

Development of Teachers' Compliance with Professional Ethics in Relations with Students Scales: Teacher and Student Forms*

RESEARCH ARTICLE

Hasan ARSLAN¹, Semra TİCAN BAŞARAN², Sibel AYDOĞAN³

1 Muğla Provincial Directorate of National Education, hasanarslan_48@hotmail.com. ORCID: 0000-0003-3300-3390

2 Assoc. Prof. Dr., Muğla Sıtkı Koçman University, Faculty of Education, semrabasaran@mu.edu.tr. ORCID: 0000-0003-2734-7779

3 Dr., Muğla Sıtkı Koçman University, Faculty of Education, sibeldemirbilek@mu.edu.tr. ORCID: 0000-0002-0699-6510

Received: 03.07.2024 Accepted: 25.12.2024 DOI: 10.37669/milliegitim.1509837

Citation: “Arslan, H., Tican Başaran, S., and Aydoğan, S. (2024). Development of teachers' compliance with professional ethics in relations with students scales: Teacher and student forms. *Millî Eğitim*, 54(245), 355-390. DOI: 10.37669/milliegitim.1509837”

Abstract

This study aims to develop parallel forms of the Teachers' Compliance with Professional Ethics in Relations with Students Scale for secondary school teachers and students. The first study group comprised 266 secondary school teachers and 427 students, while the second group included 216 secondary school teachers and 851 students. Exploratory factor analysis revealed a single-dimensional structure consisting of 18 items for teacher and student scales, and the total variance explained by this structure was found 64.00% and 48.00% respectively. Confirmatory factor analysis confirmed that both scales maintained their single-dimensional structure, fitting well and meeting the criteria for goodness-of-fit indices. The Cronbach's α internal consistency coefficient was .96 for both scales. These findings indicate that teachers' compliance with professional ethics in relations with students scales for secondary school teachers and students are valid and reliable scales.

Keywords: *ethics, professional ethics, ethics for teaching profession, scale development*

*This study is produced from the first author's master's thesis. A part of the research was presented at the 7th International Contemporary Educational Research Congress on 27-30.09.2023

Öğretmenlerin Öğrencilerle İlişkilerde Mesleki Etik İlkelerine Uygun Davranma Ölçeklerinin Geliştirilmesi: Öğretmen ve Öğrenci Formları*

Öz

Bu çalışmanın amacı, ortaöğretim öğretmen ve öğrencilerine yönelik Öğretmenlerin Öğrencilerle İlişkilerde Mesleki Etik İlkelerine Uygun Davranma Ölçeklerinin geliştirmektir. İlk çalışma grubunu ortaöğretim kurumlarından 266 öğretmen ve 427 öğrenci, ikinci çalışma grubunu 216 öğretmen ve 851 öğrenci oluşturmuştur. Açımlayıcı faktör analizi çalışmaları her iki ölçek için 18 maddelik tek boyutlu bir yapı ortaya koymuş ve bu yapının açıkladığı toplam varyans oranının öğretmen ölçeği için %64.00, öğrenci ölçeği için %48.00 olduğunu göstermiştir. Doğrulayıcı faktör analizinin öğretmen ve öğrenci ölçekleri için ortaya koyduğu uyum indeksi değerleri de modelin veriyle uyumlu olduğunu göstermiştir. Güvenilirlik çalışmaları kapsamında Cronbach α iç tutarlılık katsayısı her iki ölçek için .96 olarak hesaplanmıştır. Elde edilen bulgular; ortaöğretim öğretmen ve öğrencilerine yönelik Öğretmenlerin Öğrencilerle İlişkilerde Mesleki Etik İlkelerine Uygun Davranma Ölçeklerinin geçerli ve güvenilir olduğunu göstermektedir.

Anahtar Kelimeler: etik, meslek etiği, öğretmenlik meslek etiği, ölçek geliştirme

Introduction

Educational activities are among the most critical tools for countries in shaping their future. Achieving the desired goals in education is closely related to the qualities of teachers. It is emphasized that innovations in education can only be implemented through teachers (Ministry of National Education [MoNE], 2017). There is a need for qualified teachers, and teachers are expected to possess certain competencies. Within the framework of the Teacher Training Component of the Basic Education Support Project, MoNE (2008) conducted studies on competencies for teaching profession and, with the approval of the Board of Education on April 14, 2006, enacted the Teaching Profession Competencies as six main competencies, 31 sub-competencies, and 233 performance indicators. Later, to address the needs arising from national and international developments, competencies of the teaching profession were re-defined under three main title in 2017: 1) Professional knowledge, 2) Professional skills, and 3) Attitudes and values, under which 11 competencies and 65 indicators were specified (MoNE, 2017).

In Türkiye, besides MoNE (2017), some researchers (e.g. Tican Başaran et al., 2017; Çelebi and Akbağ, 2012; Gündüz and Coşkun, 2012; Manolova, 2011, Sakin, 2007) and institutions/organizations (e.g. Turkish Education Association [TED], 2009) have also conducted studies to determine teacher competencies. A comparison of the professional competencies developed for teachers by TED

(2009) and MoNE (2017) shows that a teacher must also be capable of acting responsibly and critically within the framework of ethical principles.

The concept of ethics is gaining more importance in our lives (Aydın 2012). Just as evaluating all human actions within the context of ethical values is not possible, discussing any human activity that is entirely unrelated to ethical values is equally challenging. Ethics is a discipline that centers on the purpose of human existence, clarifying the concepts of good and evil in alignment with human nature. Ethics thoroughly addresses the issues encountered in personal and social life, offering solutions and proposing new ethical approaches and principles based on rational and critical inquiry by accessing accurate information about existence (Güçlü et al., 2003).

Ethical principles are fundamental guidelines that aid individuals in discerning right from wrong, shaping their behaviors and making decisions. These principles offer a framework for evaluating actions, intentions, and outcomes, ensuring they align with moral values. They play a role in increasing the likelihood of protecting human dignity in situations where individuals are compelled to act but lack sufficient competence (Kuçuradi, 2003).

Professional ethics provides a comprehensive set of ethical principles and standards that guide and shape an individual's professional behavior (Aydın, 2012). Professional ethics serve as the codes of conduct that command members of a particular profession to act according to specific rules, limit arbitrary choices, exclude incompetent and unprincipled members from the profession, regulate professional competition, and illustrate the ideals of the profession. Professional ethics encompass the approaches, attitudes, and behaviors that must be considered in practicing the profession regardless of where it is practiced. In this aspect, professional ethics gives a profession a universal identity (Erdem, 2012).

In Türkiye, the Professional Ethical Principles for Providers of Educational Services, which includes teachers as an official professional group, was first established by the MoNE in 2015. These principles are presented under six main headings: Ethical principles related to the teaching profession; ethical principles in relationships with students, colleagues, parents, school management and society and ethical principles for school administrators in relations with teachers, students, and parents (MoNE, 2015). The first five headings pertain to ethical principles for teachers, while the last includes additional ethical principles specifically for administrators.

Among the six main headings (MoNE, 2015), ethical principles in relationships with students are emphasized further with additional eight subheadings and specific explanations below:

Love and respect: Educational activities are grounded in love and respect from start to finish. The educator fosters a sense of love in every student, demonstrating care without regard for differences or deficiencies. By embodying the values of kindness toward younger students and respect toward older ones, the educator sets an example, taking care to avoid words or actions that could embarrass or harm a student's dignity.

Being a good role model: The educator serves as a positive role model through words, actions, demeanor, and appearance, inspires students' desire and determination to learn through her/his knowledge and expertise, and carefully avoids any attitudes or behaviors that might set a negative example.

Being understanding and tolerant: The educator approaches all students with different characteristics with the same understanding and tolerance as others.

