organizational attraction	.90	.105	.000*
	organizational reputation of university - intention to pursue university	.42	.278	.040*
	organizational attraction - intention to pursue university	.36	.321	.082

In the third phase, a path analysis was applied using AMOS software to examine the intervention effect of organizational attraction between the organizational reputation of the university and the intention to pursue university. The method recommended by Holmbeck (1997) was used in this analysis. Two mid effects, intervention effect and indirect effect, are mentioned in this method. To exemplify over the setup models, the intervention effect revealed that the relationship between the organizational reputation of the university and the intention to pursue university, which at first found statistically significant, seemed to reduce dramatically when a third variable, organizational attraction, was included in the analysis. Besides, in the model with organizational attraction included, making the relationship between organizational reputation of university and intention to pursue

university not significant indicated full intervention, whereas it indicated a partial intervention when the relationship between two variables was significant, but there was a slight fall in the beta coefficient.

In the model in which the intervention effect of organizational attraction was examined, it was found that the organizational reputation of the university predicted the intention to pursue university significantly and there was a fall in beta coefficient (β=0.42, p<0.000). These results demonstrate that organizational attraction has a partial intervention role in the relationship between the organizational reputation of university and the intention to pursue university (Figure 1). The acceptable levels of goodness of fit criteria have showed that the model was verified (χ^2/sd= 4.4; RMSEA= 0.13; CFI= 0.71; GFI= 0.78).

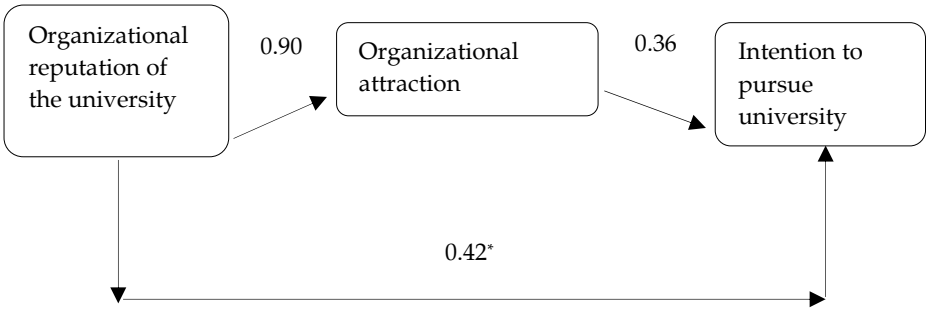


Figure 1.

The Effects of Organizational Reputation of University on Organizational Attraction and Intention to Pursue University

After figuring out the partial intervention role of organizational attraction between organizational reputation of university and intention to pursue university, more path analyses were applied to examine intervention effects of organizational attraction in the relationship between sub-variables of organizational reputation of university, namely, quality of academic performance, quality of external performance and emotional engagement (Table 3).

In the model in which intervention effect of organizational attraction was examined, it was found that sub-variables of quality of academic performance (β=0.22, p<0.289) and emotional engagement did not significantly predict intention to pursue university, and there was fall in beta coefficients (β=0.13, p<0.282). On the other hand, the quality of the external performance was found to predict intention to pursue university significantly with a fall in the beta coefficient (β=0.15, p<0.021). These findings revealed that academic performance and emotional engagement had a full intervention role and quality of external performance had a partial intervention

role in the relationship between sub-variables of the organizational reputation of the university and intention to pursue university. The model did not seem to be verified since the goodness of fit criteria were above the acceptable levels (χ^2/sd= 5.72; RMSEA= 0.15; CFI= 0.70; GFI= 0.68).

Table 3

Path Analysis Results regarding Sub-variables of Organizational Reputation of University, Organizational Attraction and Intention to Pursue University

	Path	Standardized β	Standard Error	p
Model 5	Quality of academic performance- organizational attraction,	.91	.105	.000 *
	Quality of external performance- organizational attraction,	.73	.109	.000 *
	Emotional engagement- organizational attraction	.74	.068	.000 *
Model 6	Quality of academic performance– intention to pursue university,	.73	.123	.000 *
	Quality of external performance– intention to pursue university,	.59	.169	.000 *
	Emotional engagement– intention to pursue university	.58	.092	.000 *
Model 7	Quality of academic performance- organizational attraction	.79	.084	.000 *
	Quality of external performance- organizational attraction,	.02	.042	.708
	Emotional engagement- organizational attraction	.40	.043	.000 *
	Quality of academic performance– intention to pursue university,	.22	.265	.289
	Quality of external performance – intention to pursue university,	.15	.071	.021 *
	Emotional engagement – intention to pursue university	.13	.107	.282
	organizational attraction - intention to pursue university	.42	.365	.076

In sum, it can be said that organizational attraction has a partial intervention role in the relationship between organizational reputation of university and intention to pursue university (Figure 2).

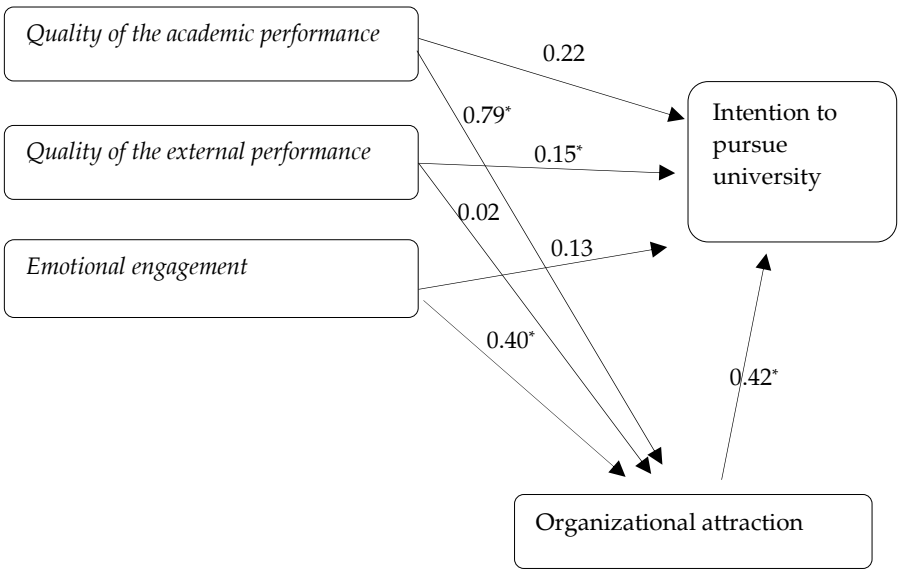


Figure 2.