Acting fairly and equitably: In practicing their profession, the educator upholds respect for human rights, treating all students fairly and equally, regardless of race, language, religion, color, political views, or family status. They ensure that all students have equal access to educational opportunities, providing each with the attention needed to foster their development.

Considering the student's development: The educator fosters students' physical, emotional, social, cultural, and moral development, building sincere, trust-based communication with them. In the classroom, they encourage students to express themselves freely and actively participate. The educator strives to nurture individuals who are physically and mentally healthy, morally grounded, self-confident, and responsible.

Protecting confidential information about the student: The educator respects the confidentiality of information regarding the student, safeguarding it and sharing only in cases of legal obligation or emergencies. They do not disclose details about the student's private life to anyone outside the family.

Not reflecting negative psychological states: The educator does not disclose or reflect personal feelings, such as sadness, distress, or unhappiness stemming from personal, family, or environmental reasons, onto the students.

Avoiding mistreatment: The educator avoids any behavior that could negatively affect a student's physical and mental health, social development, or education. If they become aware of a student facing mistreatment, whether in or outside of school, they take appropriate action and report the situation to the relevant authorities.

The establishment of ethical principles for educational service providers by MoNE is extremely important for ensuring that the services provided in educational institutions are in line with shared principles among stakeholders. Moreover, monitoring the extent to which these principles are implemented is crucial for the future quality of education and, ultimately, for the quality of society. These principles contribute to aligning services with shared values among stakeholders and underscores the significance of monitoring their implementation.

For the establishment and dissemination of professional ethical principles in educational institutions, it is essential that educators act in accordance with these principles, serving as role models for students who will shape the country's future, and help them develop ethical thinking skills and behaviors (Gözütok, 1999). Students often emulate their teachers in many aspects as the role models. In higher education institutions, where various professional groups are trained, it is expected that faculty members also comply with professional ethics during the educational process. By doing so, they can serve as role models for their students, who are future professionals and scientists, helping them to adopt ethical principles (Erdem, 2012; Gözütok, 1999). Students also look up to their faculty members as role models in professional ethics, just as they do in many other areas (Kuther, 2003).

When examining the local literature on the compliance of teachers with ethical principles, several studies have utilized various scales to assess teachers' views and behaviors. In a study exploring the perspectives of preschool teachers on professional ethical principles (Tarkoçin and Yıldızhan Bora, 2018), the Ethical Behaviors of Preschool Teachers Scale (OÖEDÖ) developed by Sakin (2007) was implemented. In studies concerning primary school teachers (Özen, 2017), the Ethical Principles Scale for the Teaching Profession developed by Manolova (2011) was employed. For studies involving middle school teachers (Yeşilyurt and Kılıç, 2014), the Teacher Ethical Values Scale According to Student Perception developed by Gündüz and Coşkun (2012) was conducted. In

other study involving high school teachers data was collected by Teacher Ethical Behavior Scale developed by Çelebi and Akbağ (2012). At the higher education level, Tican Başaran et al. (2017) developed scales based on the Ethical Behavior Principles of Higher Education Institutions determined by the HEC, examining faculty members' compliance with these principles.

Excluding higher education, the scales utilized at other educational levels were independently developed by researchers drawing from existing literature. However, there has been no official scale development effort by the MoNE to assess compliance with the professional ethical principles, which have been officially announced and binding for in-service teachers since 2015. As a result, studies concentrating on teachers' compliance with the professional ethics have not yet been represented in the literature. Furthermore, it is believed that studies solely focusing on teachers may not provide a complete understanding of their compliance with professional ethics. There is a necessity for triangulation studies that incorporates the viewpoints of students, who have the chance to closely observe teachers' ethical conduct. Nonetheless, it is crucial to consider the developmental stages of the students in such studies.

Understanding the compliance of teachers with official professional ethics is crucial for monitoring the implementation of the ethical principles, guiding activities to enhance teacher quality, and improving the future quality of education. Furthermore, it would provide MoNE with scientific data as the policymaker, showing the practical application of the developed professional ethics.

In this context, the aim of this study is to develop the Teachers' Compliance with Professional Ethics in Relations with Students Scale (TCPERSS) for secondary school teachers and students. The objective is to determine the extent to which secondary school teachers comply with the professional ethics in their relations with students, as specified in the professional ethics for providers of educational services put into practice by the MoNE in 2015.

Methods

Design of the Study

In the process of developing the TCPERSS for secondary school teachers and students, scale development steps proposed by DeVellis (2003) were

followed. The aim was to create data collection instruments for both teachers and students that would validly, reliably, and impartially reflect the extent to which teachers comply with the ethics in their relationships with students, as determined by the MoNE (2015). Furthermore, these instruments were designed to be implemented across different secondary education institutions and to facilitate precise and straightforward reporting of the collected data. Therefore, a multi-phase data collection instrument development process was employed to provide comprehensive evidence, derived from both statistical analyses and expert opinions, regarding validity and reliability.

Study Group

This study was conducted with two different study groups.

First study group: In the context of scale development studies, the principal objective in selecting the study cohort is to capture a diverse spectrum of behavioral variances to be measured with precision (Anastasi, 1982). Therefore, when determining the sample for scale development, the goal is to reach a heterogeneous group that possesses all levels of the behavior to be measured, rather than to represent a country, region, or similar entities accurately (Acar Güvendir and Özer Özkan, 2022). In line with this approach, data collection for the Exploratory Factor Analysis (EFA) was planned in the first stage, targeting secondary school teachers and students in the Menteşe district of Muğla. The focus was on obtaining sufficient variance in the sample (Erkuş, 2014). To ensure that teachers and students from various secondary schools in the district were represented in the study group proportionally to their presence in the target population, stratified sampling was employed (Büyüköztürk et al., 2021; Çıngı, 1994; Karasar, 2019). Additionally, in deciding the sample size for scale development, it is recommended to consider 5-10 times (Büyüköztürk, 2020; Kass and Tinsley, 1979) or 10 times the number of items (Nunnally, 1978). Therefore, the first study group aimed to include at least 180 teachers and 180 students (10 times the number of 18 items).

Accordingly, with a 95% confidence interval and based on stratified sampling according to school type, the initial study group was planned to include at least 218 teachers and 357 students. However, the actual participation included 307 teachers and 494 students. After data cleaning, the final study group consisted of 266 teachers from different secondary schools and fields, and 427 students from different grade levels.

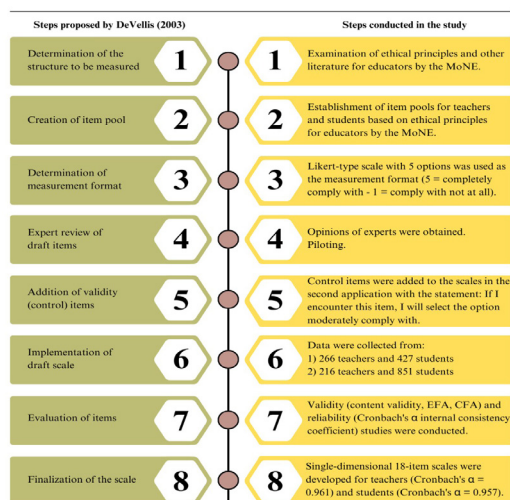
Second study group: The second study group consisted of teachers and students from secondary schools in other districts of the same province, excluding the district where the initial data were collected. Due to difficulties in finding the targeted number of volunteer teachers from the specified secondary schools in the initial stage, and because of the larger target population for sampling, appropriate sampling was conducted in the second stage (Büyüköztürk et al., 2021). Upon examining the data obtained from the second study group before Confirmatory Factor Analysis (CFA), it was found that 109 teachers (29.82%) and 244 students (22.28%) did not provide an appropriate response to the attention check item (if I encounter this item, I will select the option 'moderately comply with'). After filtering out the data that did not provide an appropriate response to the attention check item, the second study group finally comprised 216 teachers and 851 students from different types of secondary schools.