The Mediating Effects of Organizational Attraction between Sub-variables of Organizational Reputation of University and Intention to Pursue University

Discussion, Conclusion and Recommendations

In this study, the results revealed that there were positive relationships between perceptions of international students towards the organizational reputation of the university, the intention to pursue university and organizational attraction. Their perception of the organizational reputation of university seemed to affect perceptions of the intention to pursue university and organizational attraction directly. Another finding was that international students' perception of organizational reputation of university affected intention to pursue university indirectly over organizational attraction. To put it differently, the organizational attraction is a mediating variable between the organizational reputation of university and the intention to pursue university.

A positive relationship was found between sub-variables of the organizational reputation of the university (quality of academic performance, quality of external performance and emotional engagement), organizational attraction and intention to pursue university. Another finding was that perceptions of international students

towards sub-variables of the organizational reputation of the university (quality of academic performance, quality of external performance and emotional engagement) affected organizational attraction and intention to pursue university variables directly. At the same time, sub-variables of organizational reputation of university (quality of academic performance, quality of external performance and emotional engagement) indirectly affected intention to pursue university over organizational attraction.

According to the results of this study, the quality of the academic performance was the most effective sub-variable of the sub-variables of the organizational reputation of university, affecting organizational attraction and intention to pursue university. This finding is consistent with the findings of Akar's study (2012). According to Akar (2012), academic respectability is the most important factor which university students consider when they choose their universities.

The results in this study yielded that students who perceived the organizational reputation of university high were the ones who found the organization attractive. This finding is consistent with the findings of theoretical and applied studies. An organization with a high reputation outperforms its rivals and seems more attractive in the eyes of stakeholders (Croucher, Zeng & Kassing, 2019; Fombrun & Shanley, 1990). In other words, a strong reputation towards an organization makes it more preferable by making it more attractive (Chauvin & Guthrie, 1994; Mohammed, 2019). Organizational reputation directly affects preferences target audience, especially individuals who are in search (Gatewood et al., 1993).

Another finding was that the perception of organizational attraction increased the perception of intention to pursue university. This finding also seems compatible with the expectations because high level of organizational reputation meets the expectations of individuals and increases the attractiveness of the organization, and therefore reduces the rate of quitting work (Carmeli & Freund, 2002; Fombrun et al. 2000; Freund, 2006; Herrbach & Mignonac, 2004). Hence, it increases the intention to pursue an organization. Organizational reputation seems to have a pivotal role in attracting qualified individuals to organization and keeping them in. The development of the social capital capacity of the organization depends on increasing organizational reputation, organizational attraction and perception of intention to pursue an organization (Djurdjevic, Rosen, Conroy, Rawski & Sosna, 2019). Another finding was that organizational reputation of university affected students to pursue universities positively. This finding also shows compliance with expectations because it was found that there was a rise in the number of qualified individuals in the organization with a high reputation and a fall in their behaviors of quitting work (Bohlmann, Krumbholz & Zacher, 2018; Winkleman, 1999).

In conclusion, the results show that the organizational reputation of university affects international students' intention to pursue post-graduate education, and organizational attraction is a mediating variable. This result suggests that university administrators should be sensitive to increase the university's organizational reputation to increase the perceptions towards attraction. It can be suggested that by

doing this, administrators could attract international students to choose their university and could increase the level of international students' intention to pursue their post-graduate education at the same university.

Recommendations

As any other studies, this research has some limitations. Firstly, this study was conducted with the international students that enrolled at Kocaeli University in the 2015-2016 academic years. Another research can be conducted with the same students through their 2nd, 3rd, or 4th years to understand whether their perceptions change or not. Also, this study was conducted in only one university, which limits the generalizability of the findings. Thus, it can be suggested that other researchers can conduct a similar study with international students at other universities to reach a more comprehensive result.

In addition to the recommendations for researchers mentioned above, there can be some others for practitioners. This study suggests that organizational reputation of a university affects international students' intention to pursue post-graduate study at that university, and organizational attraction is a mediating variable. These results may shed light to rectors', deans', or other administrators' ways to make their university more attractive for international students. Rectors may organize some events to present their university at international education fairs; they may appoint some academicians and professional staff for the human relations department to publicize their university concerning both academic opportunities and other facilities. When it comes to deans, they may show the same efforts to present their faculty and programs to attract international students by providing the necessary information. Also, all administrators should try to make their university more attractive by improving the conditions related to transportation, accommodation, and opportunities to reach information, dining hall and job opportunities for international students.

References

Aiman-Smith, L., Bauer, T. N., & Cable, D. M. (2001). Are you attracted? Do you intend to pursue? A recruiting policy-capturing study. *Journal of Business and Psychology*, *16*(2), 219-237.

Akar, C. (2012). Universite secimini etkileyen faktorler: Iktisadi ve idari bilimler öğrencileri üzerine bir calisma. *Eskisehir Osmangazi Universitesi IIBF Dergisi*, *7*(1), 97-120.

Akcay, A. D. (2014). Orgutsel cekicilik baglamında otel isletmelerini rakiplerinden ayiran ozellikler. *Anadolu Universitesi Sosyal Bilimler Dergisi*, *14*(1), 475-185.

Alessandri, S. W., Yang, S. U., & Kinsey, D. F. (2006). An integrative approach to university visual identity and reputation. *Corporate Reputation Review*, *9*(4), 258-270.

Anderson, P. (1999). Perspective: Complexity theory and organization science. *Organization Science*, *10*(3), 216-232.

Apaydin, C., & Seckin-Kapucu, M. (2017). Universiteyi tercih etme, akademik itibar ve sosyal etkinlik arasındaki iliski: Akdeniz ve Eskisehir Osmangazi Universitesi lisans ögrencileri örnegi. *Kuram ve Uygulamada Egitim Yonetimi*, *23*(2), 199-222.