The Scale Development Process

During the development of parallel scales for teachers and students, the scale development steps and procedures proposed by DeVellis (2003) were followed and are summarized in Figure 1.

Figure 1

Steps and Procedures Followed in Developing Teacher and Student Scales



Following DeVellis's (2003) recommendations, the development of data collection instruments commenced with a thorough literature review, which included examining the Professional Ethics for Education Service Providers outlined by the MoNE (2015) and categorized under six main headings, were scrutinized. Upon review, the section titled Ethical Principles for School Administrators in their Relationships with Teachers, Students, and Parents was excluded from consideration. As a result, the scope was narrowed down to five main categories: Ethical Principles Related to the Teaching Profession, Ethical Principles in Relations with Students, Educators, Parents, School Management and Society.

Subsequently, the research team and measurement and evaluation experts conducted discussions, leading to a decision to focus exclusively on the dimension of Ethical Principles in Relations with Students. This decision aimed to streamline the development process and ensure the creation of user-friendly instruments. This focus resulted in the formulation of a pool of 18 draft items, covering the eight subtopics taking place under the topics of Ethical Principles in Relations with Students. Additionally, local literature on teachers'/faculty members' compliance with the professional ethics was consulted during the drafting.

After careful examination by the experts for relevance to the research objectives, clarity, coherence with other items, and delineation of boundaries, the draft data collection instruments consisting of 18 items for both students and teachers were prepared in a five-point Likert scale (5 = completely comply with, 4 = mostly comply with, 3 = moderately comply with, 2 = mostly not comply with, 1 = not comply with at all). Distribution of draft items according to subheadings is as follows: Love and respect (1, 2, 3), Being a Good Role Model (4, 5, 6), Being Understanding and Tolerant (7), Acting Fairly and Equitably (8, 9), Considering the Student's Development (10, 11, 12, 13), Protecting Confidential Information about the Student (14), Not Reflecting Negative Psychological States (15), Avoiding Mistreatment (16, 17, 18). Items in the teacher scale starts with "My colleagues" and in the student scale with "My teachers". Final version of the both scales presented in appendices.

Feedback were sought from two experts each in the fields of measurement and evaluation, teacher education, and ethics in education, along with one expert

in Turkish education. Subsequently, the scales were piloted face-to-face with two secondary school teachers and two students. Following the piloting and expert opinions, the scales were finalized, and permissions were obtained from the Social and Human Sciences Ethics Committee of Muğla Sıtkı Koçman University and the Muğla Provincial Directorate of National Education.

Data Collection and Analysis

The initial data were collected using face-to-face paper-and-pencil methods during the spring semester of the 2022-2023 academic year. In contrast, the second stage data, owing to the widespread geographic dispersion of the target population, were gathered with technological assistance and by visiting schools as extensively as feasible during the fall semester of the 2023-2024 academic year.

To ascertain the construct validity of the preliminary scales created for teachers and students, EFA and CFA were performed using SPSS 22.0 and JAMOVI 2.2.5, respectively. Additionally, the internal consistency coefficients (Cronbach's α) were calculated.

Literature suggests that when approximately 10.00% of individuals respond carelessly or randomly to a scale, it significantly distorts the factor structure of the scale (Huang et al., 2012; Woods, 2006). Moreover, identifying individuals who respond carelessly/randomly solely based on person fit indices or Mahalanobis distance is inadequate; for instance, individuals who assign full scores to all items cannot be classified as such based solely on these indices (Hambleton, 2000). This implies that there may be more individuals responding carelessly or randomly than can be identified using these indices. Consequently, prior to EFA, data cleansing was performed using the 'Mahalanobis' function in R 3.5.1 (2018-07-02). It was discovered that approximately 13.00% of the teacher dataset and 14.00% of the student dataset contained inconsistent data based on Mahalanobis distance. After data cleansing, the teacher dataset had 266 and the student dataset 427 participants, making them suitable for EFA. To assess sample size adequacy, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were conducted to determine if the data were suitable for EFA.

The structure revealed in EFA needs validation. Therefore, after conducting EFA studies in scale development, if feasible, CFA studies are carried

out using data obtained from a separate study group (Worthington and Whittaker, 2006; Yaşlıoğlu, 2017) to assess the suitability of the structure identified in EFA. The adequacy of the single-dimensional structure obtained at the end of EFA was also examined using CFA with data collected from the second study group. Before conducting CFA, data were scrutinized using both Mahalanobis distance and the attention check item. Approximately 34% of the teacher data and 22% of the student data were deemed inconsistent and removed. After cleansing, the teacher dataset had 216 participants and the student dataset had 851, making them suitable for CFA. Maximum likelihood estimation was employed in the CFA process.

Findings

The studies conducted to validate the teacher and student scales are presented below under relevant headings.

Content Validity Studies

The preparation of the professional ethics principles by the MoNE proceeded as follows:

The Strategy Document and Action Plan for Increasing Transparency and Strengthening the Fight Against Corruption in Türkiye was approved by the Council of Ministers and published in the Official Gazette on 22.02.2010, thus put into practice. This Action Plan aimed to establish ethical principles for each professional group within public administration and prevent conflicts of interest. To achieve this, the MoNE initiated the development of professional ethics for educators.

The basis for these studies included the United Nations “International Code of Conduct for Public Officials” and the Regulation on “Ethical Conduct Principles for Public Officials and Application Procedures and Principles,” which were in effect at that time. Initially, written opinions from MoNE units were gathered, followed by the formation of a multi-party working group comprising representatives from the Prime Ministry, MoNE, and teacher unions. A commission study was then conducted in Izmir with the participation of MoNE representatives, district education branch managers, inspectors, and teachers.

To ensure the compatibility of the identified principles with international standards, various country examples were also included in the study. Under the

coordination of the Prime Ministry, two separate workshops were organized to finalize the ethical principles. These workshops included MoNE representatives, district education branch managers, school principals, teachers, students, parents, representatives from civil society and unions, and academics (MoNE, 2015).

The comprehensive, multi-faceted, and multi-stage studies conducted by the MoNE, based on a wide range of literature, were considered valuable for content validity. This was supported by the decision that no item needed to be removed from the scale based on the item load values in Table 3. To ensure content validity, additionally opinions were obtained from two experts in measurement and evaluation in education, teacher education, and ethics in education, as well as one expert in Turkish education. The draft scales were then piloted with two secondary school teachers and two students.

Structural Validity Studies

To demonstrate the structural validity of the draft scales developed for teachers and students, both EFA and CFA were conducted. Factor analysis involves applying multi-faceted statistical techniques to uncover and explain the underlying structure within the data obtained in the research (Crocker and Algina, 1986). By analyzing the relationships between variables, factor analysis identifies factors or dimensions. It can also be used to summarize or rename data (Kim and Mueller, 1978).

EFA studies: Before conducting the EFA, the KMO test was performed to assess sample size adequacy, Bartlett’s sphericity test was conducted to determine the suitability of the data for EFA. The results are presented in Table 1.

Table 1

Results of KMO Test and Bartlett’s Test for Teacher and Student Scales

		Teacher	Student
KMO test		.96	.96
Bartlett’s sphericity test	χ^2	4694.721	4419.327
	sd	153	153
	p	.000	.000

The adequacy of the sample size, as demonstrated by the KMO test results in Table 1, was determined to be .96 for the teacher scale and .96 for

the student scale. Values above .70 indicate good sample adequacy in terms of relationships (Can, 2014), thus implying that the sample size is sufficient for EFA (Büyüköztürk, 2020). Additionally, the significant results of the Bartlett's sphericity test indicate adequate relationships, confirming that the data are suitable for EFA (Büyüköztürk, 2020; Can, 2014).

The Principal Axis Factoring technique was employed to determine the factors for both the teacher and student scales. This technique aims to identify the factors that explain the variance in the data. A single factor with an eigenvalue greater than 1 was obtained for all 18 items on both scales. The variance explained by the first dimension was 64.00% for the teacher scale and 48.00% for the student scale, respectively. A higher total explained variance indicates that the intended structure is well measured (Büyüköztürk, 2020). While Büyüköztürk (2020) suggests that in unidimensional structures in social sciences, the explained variance can be as low as 30.00%, Reckase (1979) indicates that the first factor should explain at least 20.00% of the variance. In this study, 64.00% of the variance was explained in the teacher scale and 48.00% in the student scale. Based on the proportion of the total explained variance, it was concluded that the scales effectively measure the intended structure.

In scale development studies, determining the number of factors involves considering whether an additional second factor contributes at least 10% of the variance explained by the first factor. This criterion is applied because adding another factor can increase the complexity of the structure. Therefore, an increase of at least 10% in the proportion of explained variance with the addition of a second factor is considered a standard (Kılıç, 2022). To evaluate this, the eigenvalue and variance values for the first and second dimensions in the teacher and student scales were analyzed, and the results are provided in Table 2.

Table 2

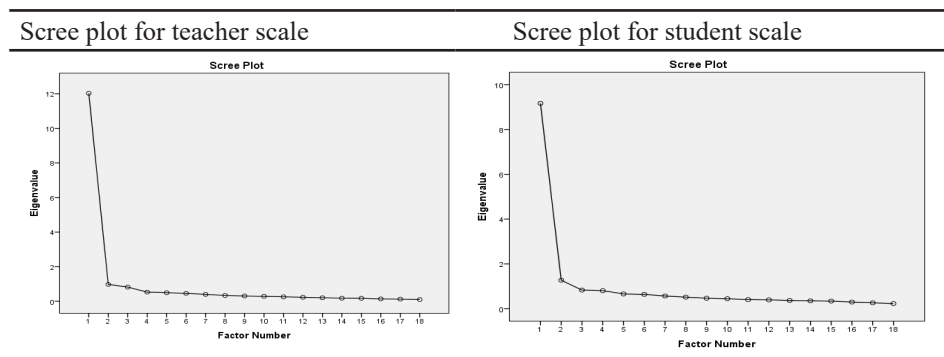
Eigenvalues and Variances for the First and Second Dimensions in Teacher and Student Scales

	Dimension	Eigenvalue	Variance	Cumulative variance
Teacher	1	11.77	64.40	64.40
	2	0.73	4.08	68.48
Student	1	8.71	48.39	48.39
	2	0.85	4.69	53.08

The findings in Table 2 indicate that in both scales, the second factor did not contribute 10% to the first factor, confirming the decision that the scale is unidimensional. To further support this decision, cumulative scree plots were examined for both scales. The cumulative scree plots for the teacher and student scales are presented in Figure 2.

Figure 2

Scree Plots for Teacher and Student Scales



The abrupt, distinct drop followed by a plateau evident in both graphs in Figure 2 reinforces the conclusion that both scales possess a unidimensional structure. In cases where it is determined that a scale is unidimensional, rotation is unnecessary (Kılıç, 2022). Therefore, no rotation process was carried out for either scale in this study. The factor loadings, eigenvalues and variance explained regarding the 18 items in both the teacher and student scales are presented in Table 3.

Table 3

Factor Loadings, Eigenvalues, and Explained Variance Ratios for Items in Teacher and Student Scales

Item No	Factor loadings for the items in the teacher scale	Factor loadings for the items in the student scale
1* (eğitim ve öğretim faaliyetlerini saygı üzerine dayandırır)	.74	.72
2 (öğrencilerini sever, sevdiğini hissettirirler)	.77	.72
3 (öğrenciyi utandıracak, onurunu kıracak söz ve davranışlardan kaçınırlar)	.78	.62
4 (öğrencilere iyi örnek (söz, davranış, hal, hareket, görüntüleri vb. ile) olurlar)	.82	.75
5 (bilgi birikimleriyle öğrencilerde öğrenme isteği/azmi uyandırır)	.80	.61
6 (öğrencilere kötü örnek oluşturacak tutum ve davranışlardan kaçınırlar)	.80	.69
7 (özellikleri bakımından farklılık gösteren öğrencilere diğerleri gibi anlayış/hoşgörü ile yaklaşır)	.79	.67
8 (mesleğini icra ederken insan haklarına saygı duyarlar)	.86	.73
9 (bütün öğrencilere adil ve eşit davranır)	.85	.66
10 (öğrencilerin gelişimlerini (fiziksel, duygusal, sosyal, kültürel, ahlaki) gözetirler)	.86	.71
11 Attention check item (bu maddeyi okuyorsam orta düzeyde uygun davranırlar seçeneğini işaretleyeceğim)	.86	.73
12 (gelişimleri doğrultusunda öğrencileri ile samimi ve güvene dayalı iletişim kurarlar)	.83	.74
13 (öğrencileri derslerde kendilerini ifade etmeleri konusunda cesaretlendirirler)	.88	.78

14 (iyi bireyler (bedenen, ruhen sağlıklı, iyi ahlaklı, kendine güvenen, sorumluluk sahibi) yetiştirmek için gereken çabayı gösterirler)	.74	.67
15 (öğrencileri ile ilgili gizli bilgileri yasal zorunluluklar ve acil durumlar dışında paylaşmazlar)	.75	.58
16 (kişisel durumlarını (üzüntü, sıkıntı, mutsuzluk vb.) öğrencilere yansıtmazlar)	.85	.72
17 (öğrenciyi (beden, ruh sağlığını, fiziksel, sosyal gelişimini, eğitimini vb.) olumsuz etkileyecek şekilde davranmazlar)	.76	.73
18 (öğrencinin kötü muameleye uğradığını fark ettiğinde gerekli tedbirleri alırlar)	.64	.65
	Eigenvalue = 11.80	Eigenvalue = 8.70
	Explained total variance = 64.00%	Explained total variance = 48.00%

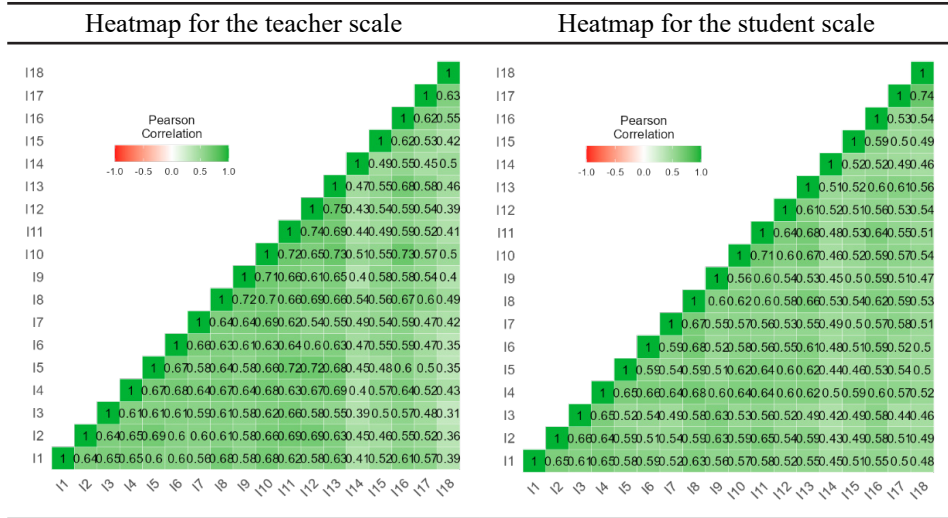
*Items in the teacher scale starts with “My colleagues” and in the student scale with “My teachers”.