Arambewela R. & Hall J. (2006). A comparative analysis of international education satisfaction using SERVQUAL. *Journal of Service Research*, *6*, 63-141

Ateg, M., Andersson, I. M., & Rosén, G. (2009). Change processes for attractive work in small manufacturing companies. *Human Factors and Ergonomics in Manufacturing*, *19*(1), 35-63.

Ayoubi, R. M., & Massoud, H. K. (2012). Student aspiration factors, university reputation and the entry standards to UK universities. *European Journal of Social Sciences*, *34*(4), 609-621.

Bohlmann, C., Krumbholz, L., & Zacher, H. (2018). The triple bottom line and organizational attractiveness ratings: The role of pro-environmental attitude. *Corporate Social Responsibility and Environmental Management*, *25*(5), 912-919.

Bromley, D. (2002). Comparing corporate reputations: League tables, quotients, benchmarks, or case studies?. *Corporate Reputation Review*, *5*(1), 35-50.

Bromley, D. B. (1993). *Reputation, image and impression management*. John Wiley & Sons.

Bromley, R. (2000). *Narratives for a new belonging: Diasporic cultural fictions*. Edinburgh University Press.

Brooks, M. E., Highhouse, S., Russell, S. S., & Mohr, D. C. (2003). Familiarity, ambivalence, and firm reputation: Is corporate fame a double-edged sword? *Journal of Applied Psychology, 88*, 904–914.

Buyukozturk, S., Akgun, Ö. E., Demirel, F., Karadeniz, S., & Cakmak, E. K. (2015). *Bilimsel arastirma yontemleri*. Pegem Akademi.

Cable, D. M., & Graham, M. E. (2000). The determinants of job seekers' reputation perceptions. *Journal of Organizational Behavior*, *21*(8), 929-947.

Cable, D. M., & Judge, T. A. (1996). Person–organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes*, *67*(3), 294-311.

Caligiuri, P., Colakoglu, S., Cerdin, J. L., & Kim, M. S. (2010). Examining cross-cultural and individual differences in predicting employer reputation as a driver of employer attraction. *International Journal of Cross Cultural Management*, *10*(2), 137-151.

Carless, S. A., & Wintle, J. (2007). Applicant attraction: The role of recruiter function, work–life balance policies and career salience. *International Journal of Selection and Assessment*, *15*(4), 394-404.

Carmeli, A., & Freund, A. (2002). The relationship between work and workplace attitudes and perceived external prestige. *Corporate Reputation Review*, *5*(1), 51-68.

Caruana, A. (1997). Corporate reputation: concept and measurement. *Journal of Product & Brand Management*, *6*(2), 109-118.

Casper, W. J., & Buffardi, L. C. (2004). Work-life benefits and job pursuit intentions: The role of anticipated organizational support. *Journal of Vocational Behavior*, *65*(3), 391-410.

Chapman, D. S., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005). Applicant attraction to organizations and job choice: a meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, *90*(5), 928-944.

Chauvin, K. W., & Guthrie, J. P. (1994). Labor market reputation and the value of the firm. *Managerial and Decision Economics*, *15*(6), 543-552.

Croucher, S. M., Zeng, C., & Kassing, J. (2019). Learning to contradict and standing up for the company: An exploration of the relationship between organizational dissent, organizational assimilation, and organizational reputation. *International Journal of Business Communication*, *56*(3), 349-367.

Deephouse, D. L. (2000). Media reputation as a strategic resource: An integration of mass communication and resource-based theories. *Journal of management*, *26*(6), 1091-1112.

Djurdjevic, E., Rosen, C. C., Conroy, S. A., Rawski, S. L., & Sosna, K. U. (2019). The influence of political climate on job pursuit intentions and the moderating effect of Machiavellianism. *International Journal of Selection and Assessment*, *27*(2), 180-192.

Drewes, T., & Michael, C. (2006). How do students choose a university? An analysis of applications to universities in Ontario, Canada. *Research in Higher Education*, *47*(7), 781-800.

Dural, S., Aslan, G., Alince, M., & Araza, A. (2014). Orgütsel cekicilik: Bir olcek uyarlama calismasi. *Dogus Universitesi Dergisi*, *15*(2), 141-154.

Fishbein, M. & Ajzen, I. (1975). *Belief, Attitude, Intentions, and Behavior: An Introduction to Theory and Research*. Boston, MA: Addison Wesley.

Fombrun, C. J., & Van Riel, C. B. M. (2003). *Fame & Fortune: How the World's Top Companies Develop Winning Reputations*. Pearson Education.

Fombrun, C. J., Gardberg, N. A., & Sever, J. M. (2000). The Reputation QuotientSM: A multi-stakeholder measure of corporate reputation. *Journal of Brand Management*, *7*(4), 241-255.

Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of management Journal*, *33*(2), 233-258.

Freund, A. (2006). Work and workplace attitudes on social workers: Do they predict organizational reputation?. *Business and Society Review*, *111*(1), 67-87.

Gatewood, R. D., Gowan, M. A., & Lautenschlager, G. J. (1993). Corporate image, recruitment image and initial job choice decisions. *Academy of Management journal*, *36*(2), 414-427.

Gotsi, M., & Wilson, A. M. (2001). Corporate reputation: seeking a definition. *Corporate Communications: An International Journal*, *6*(1), 24-30.

Grunig, J. E., & Hung, C. J. F. (2002). The effect of relationships on reputation and reputation on relationships: A cognitive, behavioral study. In *PRSA Educator's Academy 5th Annual International, Interdisciplinary Public Relations Research Conference, Miami, Florida* (pp. 8-10).

Gunduzyeli, B. (2015). *Kuresel egitim pazarlama stratejileri ve yabanci uyruklu ogrencilerin universite secim faktorleri uzerine bir arastirma* (Unpublished master thesis), Beykent University, Istanbul.

Herrbach, O., & Mignonac, K. (2004). How organisational image affects employee attitudes. *Human Resource Management Journal*, *14*(4), 76-88.

Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement*, *63*(6), 986-1001.

Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.

Isik, M., Cicek, B. & Almali, V. (2016). Universitelerin ic paydaşlarının kurumsal itibar algısını olcmeye yonelik bir arastirma. *Journal of Bitlis Eren University Institute of Social Sciences, 5*, 163-180.