Based on the EFA results in Table 3, it was concluded that there is no need to remove items from either scale, and the TCPERSS, developed for both teachers and students, consists of a unidimensional structure comprising 18 items each. For the teacher scale, the total eigenvalue was 11.80 with a total explained variance of 64.00%, while for the student scale, the total eigenvalue was 8.70 with a total explained variance of 48.00%.

In the validity studies, the levels of relationship between the 18 items forming the unidimensional structure were also examined. In this context, heatmaps prepared for both scales are provided in Figure 3.

Figure 3

Heatmaps (Inter-item Correlations) for the Teacher and Student Scales



Based on the heat maps depicted in Figure 3, it can be observed that all items exhibit positive correlations with each other.

CFA studies: To validate the unidimensional structure identified by EFA in both the teacher and student scales, it underwent testing through CFA. The CFA results for the data obtained from teachers in the second study group are presented in Table 4.

Table 4

CFA Results for the Teacher Scale

Item No	Value	Standard error	Z	P
1	.54	.0397	13.49	< .001
2	.54	.0392	13.71	< .001
3	.52	.0405	12.76	< .001
4	.54	.0373	14.54	< .001
5	.60	.0423	14.23	< .001
6	.53	.0392	13.52	< .001
7	.53	.0405	13.05	< .001

8	.53	.0354	14.97	< .001
9	.56	.0407	13.78	< .001
10	.60	.0383	15.60	< .001
11	.55	.0375	14.80	< .001
12	.56	.0391	14.42	< .001
13	.60	.0404	14.89	< .001
14	.39	.0420	9.23	< .001
15	.44	.0395	11.15	< .001
16	.51	.0370	13.78	< .001
17	.45	.0401	11.19	< .001
18	.36	.0431	8.32	< .001

Upon reviewing Table 4, it becomes apparent that the CFA outcomes affirm the single-factor structure of the teacher scale. The conformity index values (Hu and Bentler, 1999) pivotal to this determination are provided in Table 5.

Table 5

Basic Goodness of Fit and Acceptable Fit Index Values

Index	Good fit	Acceptable fit
χ^2	$p > .05$	$p > .05$
χ^2 /sd	$0 \leq \chi^2 /sd \leq 3$	$3 < \chi^2 /sd \leq 5$
RMSEA	$0 \leq RMSEA \leq .05$	$.05 < RMSEA \leq .08$
CFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI < .95$
TLI	$.95 \leq TLI \leq 1.00$	$.90 \leq TLI < .95$
SRMR	$.00 \leq SRMR \leq .05$	$.05 < SRMR \leq .08$

In Table 5, the significance of the χ^2 statistic indicates that the model does not adequately fit the data. This metric is often dismissed because the χ^2 statistic tends to become significant as sample size increases and relies on the assumption of equality between estimated and expected values (Brown, 2015). While some researchers view the χ^2/df statistic, which aims to adjust for sample size, as an acceptable criterion for model fit (Anderson and Gerbing, 1984), Kline (2016) underscores that this statistic lacks a logical and statistical basis for assessing model fit. Similarly, Wheaton (1987) advises against using this statistic for assessing model fit.

Brown (2015) classifies fit indices into three categories: Absolute fit indices (χ^2 , SRMR, and RMR), incremental fit indices (RMSEA), and comparative fit indices (CFI-IFI, TLI-NNFI). He recommends including at least one index from each group in reporting. In this study, fit indices from all three categories were reported, including SRMR, RMSEA, and CFI-TLI values. The fit indices obtained from CFA for the teacher scale (RMSEA = .08; CFI = .94; TLI = .93) indicated acceptable results. The CFA results for the data obtained from students in the second study group are presented in Table 6.

Table 6

CFA Results for the Student Scale

Item No	Value	Standard error	Z	P
1	.67	.0264	25.5	< .001
2	.76	.0291	26.2	< .001
3	.79	.0325	24.2	< .001
4	.78	.0265	29.4	< .001
5	.81	.0314	25.7	< .001
6	.69	.0268	25.7	< .001
7	.77	.0309	24.9	< .001
8	.79	.0275	28.7	< .001
9	.89	.0360	24.8	< .001
10	.82	.0301	27.3	< .001
11	.83	.0294	28.2	< .001
12	.79	.0315	25.1	< .001
13	.81	.0297	27.2	< .001
14	.63	.0311	20.2	< .001
15	.71	.0315	22.4	< .001
16	.80	.0303	26.3	< .001
17	.76	.0324	23.4	< .001
18	.76	.0347	21.8	< .001

The fit index values in Table 6 indicate that the fit indices for the student scale obtained from CFA (RMSEA = .072; CFI = .95; TLI = .94) also produced acceptable results based on the thresholds in Table 5. These findings further validate the single-factor structure of the student scale.

Reliability Studies

Following the EFA and CFA studies, reliability analyses were performed for teacher and student scales. In this regard, the internal consistency coefficients of the scales were scrutinized, and the resulting Cronbach's α values are presented in Table 7.

Table 7

Reliability Statistics for Teacher and Student Scales

Scale	Cronbach α (Data from first study group)	Cronbach α (Data from second study group)
Teacher	.97	.96
Student	.94	.96

Upon examining Table 7, it is evident that the Cronbach's α coefficients of the scales after EFA and CFA are above .94. For values of .81 and above, the reliability level of the scale is considered "excellent" (Özdamar, 2004). Therefore, it can be stated that the reliability level of the TCPERSS developed for secondary school teachers and students after EFA and CFA is excellent.

Upon review of Table 7, it becomes apparent that the Cronbach's α coefficients of the scales following EFA and CFA exceed .94. According to Özdamar (2004), values of .81 and above indicate an excellent level of reliability for the scale. Therefore, it can be concluded that the reliability levels of the teacher and student scales following EFA and CFA, are excellent. Final versions of both scales are presented in the appendices.

Discussion, Conclusion and Recommendations

Within the study's framework, two scales were developed to effectively measure the teachers' compliance with the professional ethics in teacher student relationships, ensuring reliability and validity across both teacher and student samples. To define the scope of the scales, the Professional Ethical Principles for Educational Service Providers, categorized into six main headings by the MoNE (2015), were consulted. Following this review, the scales' scope was narrowed down to the title Ethical Principles in Relationships with Students directly impacting both teachers and students and allowing both parties to express their perspectives. In line with this, a parallel student scale was developed alongside

the teacher scale to ensure data triangulation, allowing for the corroboration of data obtained from teachers or students with data from the other group, thereby enhancing reliability.

Upon reviewing the local literature concerning the examination of teachers' compliance with professional ethics, it becomes apparent that while some studies solely focus on the teacher population (Çelebi and Akbağ, 2012; Manolova, 2011; Özen, 2017; Sakin, 2007; Tarkoçin and Yıldızhan Bora, 2018; Yeşilyurt and Kılıç, 2014), others exclusively on students. Notably, the study by Gündüz and Coşkun (2012), investigating teachers' compliance with professional ethics from the perspective of students highlights the development of the Student Perception of Teacher Ethical Values Scale, which is tailored to fourth and eighth graders.