Jiang, T., Iles, P. (2011). Employer-brand equity, organizational attractiveness and talent management in the Zhejiang private sector, China. *Journal of Technology Management in China*, *6*(1), 97-110.

Kaur, S., & Sidhu, G. K. (2009). A qualitative study of postgraduate students' learning experiences in Malaysia. *International Education Studies*, *2*(3), 47-56.

Kondakci, Y. (2011). Student mobility reviewed: Attraction and satisfaction of international students in Turkey. *Higher Education*, *62*(5), 573-592.

Lawley, M. (1998). *Thai and Malaysian students' perceptions of overseas study destinations: an exploratory study* (Unpublished doctoral dissertation), University of Southern Queensland.

Lawley, M., & Blight, D. (1997). *International students: Reasons for choice of an overseas study destination.* Research paper presented at the 11th Australian International Education Conference. Melbourne, IDP Australia, Canberra.

Lievens, F., & Highhouse, S. (2003). The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. *Personnel psychology*, *56*(1), 75-102.

Lievens, F., Decaesteker, C., Coetsier, P., & Geirnaert, J. (2001). Organizational attractiveness for prospective applicants: A person–organisation fit perspective. *Applied Psychology*, *50*(1), 30-51.

Llewellyn-Smith, C., & McCABE, V. S. (2008). What is the attraction for exchange students: The host destination or host university? Empirical evidence from a study of an Australian university. *International Journal of Tourism Research*, *10*(6), 593-607.

Mazzarol, T., & Soutar, G. (2002). Push-pull factors influencing international students' destination choice. *International Journal of Educational Management*, *16*(2), 82-90.

Meydan, C. H., & Sesen, H. (2011). *Yapisal esitlik modellemesi AMOS uygulamalari*. Detay Yayıncılık.

Mohammed, S. D. (2019). *The impact of recruitment sources on brand image perceptions and organizational attraction: Leveraging organizational brand image perceptions to enhance recruitment attraction*. Retrieved from ProQuest Digital Dissertations (13861086).

Ponzi, L. J., Fombrun, C. J., & Gardberg, N. A. (2011). RepTrak™ pulse: Conceptualizing and validating a short-form measure of corporate reputation. *Corporate Reputation Review*, *14*(1), 15-35.

Price, I. F., Matzdorf, F., Smith, L., & Agahi, H. (2003). The impact of facilities on student choice of university. *Facilities*, *21*(10), 212-222.

Rao, H. (1994). The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American automobile industry: 1895–1912. *Strategic Management Journal*, *15*(S1), 29-44.

Rindova, V. P., & Kotha, S. (2001). Continuous "morphing": Competing through dynamic capabilities, form, and function. *Academy of Management Journal*, *44*(6), 1263-1280.

Rynes, S. L., & Barber, A. E. (1990). Applicant attraction strategies: An organizational perspective. *Academy of Management Review*, *15*(2), 286-310.

Rynes, S. L., Bretz, R. D., & Gerhart, B. (1991). The importance of recruitment in job choice: A different way of looking. *Personnel Psychology*, *44*(3), 487-521.

Sabuncuoglu, Z., & Tuz, M. V. (1998). *Orgutsel psikoloji*. Alfa Basim Yayim Dagitim.

Shamma, H. M. (2012). Toward a comprehensive understanding of corporate reputation: Concept, measurement and implications. *International Journal of Business and Management*, *7*(16), 151.

Soutar, G. N., & Turner, J. P. (2002). Students' preferences for university: a conjoint analysis. *International Journal of Educational Management*, *16*(1), 40-45.

Stevens, C. K., Dragoni, L., & Collins, C. J. (2001). Familiarity, organizational images, and perceived fit as antecedents to the application decisions of new graduates. In *Annual Meeting of the Society for Industrial Organizational Psychology, San Diego, CA*.

To, W. M., Lai, L. S., Lung, J. W., & Lai, T. M. (2014). Intent to pursue further studies among Chinese Students. *Educational Studies*, *40*(3), 292-309.

To, W. M., Lung, J. W., Lai, L. S., & Lai, T. M. (2014). Destination choice of cross-border Chinese students: an importance-performance analysis. *Educational Studies*, *40*(1), 63-80.

Turban, D. B., & Cable, D. M. (2003). Firm reputation and applicant pool characteristics. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *24*(6), 733-751.

Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, *40*(3), 658-672.

Turban, D. B., & Keon, T. L. (1993). Organizational attractiveness: An interactionist perspective. *Journal of Applied Psychology*, *78*(2), 184.

Turban, D. B., Lau, C. M., Ngo, H. Y., Chow, I. H., & Si, S. X. (2001). Organizational attractiveness of firms in the People's Republic of China: A person–organization fit perspective. *Journal of Applied Psychology*, *86*(2), 194.

TUIK. (2018). *Adrese Dayalı Nüfus Kayıt Sistemi Sonucları, 2017,* available at: http://www.tuik.gov.tr/HbGetirHTML.do?id=27587 (28 February 2018)

URAP. (2018). *2017-2018 Türkiye Genel Sıralamaları*, available at: http://tr.urapcenter.org/2017/2017_t5.php (28 February 2018)

Veloutsou, C., Lewis, J. W., & Paton, R. A. (2004). University selection: Information requirements and importance. *International Journal of Educational Management*, *18*(3), 160-171.

Williamson, I. O., King, J. E., Lepak, D., & Sarma, A. (2010). Firm reputation, recruitment web sites, and attracting applicants. *Human Resource Management*, *49*(4), 669-687.

Winkleman, M. (1999). The right stuff: survey on corporate reputation. *Chief Executive (US)*, *143*, 80-81.

Yang, S.-U., & Grunig, J. E. (2005). The effects of organization-public relationships outcomes on cognitive representations of organizations and overall evaluations of organizational performance. *Journal of Communication Management*, 9, 305–326.

Üniversitenin Örgütsel İtibar ve Örgütsel Çekiciliğinin Öğrencilerin Devam Niyeti Üzerine Etkisi

Atıf:

Polat, S., Guncavdi, G., & Arslan, Y. (2019). The impacts of a university's organizational reputation and organizational attraction on students' intention to pursue. *Eurasian Journal of Educational Research, 84,* 213-236. DOI: 10.14689/ejer.2019.84.10

Özet

Problem Durumu: Devam niyeti bireyin bir yere başvurma, çalıştığı ya da bulunduğu kurumda çalışmaya istekli olma durumu olarak tanımlanmaktadır (Chapman vd., 2005). Örgütsel ün kavramı ise bir örgütün kimliği ve önemi ile ilgili bireylerin sahip olduğu ortak görüşlerdir (Rao, 1994; Rindova & Kotha,

2001), örgütün medyadaki görünürlüğü ve popülerliği (Deephouse, 2000) ve farklı topluluklardaki bireylerin zihinlerinde örgütler ile ilgili varolan anlayış (Grunig & Hung, 2002; Yang & Grunig, 2005) olarak tanımlanmaktadır. Çalışma kapsamındaki kavramlardan bir diğeri ise örgütsel çekicilik kavramıdır. Bir kurumun, gelecekteki işgörenler tarafından çekici bir iş yeri olarak değerlendirilmesi olarak tanımlanan örgütsel çekicilik kavramı, bireylerin çalışacakları yere, o yerde çalışmak için başvurup başvurmama konusundaki karar verme süreçlerini etkileyen önemli bir faktör olarak ele alınmaktadır (Akçay, 2014).

Örgütsel çekicilik ile örgütsel ün arasındaki ilişkiyi inceleyen bir dizi çalışma vardır (Cable & Graham, 2000; Turban ve Cable, 2003; Caligiuri ve diğerleri, 2010; Williamson, King, Lepak & Sarma, 2010). Başarılı bir şekilde yönetildiğinde örgütün itibarı, kurumun hedef grup için tanınırlığının artışına ve örgüte yakınlığın artmasına yardımcı olur. Bu sayede hedef grubun bireyleri daha yüksek itibarı olan kuruluşları tercih etmektedir (Brook ve ark. 2003). Benzer şekilde, örgütsel çekicilik ve tanınırlık arasındaki ilişkiyi konu alan çalışmalarda, örgütsel çekicilik düzeyinin önemli öncüllerinden biri olduğu vurgulanmıştır (Gatewood, Gowan & Lautenschlager, 1993; Turban ve Greening, 1997; Stevens, Dragoni &. Collins, 2001; Turban ve arkadaşları, 2001).

Örgütsel itibar, örgütsel çekicilik ve devam etme niyeti arasındaki ilişki "eylem teorisi" ile açıklanabilir (Fishbein ve Ajzen, 1975). Mantıksal eylem teorisi, kişinin davranışsal niyetini tanımlayan belirleyicilerinden birinin bir nesneye, organizasyona veya davranışa dair insanların fikirleri olduğunu öne sürmektedir. Bu fikirler bir nesne, örgüt veya davranış hakkında öznel bir norm oluştururlar. Bu teori açısından örgütsel itibarın ve örgütsel çekiciliğin öznel normlar oluşturduğunu söylemek yanlış olmaz.

Araştırmanın Amacı: Bu çalışmanın amacı, bir üniversitenin kurumsal itibarının ve örgütsel çekiciliğin uluslararası öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitime devam etme niyetine olan etkisini tespit etmektir. Buna göre, bu çalışmanın hipotezleri aşağıdaki gibi oluşturulmuştur:

Hipotez 1: Üniversitenin itibarı öğrencilerin üniversitenin çekiciliğine ilişkin algılarını etkiler. Hipotez 2: Öğrencilerin üniversitenin itibarına ilişkin algılarının, öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri üzerinde anlamlı etkisi vardır. Hipotez 3: Öğrencilerin üniversitenin çekiciliğine ilişkin algılarının, öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri üzerinde anlamlı etkisi vardır.

Hipotez 4: Üniversitenin örgütsel çekiciliği, örgütsel itibarının öğrencilerin lisans eğitimine devam ettikleri üniversitede lisansüstü eğitime devam etme niyetleri üzerindeki etkisinde aracı rolü vardır.

Araştırmanın Bulguları: Çalışma Kocaeli Üniversitesinde yapılmıştır. Üniversite Marmara Bölgesi'nde yer alan Kocaeli ilinde yer almaktadır. Marmara Bölgesi Türkiye'nin en çok sanayileşmiş bölgesi olduğundan ve İstanbul'un yer aldığı

bölge olmasından dolayı uluslararası öğrenciler tarafından oldukça fazla şekilde tercih edilen bir bölgedir. Kocaeli de İstanbul'un komşu illerinden biri olduğu ve büyükşehir olduğundan dolayı birçok iş imkanına ve sosyal imkanlara sahiptir. Tüm bu etkenlerin uluslararası öğrencilerin üniversite tercihlerini etkilediklerine inanılmaktadır. Ayrıca Kocaeli Üniversitesi 81000 öğrencisi ve 2000'den fazla akademik personeli ile Türkiye'nin en kalabalık üniversitelerinden biridir. 2018 yılı verilerine göre, Kocaeli Üniversitesi Türkiye'deki üniversiteler arasında akademik çalışmalar, doktora programlarından mezun olan öğrenciler gibi kriterlere göre değerlendirildiğinde 30. sırada yer almaktadır (URAP, 2018).

Araştırmanın örneklemini 2015-2016 eğitim öğretim yılında Kocaeli Üniversitesi'nde eğitim gören 1476 uluslararası öğrenciden o yıl eğitime başlayan 231 öğrenci oluşturmaktadır. Öğrencilerin çoğu Türkmenistan, Azerbaycan, Kazakistan, Kırgizistan, Tacikistan ve Özbekistan gibi Türkî Cumhuriyetlerinden gelmektedir. Bu öğrencileri Avrupa'dan ve Afrika ülkelerinden gelen öğrenciler takip etmektedir. Öğrencilerin 85'i (%36,8) kadın, 146'sı (%63,2) erkektir. 134'ü (%58) lisans öğrencisi, 71'i (%30,7) yüksek lisans ve 26'sı (%11,3) doktora öğrencisidir.