In alignment with the scale development endeavors within the local literature, the study by Tican Başaran et al. (2017) stands as the sole parallel investigation. They devised parallel scales for both faculty members and students based on the Ethical Principles of Higher Education Institutions determined by the HEC. However, this study is confined to the Ethical Principles of Higher Education Institutions, with the study group consisting of faculty members and students from education faculties. In contrast, the present study, which centers on the Ethical Principles in Relationships with Students from the MoNE and targets secondary school teachers and students, represents a pioneering investigation with the potential to carve out a new research domain in the local literature at the secondary education level. This endeavor not only lays the groundwork for research probing the ethical conduct of secondary school teachers in their interactions with students using valid and reliable scales but also sets the stage for scale development and exploration studies in other professional ethical dimensions, such as compliance with professional ethics in relationships with parents and colleagues.

Studies scrutinizing teachers' ethical conduct contribute significantly to the literature by furnishing scientific insights into educators' compliance with professional ethics while offering feedback to the MoNE on the ramifications of the ethical principles they have delineated, areas necessitating updates, additional required practices, and more. It is widely acknowledged that centrally imposed educational policies not embraced by practitioners, namely teachers, run the risk

of falling short of yielding the anticipated outcomes (Hopkins and Levin, 2000; McLaughlin, 1991).

To ensure that validity and reliability studies are conducted with dependable data, data cleansing was conducted prior to data analysis. Data screening, which involves removing cases with inappropriate responses, is recommended as part of the data analytics process (Tabachnick and Fidell, 2007) to achieve a clean dataset. There are numerous studies in the literature demonstrating that careless, random, or invalid responses to scales negatively affect the psychometric properties of data collection instruments (Hinkin, 1998; Johnson, 2005; Meade and Craig, 2012).

Curran (2016), who examined the methods used to detect careless responses, categorized these methods into 14 subheadings. One of these methods is the "Mahalanobis Distance," while another is the attention check item. An attention check item directs participants to select a specific response option, as in the example "Please select 'moderately agree' for this item" (Huang et al., 2012), and participants who do not adhere to this instruction are considered suspicious and may be removed from the dataset if deemed necessary.

While Mahalanobis Distance can be used as a cleaning method for data collected without adding any items, the attention check item is incorporated into the data collection tool before data collection begins. After implementation, responses to this item in the dataset are examined to make decisions regarding data cleansing. In the study, Mahalanobis Distance was used for data cleansing before the EFA, and both Mahalanobis Distance and an attention check item were used before the CFA. In the initial implementation, the percentage of individuals with inconsistent responses identified by Mahalanobis Distance was 13.00% for the teacher dataset and 14.00% for the student dataset. However, in the second implementation, by utilizing both Mahalanobis Distance and the additional attention check item, 34.00% of the teacher dataset and 22.00% of the student dataset were removed.

To ensure the content validity of the scales, expert opinions were solicited (Karasar, 2019) in two stages. In the first stage, opinions of MoNE representatives, educational administrators, teachers, students, parents, representatives from civil society and unions, and academic staff were gathered by the MoNE itself during meetings and workshops organized by the MoNE (2015) to discuss ethical

principles and provide explanations. In the second stage, opinions of academics from relevant fields were sought regarding the draft items developed by the researchers based on the professional ethics determined by the MoNE.

To demonstrate the construct validity of the scales, EFA was employed initially, followed by the confirming the model using data from a second sample through CFA. The EFA studies for both scales indicated that they consist of a unidimensional structure comprising 18 items each. A single factor with an eigenvalue greater than 1.00 was found for both scales.

Furthermore, following the criterion of a minimum 10% increase in explained variance ratio with the addition of a factor (Kılıç, 2022), it was observed that both scales remained unidimensional. Adhering to Thurstone's (1947) simple structure criterion, which recommends minimizing the number of factors as much as possible (Crocker and Algina, 1986), suggests that the teacher and student scales developed in this study, with their 18-item unidimensional structure, are straightforward and user-friendly. Moreover, the variance explained by a single dimension in the developed teacher scale being 64.00% and in the student scale being 48.00% further supports the robustness of the scales' unidimensional structure.

The factor loading values for the items in the teacher scale range from .64 to .88, while in the student scale, they range from .58 to .78. Tabachnick and Fidell (2007) consider factor loading values above .45 as significant, whereas Kline (2016) regards values above .60 as high and values between .30 and .59 as moderate. In this study, all items in the teacher scale exhibit factor loading values above .60, indicating high significance. Similarly, in the student scale, 17 items have factor loading values above .60, indicating high significance, while one item has a factor loading of .58, which can be considered moderate. Therefore, these findings suggest that each item contributes to the scale at the desired level of significance.

The relationships between the items were further analyzed using heatmaps, where negative relationships between variables are depicted in red, positive relationships in dark green, and no relationship is indicated by the absence of color (Revelle, 2016). In the heatmaps generated for both scales in this study, it was observed that all items exhibited positive relationships with each other and they were associated with teachers' compliance with professional ethics in their relationships with students.

The psychometric strength of a developed scale is typically assessed to ensure its validity and reliability (Noar, 2003). CFA is a crucial step in this process. In this study, the CFA results for both the teacher scale (RMSEA = .080; CFI = .94; TLI = .93) and the student scale (RMSEA = .072; CFI = .95; TLI = .94) were found to meet the criteria proposed by Hu and Bentler (1999), indicating acceptable results. These findings suggest that the model derived from the developed scales aligns well with data obtained from a similar group, thus confirming the 18-item unidimensional structure of the scales.

Following EFA and CFA, reliability studies were conducted by computing the internal consistency coefficients of the scales. The Cronbach's α coefficients were found to be above .94. It's worth noting that there's no universally agreed-upon cutoff point for Cronbach's α in the literature (Taber, 2018). One of the primary reasons for this variability is the tendency of this coefficient to increase with the number of items in the scale (Taber, 2018). For the scales developed in this study, the internal consistency coefficient for the 18 items significantly exceeded .70. According to George and Mallery (2003), Cronbach's α values above .90 are considered excellent, above .80 are good, above .70 are acceptable, above .60 are questionable, and above .50 are weak. Based on this criterion, both the teacher and student scales exhibit excellent reliability.

The scales were designed for practicality. Both the teacher and student scales have 18 items in a five-point Likert-type format, with no items requiring reverse-coding. The total score ranges from 18.00 to 90.00, reflecting the unidimensional nature of the scales. Total scores can be interpreted as follows: 1.00-1.79= not comply at all, 1.80-2.59= mostly not comply, 2.60-3.39= moderately comply, 3.40 - 4.19 = mostly comply, 4.20 - 5.00 = completely comply.

In conclusion, valid and reliable scales for teachers and students have been successfully developed to assess secondary school teachers' compliance with professional ethics in their relations with students, as stipulated by the MoNE in Türkiye. Both scales are user-friendly and easily interpretable for respondents.

Given the developmental stage of students and their engagement with the subject matter, this study, which focused on teachers and students from secondary schools in a specific province in Türkiye, can be conducted with diverse study groups from other provinces within the nation or from different countries internationally.

For enhanced reliability and validity of future scale development efforts, it's advisable to include an attention check item in the scales.

Scale development studies targeting teachers, students, parents, colleagues, and other stakeholders, focusing on all or specific subcategories of professional ethics set by the MoNE, could be conducted at the preschool, primary and middle school levels. Such studies could offer valuable insights for both policy development and practical implementation.

Author Contribution: First author 30.00%, second author 40.00% and third author 30.00%.

Conflict of Interest: There is no conflict of interest among the authors.

Ethical Statement: In this study, we declare that we have complied with the rules outlined in the “Directive on Scientific Research and Publication Ethics of Higher Education Institutions” and have not engaged in any actions that violate these rules. We further affirm that all authors have contributed to the study, that there are no conflicts of interest among the authors, and that the authors assume full responsibility for any ethical violations.