Araştırma sonucunda üniversitenin örgütsel itibarının örgütsel çekiciliği (β=0.90, p=0.000) ve devam niyetini (β=0.74, p=0.000) yordadığı bulunmuştur. Bu sonuçlar, örgütsel çekiciliğin, üniversitenin örgütsel itibarı ile öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri arasındaki ilişkide kısmi bir aracı rolüne sahip olduğunu göstermektedir. Araştırmanın sonuçları, uluslararası öğrencilerin üniversitenin örgütsel itibarı, öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri ve örgütsel çekiciliğe ilişkin algıları arasında olumlu ilişkiler olduğunu ortaya koymuştur. Üniversitenin örgütsel itibarı hakkındaki algılarının ve örgütsel çekiciliğin, aynı üniversitede lisansüstü eğitime devam niyetlerini etkilediği görülmektedir. Araştırmanın bir başka bulgusu, uluslararası öğrencilerin üniversitenin örgütsel itibarına ilişkin algısının, üniversitenin örgütsel çekiciliğe ilişkin algıları üzerinden aynı üniversitede lisansüstü eğitime devam etme niyetini etkilemiş olmasıdır. Başka bir ifadeyle, üniversitenin örgütsel çekiciliğinin, üniversitenin örgütsel itibarı ile öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri arasında aracılık yapan bir değişken olduğu bulunmuştur. Araştırma kapsamında elde edilen bir diğer bulgu ise üniversitenin örgütsel itibarının alt boyutları olan akademik performansın kalitesi, dış performansın kalitesi ve duygusal özdeşleşme boyutları ile üniversitenin örgütsel çekiciliği ve öğrencilerin lisans eğitimini aldıkları üniversitede lisansüstü eğitimine devam etme niyetleri arasında pozitif yönde bir ilişki olmasıdır. Bunun yanı sıra, öğrencilerin üniversitenin örgütsel itibarının alt boyutlarına ilişkin algıları, örgütsel çekicilik ve üniversitede lisansüstü eğitime devam etme niyetlerini doğrudan etkilemektedir. Araştırmanın sonucunda örgütsel itibarın alt boyutlarından akademik performansın kalitesi, üniversitenin örgütsel çekiciliği ve üniversitede lisansüstü eğitime devam etme niyetini en çok etkileyen alt boyutu olduğu bulunmuştur.

Araştırmanın Sonuçları ve Önerileri: Araştırmanın sonuçları, uluslararası öğrencilerin üniversitenin örgütsel itibarı, aynı üniversitede lisansüstü eğitime devam etme niyeti ve örgütsel çekicilik algıları arasında olumlu ilişkiler olduğunu ortaya koymuştur. Üniversitenin örgütsel itibarı hakkındaki algıları, üniversite ve örgütsel çekiciliğin devam etme niyetlerini doğrudan etkilediği görülmektedir. Ayrıca, sonuçlar örgütsel çekiciliğin örgütsel itibar ve devam etme niyeti arasındaki ilişkiye aracılık ettiğini göstermiştir.

Diğer çalışmalarda olduğu gibi, bu araştırmanın bazı sınırlılıkları vardır. İlk olarak, bu çalışma 2015-2016 akademik yıllarında Kocaeli Üniversitesine kayıtlı uluslararası öğrencilere yapılmıştır. Algılarının değişip değişmediğini anlamak için aynı öğrencilerle 2., 3. veya 4. yıllarında başka bir araştırma yapılması önerilebilir. Ayrıca bu çalışma yalnızca bir üniversitedeki uluslararası öğrenciler ile gerçekleştirilmiştir. Bu durumun, çalışmanın genellenebilirliğini sınırlandırdığını söylemek mümkündür. Bu nedenle, diğer araştırmacıların daha kapsamlı bir sonuca ulaşmak için bu araştırmayı diğer üniversitelerdeki uluslararası öğrencilerle yapmaları önerilebilir. Bu sayede çalışmanın genellenebilirliği arttırılabilecek, daha kapsamlı veriler elde edilebilecektir.

Anahtar Kelimeler: Örgütsel itibar, örgütsel çekicilik, devam niyeti, uluslararası öğrenciler.

Submission Checklist
Makale Sunumu Kontrol Çizelgesi

** Aday makalenin değerlendirilmeye hazır olduğunu aşağıdakilerin her biri ile karşılaştırarak kontrol ediniz.*

* Indicate that this submission is ready to be considered by this journal by checking off the following.

Manuscript Agreement: *I / We hereby accept that, the article after being accepted for publication in the Eurasian Journal of Educational Research (EJER), the author (s) as, all rights related to the article has been transferred to the ANI PUBLISHING under the laws of the, "copyright transfer".* Makale Eurasian Journal of Educational Research (EJER) dergisinde basıma kabul edildikten sonra, yazar(lar) olarak; makale ile ilgili tüm hakları, "Telif Hakkı Devir" yasaları uyarınca, ANI YAYINCILIK'A devrettiğimizi kabul ediyoruz.		
Manuscript Submission: *I have prepared my manuscript based on the criteria listed below and I accept all submission conditions.* Makalemi aşağıda belirtilen kriterlere göre hazırladım ve makale gönderme koşullarının tamamını kabul ediyorum. *Indicate that this submission is ready to be considered by this journal by checking off the following.* Aday makalenin değerlendirilmeye hazır olduğunu aşağıdakilerin her biri ile karşılaştırarak kontrol ediniz.		
1	☒	*The manuscript is a report of original educational research or a discussion article on research topics in education.* Aday makale, eğitim alanıyla doğrudan ilgili bir araştırma ya da tartışma yazısıdır.
2	☒	*The submission has not been previously published, nor sent to another journal for consideration.* Sunulan çalışma daha önce herhangi bir yerde yayınlanmamıştır, başka bir derginin incelemesinde değildir.
3	☒	*Within a year, I have not submitted a manuscript to EJER as an author or co-author for review other than this manuscript.* Son bir yıl içerisinde, yazarı olduğum ya da yazarları arasında bulunduğum başka bir çalışma değerlendirilmek üzere EJER'e sunulmamıştır.
4	☒	*The entire manuscript is written in English.* Aday makalenin bütününün yazım dili İngilizcedir.
5	☒	*The original manuscript is typed on A4 paper. The margins are 2.5 cm.* Aday makale kenar boşlukları 2.5 cm olan A4 kağıda yazılmıştır.
6	☒	*Each paragraph is longer than two sentences.* Her bir paragraf en az üç cümle içermektedir.
7	☒	*The entire manuscript - including quotations, references, author note, content footnotes, figure captions, and all parts of tables – is double-spaced.* Aday makalenin tamamı, alıntılar, kaynakça, şekil ve tablo başlıkları da dâhil olmak üzere çift aralıklı yazılmıştır.

8	☒	*The submission file is in Microsoft Word document file format. 12-point Times New Roman font is used in entire manuscript.* Aday makale, tamamında 12 punto Times New Roman yazı tipi kullanılarak hazırlanmış bir Microsoft Word dokümanıdır.
9	☒	*The text has had the authors' names removed. If an author is cited, "Author" and year are used in the bibliography and footnotes, instead of author's name, paper title, etc. The author's name has also been removed from the attached document.* **Aday makale, yazar adları çıkarılarak sunulmuştur**. Eğer yazar kendisine atıfta bulunduysa yazarın adına ve çalışma başlığına yer verilmeyecek, sadece "Author" yazılarak çalışmanın yılı belirtilecektir. Eklenen dosyada yazar adı belirtilmeyecektir.
10	☒	*The title is 10 to 12 words.* Aday makalenin başlığı 10-12 sözcük uzunluğundadır.
11	☒	*The maximum length of the manuscript-including structured abstract in English, tables, and references is 6000 words. This limitation does not include Turkish extended abstract (750-1000 words) which is placed after the references section.* Aday makale, İngilizce abstract, tablolar ve kaynakça vb. tüm ögeler dâhil olmak üzere en fazla 6000 sözcüktür. Kaynakça'nın ardından yer verilen uzun Türkçe özet (750-1000 sözcük) bu sayıya dâhil değildir.
12	☒	*The article is preceded by **English Structured Abstract of not more than 250 words** and not less than 200 using five required headings:* **Purpose***: State the problem in field. Then explain the purpose of the study.* **Method:** *Specify the research design, sample, and research instrument and data analysis in brief.* **Findings***: Highlight the significant, interesting or surprising results*. **Implications for Research and Practice**. (These headings may need some adaptation in the case of discussion papers: *Background, Purpose of Study, Sources of Evidence, Main Argument, and Conclusions)*. More information available from http://www.tandf.co.uk/journals/authors/rereabstracts.asp Yapılandırılmış İngilizce öz 200-250 sözcük uzunluğunda olup, aday makalenin başında yer almakta ve **Purpose** *(İlk önce alanda karşılaşılan sorunu belirtelim. Daha sonra araştırmanın amacını bir cümle ile veriniz),* **Method** *(Araştırma deseni, örneklem, very taoplama aracı ve verilerin analizinini kısaca açıklayınız),* **Findings** *(En önemli ve çarpıcı araştırma bulgularını verelim)* **Implications for Research and Practice,** (*Uygulama ve ileriye dönük araştırmalar için olası çıkarımlarınız)* başlıklarını içermektedir. Bu başlıklar tartışma yazıları için: *Çalışmanın Temeli, Çalışmanın Amacı, Kanıt Kaynakları, Ana Tartışma ve Sonuçlar* şeklinde olabilir. Daha fazla bilgi için; http://www.tandf.co.uk/journals/authors/rereabstracts.asp adresine başvurunuz.
13	☒	*Following the structured abstract in English four to six keywords are included. They should **represent** the content of your manuscript and **be specific** to your field or sub-field. Avoid using keywords form the title of the paper.* Yapılandırılmış İngilizce özden sonra 4-6 anahtar sözcüğe yer verilmiştir. Anahtar kelimeler çalışmanızı temsil etmeli ve kendi alanınıza ya da alt alanlara özgü olmalıdır. **Makale adındaki kavramları anahtar kelime olarak seçmekten kaçınınız**.

14	☒	*An extended (750-1000 words) Turkish structured abstract is placed following the "References" section using five required headings: Problem Statement, Purpose of Study, Methods, Findings and Results, and Conclusions and Recommendations*. (These headings may need some adaptation in the case of discussion papers: *Background, Purpose of Study, Sources of Evidence, Main Argument, and Conclusions)*. More information available from http://www.tandf.co.uk/journals/authors/rereabstracts.asp Kaynakça'dan sonra 750-1000 sözcükten oluşan Türkçe yapılandırılmış öze yer verilmiştir. Türkçe yapılandırılmış öz *Problem Durumu, Araştırmanın Amacı, Araştırmanın Yöntemi, Araştırmanın Bulguları, Araştırmanın Sonuçları ve Önerileri* başlıklarını içermektedir. Bu başlıklar tartışma yazıları için: *Çalışmanın Temeli, Çalışmanın Amacı, Kanıt Kaynakları, Ana Tartışma ve Sonuçlar* şeklinde olabilir. Daha fazla bilgi için; http://www.tandf.co.uk/journals/authors/rereabstracts.asp
15	☒	*Following the Turkish structured abstract, four to six keywords are included.* Uzun Türkçe özetten sonra 4-6 anahtar sözcüğe yer verilmelidir.
16	☒	*References are not cited in the structured abstracts in English and in Turkish.* İngilizce abstract ve Türkçe öz içerisinde atıfta bulunulmamıştır.
17	☒	*The format of headings, tables, figures, citations, references, and other details follow the **APA 6 style** as described in the Publication Manual of the American Psychological Association, 6th edition, available from http://www.apa.org* Aday makalenin başlıkları, tabloları, şekilleri, atıfları, kaynakçası ve diğer özellikleri tamamen APA altıncı baskıda belirtildiği şekildedir.
18	☒	*All illustrations, figures, and tables are placed within the text at the appropriate points, rather than at the end.* Aday makalenin şekilleri ve tabloları metin içerisinde bulunmaları gereken uygun yerlere yerleştirilmiştir. Makale sonunda sunulmamıştır.
19	☒	Citations in the text of the document include the author's surname, the year of publication, and, when there is a specific quote from a source used, a page number where the quote is located in the text. **Example:** Nothing seemed so certain as the results of the early studies (Tatt, 2001, p. 445). It was precisely this level of apparent certainty, however, which led to a number of subsequent challenges to the techniques used to process the data (Jones & Wayne, 2002, p. 879). There were a number of fairly obvious flaws in the data: consistencies and regularities that seemed most irregular, upon close scrutiny (Aarns, 2003; West, 2003, p. 457). With studies by two authors, always include both author names: (Anderson & Bjorn, 2003) As Anderson and Bjorn (2003) illustrated in their recent study As recently as 2003, a prominent study (Anderson & Bjorn) illustrated When a study has 3, 4, or 5 authors, include the names of all the authors the first time the work is cited: (Anderson, Myers, Wilkes, & Matthews, 2003) For all subsequent citations of this work, use "et al.": (Anderson et al., 2003) When a work has 6 or more authors, use et al.: (Bell et al., 2003) For unsigned works, include the title, enclosed in parentheses. Put quotation marks for short work titles, and italicize the titles of reports, books, and other significant works: ("Recent Developments," 2004) (Dictionary of Tetrathalocigistic Diseases, 2004)