Ethical Permission: Ethical permission was obtained from the Social and Human Sciences Ethics Committee of Muğla Sıtkı Koçman University (Date: 09.02.2023, No: 31).

Finance: This research did not receive any financial support.

Data Availability Statement: The data collected during this study are available from the authors upon request.

Use of Artificial Intelligence for Writing Assistance: Authors declare that no artificial intelligence is used for writing assistance.

Genişletilmiş Özet

Giriş

Öğretmenlerin yerel ve evrensel değerleri gözeterek mesleğini yapabiliyor olması gerekmektedir. Türkiye’de resmi anlamda, bir meslek grubu olarak öğretmenleri de kapsayacak şekilde ilk kez Millî Eğitim Bakanlığı (MEB) tarafından 2015 yılında Eğitim Öğretim Hizmeti Verenler için Mesleki Etik İlkeler altı başlık altında sunulmuştur (MEB, 2015). MEB tarafından etik ilkelerin belirlenmiş olması, eğitim kurumlarında sunulan hizmetlerin paylaşılan ortak ilkeler doğrultusunda sunulması açısından önemlidir. Bu ilkelerin ne kadarının hayata geçtiğinin izlenmesi için geçerli ve güvenilir veri toplama araçlarına ihtiyaç duyulmaktadır. Bu doğrultuda, bu çalışmanın amacı ortaöğretim öğretmenlerin eğitim hizmeti verenler için belirlenen mesleki etik ilkelerden öğrencilerle ilişkilerde etik ilkelere uygun davranma durumlarını incelemek amacıyla ortaöğretim öğretmen ve öğrencilerine yönelik Öğretmenlerin Öğrenciler ile İlişkilerde Mesleki Etik İlkeler Uygun Davranma Ölçeklerinin geliştirilmesidir.

Yöntem

Öğretmenlerin Öğrenciler ile İlişkilerde Mesleki Etik İlkeler Uygun Davranma Ölçeklerinin geliştirilme sürecinde DeVellis’in (2003) önermiş olduğu ölçek geliştirme aşamaları izlenmiştir.

Çalışma iki aşamada dört farklı çalışma grubu ile yürütülmüştür. İlk çalışma grubunu %95.00 güven aralığında Muğla Menteşe ilçesinden okul türüne dayalı olarak yapılan tabakalı örnekleme (Büyüköztürk vd., 2021; Çıngı, 1994; Karasar, 2019) ile belirlenen farklı orta öğretim kurumlarından, farklı branşlardan n=266 öğretmen ve farklı sınıf düzeylerinden n=427 öğrenci oluşturmuştur. İkinci çalışma grubunu ise, uygun örnekleme (Büyüköztürk vd., 2021) ile, aynı ilin diğer ilçelerdeki farklı ortaöğretim kurumlarından ve branşlardan belirlenen n=216 öğretmen ve farklı sınıf düzeylerinden n=851 öğrenci oluşturmuştur.

İlk aşama verileri 2022-2023 eğitim öğretim yılı bahar döneminde yüz yüze kâğıt kalem yoluyla, ikinci aşama verileri 2023-2024 eğitim öğretim yılı güz döneminde, hedef kitlenin geniş bir coğrafyada olması nedeniyle teknoloji desteği alınarak ve mümkün olduğunca okullar ziyaret edilerek toplanmıştır.

Taslak ölçeklerin yapı geçerliliğini ortaya koymak için SPSS 22.0 ile Açımlayıcı Faktör Analizi (AFA) ve JAMOVI 2.2.5 ile Doğrulamalı Faktör

Analizi (DFA) çalışmaları yapılmış, güvenilirlik için iç tutarlılık katsayıları (Cronbach- α) hesaplanmıştır.

Bulgular

Kapsam geçerliğini sağlamak amacıyla, MEB tarafından yapılan çok taraflı, çok aşamalı ve geniş bir alanyazına dayandırılan çalışmalar incelenmiş, uzman görüşleri alınmış, ikişer öğretmen ve öğrenci ile yüz yüze deneme uygulaması yapılmıştır.

AFA ile elde edilen faktör yük değerleri her iki ölçekten madde çıkarmaya gerek olmadığını, öğretmen ve öğrenci ölçeklerinin 18'er maddeden oluşan tek boyutlu bir yapıda olduğunu, öğretmen ölçeği için toplam öz değer 11.80 ve açıklanan toplam varyans oranının %64.00, öğrenci ölçeği için ise bu değerlerin sırasıyla 8.70 ve %48.00 olduğunu göstermiştir. DFA sonucu elde edilen uyum indeksi değerleri de ölçeklerin tek faktörlü yapısını doğrulamıştır.

Cronbach α katsayıları AFA sonunda öğretmen ölçeği için .97, öğrenci ölçeği için .94 ve DFA sonunda her iki ölçek için .96 bulunmuştur.

Tartışma, Sonuç ve Öneriler

Ölçeklerin yapı geçerliğini ortaya koymak amacıyla önce AFA yapılmış sonrasında ikinci bir çalışma grubundan elde edilen veriler ile ortaya konulan modelin DFA ile doğrulaması yapılmıştır. AFA çalışmaları her iki ölçeğin de 18 maddeden oluşan tek boyutlu yapıda olduğunu göstermiştir. Her iki ölçekte özdeğeri 1'den büyük tek faktör elde edilmiştir. Ayrıca açıklanan varyans oranının eklenen faktör ile en az %10 artması (Kılıç, 2022) ölçütüne göre de her iki ölçeğin tek boyutlu olduğu görülmüştür. Dolayısıyla çalışmada geliştirilen öğretmen ve öğrenci ölçeklerinin 18 maddelik tek boyutlu yapısı ile basit, kullanıcı dostu ölçekler olduğu söylenebilir. Ayrıca, geliştirilmiş olan öğretmen ölçeğinde tek boyutta açıklanan varyans oranının %64.00, öğrenci ölçeğinde ise %48.00 olması ölçeklerin tek boyutlu yapısının sağlamlığına kanıt oluşturduğu söylenebilir.

Geliştirilmiş olan bir ölçeğin psikometrisinin gücünün teyit edilmesi beklenir (Noar, 2003). Bu süreçte DFA'nın önemli bir rolü vardır. Çalışmada DFA ile elde edilen öğretmen ölçeği (RMSEA= .0795; CFI= .940; TLI = .931) ve öğrenci ölçeği (RMSE =. 0717; CFI =. 946; TLI = .939) uyum indeksi değerlerinin Hu ve Bentler (1999) tarafından önerilen değerler ölçüt alındığında kabul edilebilir sonuçlar verdiği görülmüştür.

Ölçekler için hesaplanan Cronbach α katsayıları .94 ve üzerindedir. Taber (2018) Cronbach α değerinin .70 ve üzerinde olmasının kabul edilebilir olduğu noktasında görüş birliği olduğunu, George ve Mallery (2003) ise .90'nın üzerinde mükemmel olduğunu belirtmektedir. Dolayısıyla, her iki ölçeğin güvenilirlik katsayıları bakımından mükemmel oldukları söylenebilir.

Sonuç olarak, Türkiye'de orta öğretim kurumlarında görev yapmakta olan öğretmenlerin MEB tarafından belirlenmiş olan mesleki etik ilkelere öğrenciler ile ilişkilerde etik ilkelere uygun davranma durumlarını ölçmek üzere geçerli ve güvenilir öğretmen ve öğrenci ölçeklerinin geliştirildiği söylenebilir.