		Metin içindeki atıfları üstte verilen örneklere uygundur.
20	☒	Three levels of headings are used: Level 1, Level 3 and Level 4. The headings are formatted as follows: Centered Uppercase and Lowercase Heading (Level 1) *Flush Left, Italicized, Uppercase and Lowercase Side Heading* (Level 3) *Indented, italicized, lowercase paragraph heading ending with a period.* Start writing after the period (Level 4). Aday makale içerisinde üç farklı düzey başlık kullanılmıştır. Düzey 1, Düzey 2, Düzey 3. Başlıklar bu düzeylere uygun olarak aşağıdaki şekilde biçimlendirilmiştir: Ortalı ve Her Sözcüğün İlk Harfi Büyük Yazılmış Başlık (Düzey 1) *Tam Sola Dayalı, İtalik ve Her Sözcüğün İlk Harfi Büyük Yazılmış Başlık* (Düzey 3) *İçeriden, italik, tamamı küçük harflerle yazılmış ve nokta ile bitten başlık.* Noktadan sonra normal metin yazımına devam edilmeli (Düzey 4).
21	☒	References are listed in alphabetical order. Each listed reference is cited in text, and each text citation is listed in the References. Basic formats are as follows: Haag, L., & Stern, E. (2003). In search of the benefits of learning Latin. *Journal of Educational Psychology, 95,* 174–178. Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley. Johnson, D. W., & Johnson, R. T. (1990). Cooperative learning and achievement. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 173–202). New York: Praeger. **Turkish References Only:** Çınkır, Ş., & Çetin, S. K. (2010). Öğretmenlerin okullarda mesleki çalışma ilişkileri hakkındaki görüşleri [Teachers' opinions about the professional working relationships in schools]. *Kuram ve Uygulamada Eğitim Yönetimi, 1 6*(3), 353-371. **Article in an Internet-only journal/Periodical, database** Fredrickson, B. L. (2000, March 7). Cultivating positive emotions to optimize health and well being. *Prevention & Treatment, 3,* Article 0001a. Retrieved November 20, 2000, from http://journals.apa.org/prevention/volume3/pre0030001a.html More information is available from: http://citationonline.net/CitationHelp/csg04-manuscripts-apa.htm#references Kaynakça'nın yazımı üstte verilen örneklere uygundur.
22	☒	***Order of the main parts in the manuscript is as follows:*** *Main title in English (max. 12 words)* *Structured abstract (min. 200-max. 250 words length)* *Keywords (in English, min. four-max. six)* *Main text* *References* *Main Title in Turkish (max. 12 words* *Extended structured abstract (min. 750-max. 1000 words length in Turkish)* *Keywords (in Turkish, min. four-max. six)* Aday makaleyi oluşturan ana öğeler aşağıdaki düzendedir: İngilizce Ana Başlık (En fazla 12 sözcük) Yapılandırılmış İngilizce Abstract (En az 200, en fazla 250 sözcük) Anahtar Sözcükler (İngilizce, en az dört, en fazla altı) Ana Metin

		Kaynakça Türkçe Ana Başlık (En fazla 12 sözcük) Yapılandırılmış Türkçe Öz (En az 750, en fazla 1000 sözcük) Anahtar Sözcükler (Türkçe, en az dört, en fazla altı)
23	☒	**Structure of the Manuscript should be as follows:** Manuscript Title **English Abstract (200-250 words) Sub-headings:** *Purpose:…* *Purpose of Study:…* *Method:…* *Findings:…* *Implications for Research and Parctice:…* *Keywords:...* **Introduction Method (sub-headings):** *Research Design* *Research Sample* *♦Research Instrument and Procedure* *Data Analysis* **Results, Discussion and Conclusion, References** **Extended Turkish Abstract (750-1000 words) Sub-headings:** *Problem Durumu:…* *Araştırmanın Amacı:…* *Araştırmanın Yöntemi:…* *Araştırmanın Bulguları:…* *Araştırmanın Sonuçları ve Önerileri:…*
24	☒	***EJER editor reserves the right to reject manuscripts and not to publish it that do not comply fully with the EJER Manuscript Submission Guidelines.***

♦ Reliability and the validity of the research instrument used or adapted in the work must be provided, and explained in detail.

SUBSCRIPTION/*ABONELİK*

Annually / *Yıllık*

***Individual** / Kişi Aboneliği.....: 200 TL*
***Institution** / Kurum Aboneliği.....: 600 TL*
***Abroad** / Yurtdışı Aboneliği:.....: 300 $*
***Student** / Öğrenci Aboneliği:.....: 150 TL*

For single issue / *Tek sayılar için*

***Individual** / Kişiler .....: 40 TL*
***Institution** / Kurumlar .....: 140 TL*

Payment / *Ödeme*

Dollar ($) Account / *Dolar Hesabı*
Account Information for Payment
Account Name: Anı Yay. Rek. Dan. Eğit. Ltd. Şti.
Bank Name: Is Bank
IBAN Number: TR82 0006 4000 0024 2141 3300 29
SWIFT CODE: ISBKTRISXXX
TURKEY

Turkish Lira (TL) Account / *Türk Lirası Hesabı*
Banka: İşbank
Hesap Adı: Anı Yay. Rek. Dan. Eğit. Ltd. Şti.
Şube Kodu: 4214
Hesap No: 962561
IBAN: TR14 0006 4000 0014 2140 9625 61