Çalışmanın ulusal ve uluslararası düzeyde farklı çalışma grupları ile ve MEB (2015) tarafından belirlenmiş olan diğer mesleki etik boyutları ile tekrarlanması ve geliştirilen ölçekler kullanılarak öğretmenlerin mesleki etik ilkelere uygun davranma durumlarının farklı değişkenler açısından incelendiği uygulamaya ve politika geliştirme süreçlerine temel oluşturan çalışmaların yapılması önerilebilir.

References

- Acar Güvendir, M., ve Özer Özkan, Y. (2022). *Tüm yönleriyle ölçek geliştirme süreci* (1. bs.). Pegem Akademi Yayıncılık.
- Anastasia, A. (1982). *Psychological testing*. (8th ed.). Mac Millan Pub. Co. Inc.
- Anderson, J. C., and Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika*, 49(2), 155-173. <https://psycnet.apa.org/doi/10.1007/BF02294170>
- Aydın, İ. (2012). *Yönetişel, mesleki ve örgütsel etik* (9. bs.). Pegem Akademi Yayıncılık.
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). The Guilford Press.
- Büyüköztürk, Ş. (2020). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni, SPSS uygulamaları ve yorum* (28. bs.). Pegem Akademi Yayıncılık.

- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., ve Demirel, F. (2021) *Eğitimde bilimsel araştırma yöntemleri* (30. bs.). Pegem Akademi Yayıncılık.
- Can, A. (2014). *SPSS ile bilimsel araştırma sürecinde nicel veri analizi* (3. bs.). Pegem Akademi Yayıncılık.
- Crocker, L. and Algina, J. (1986) *Introduction to classical and modern test theory*. Holt, Rinehart and Winston.
- Curran, P. G. (2016). Methods for the detection of carelessly invalid responses in survey data. *Journal of Experimental Social Psychology*, 66(2016), 4-19. <https://doi.org/10.1016/j.jesp.2015.07.006>
- Çelebi, N., ve Akbağ, M. (2012). Genel liselerde çalışan öğretmenlerin etik davranışlarını belirlemeye yönelik bir araştırma. *International Online Journal of Educational Sciences*, 4(2), 425-441. <https://www.ajindex.com/dosyalar/makale/acarindex-1423904318.pdf>
- Çıngı, H. (1994). *Örnekleme kuramı*. Hacettepe Üniversitesi Fen Fakültesi Basımevi.
- DeVellis, F., R. (2003). *Scale development: Theory and applications*. Sage Publications.
- Erdem, A. R. (2012). Bilim insanı yetiştirmede etik eğitimi. *Yükseköğretim ve Bilim Dergisi*, 2(1), 25-32. <https://dergipark.org.tr/en/download/article-file/1711478>
- Erkuş, A. (2014). *Psikolojide ölçme ve ölçek geliştirme-I. Temel kavramlar ve işlemler* (2. bs.). Pegem Akademi Yayıncılık.
- George, D., and Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference*, 11.0 update (4th ed.). Allyn and Bacon.
- Gözütok, F. D. (1999). Öğretmen adaylarının etik davranışları. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 32(1), 83-99. <https://dergipark.org.tr/pub/auebfd/issue/39589/468163>

- Güçlü, A., Uzun, E., Uzun, S., ve Soysal, Ü. H. (2003). *Felsefe sözlüğü*. Bilim ve Sanat Yayınları.
- Gündüz, Y., ve Coşkun, Z. S. (2012). Öğrenci algısına göre öğretmen etik değerler ölçeğinin geliştirilmesi: Geçerlik ve güvenilirlik çalışması. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 13(1), 111-131. <https://dergipark.org.tr/tr/pub/kefad/issue/59493/855096>
- Hambleton, R. K. (2000). Response to Hays et al. and McHorney and Cohen: Emergence of item response modeling in instrument development and data analysis. *Medical Care*, 38(9), II-60–II-65. <https://doi.org/10.1097/00005650-200009002-00009>
- Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, 1(1), 104 –121. <https://doi.org/10.1177/1094428198001001>
- Hopkins, D., and Levin, B. (2000). Government policy and school development. *School Leadership and Management*, 20(1), 15-30. <https://doi.org/10.1080/13632430068851>
- Hu, L. T., and Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., and DeShon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology*, 27, 99-114. <https://psycnet.apa.org/doi/10.1007/s10869-011-9231-8>
- Johnson, J. A. (2005). Ascertaining the validity of individual protocols from web-based personality inventories. *Journal of Research in Personality*, 39(1), 103–129. <https://doi.org/10.1016/j.jrp.2004.09.009>
- Karasar, N. (2019). *Bilimsel araştırma yöntemi. Kavramlar - ilkeler - teknikler* (34. bs.). Nobel Akademik Yayıncılık.
- Kass, R. A., and Tinsley, H. E. A. (1979). Factor analysis. *Journal of Leisure Research*, 11(2), 120-138. <https://doi.org/10.1080/00222216.1979.11969385>

- Kılıç, A. F. (2022). Açımlayıcı faktör analizinde boyut sayısına karar verme: Yöntemlere kısa bir bakış. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 51(Özel sayı), Ö305-Ö318. <https://doi.org/10.30794/pausbed.1095936>
- Kim, J. O., and Mueller, C. W. (1978). *Introduction to factor analysis: What it is and how to do it* (13th ed.). Sage Publications.
- Kline, R. B. (2016). *Principle and practice of structural equation modelling* (4th ed.). The Guilford Press
- Kuçuradi, İ. (2003). Etik ve etikler. *Türkiye Mühendislik Haberleri*, 423, 7-9. <https://ww4.ticaret.edu.tr/icm/wp-content/uploads/sites/121/2020/03/Etik-ve-Etikler.pdf>
- Kuther, T. L. (2003). A profile of the ethical professor: Student views. *College Teaching*, 51(4), 153–160. <http://dx.doi.org/10.1080/87567550309596431>
- Manolova, O. (2011). *Mesleki etik ilkelere ilişkin Türkiye ve Moldova'daki ilköğretim okulu öğretmenlerinin görüşleri*. [Yayınlanmış doktora tezi] Ankara Üniversitesi. YÖK Ulusal Tez Merkezi. <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>
- McLaughlin, M. W. (1991). Learning from experience: Lessons from policy implementation. *Educational Policy Analysis*, 9(2), 171–178. <https://doi.org/10.3102/01623737009002>
- Meade, A. W., and Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17(3), 437-455. <https://doi.org/10.1037/a0028085>
- MoNE. (2008). *Öğretmen yeterlikleri*. Devlet Kitapları Müdürlüğü.
- MoNE. (2015) *Eğitimciler için mesleki etik ilkeler 2015/21*. http://personel.meb.gov.tr/genelge_gorus_yonerge/ET%C4%B0K%20GENELGE.pdf
- MoNE. (2017) *Öğretmenlik mesleği genel yeterlikleri*. https://oygm.meb.gov.tr/dosyalar/StPrg/Ogretmenlik_Meslegi_Genel_Yeterlikleri.pdf
- Noar, S. M. (2003). The role of structural equation modeling in scale development. *Structural Equation Modeling*, 10(4), 622-647. https://doi.org/10.1207/S15328007SEM1004_8

- Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill Companies.
- Özdamar, K. (2004). *Paket programlar ile istatistiksel veri analizi-1* (5. bs.). Kaan Kitabevi.
- Özen, F. (2017). Sınıf öğretmenlerinin ve öğrenci sınıf öğretmenlerinin zamanla öğretmenlik meslek etiği algılarındaki değişme. *OPUS – Uluslararası Toplum Araştırmaları Dergisi*, 7(13), 379-397. <https://doi.org/10.26466/opus.331158>
- Reckase, M. D. (1979). Unifactor latent trait models applied to multifactor tests: Results and implications. *Journal of Educational Statistics*, 4(3), 207-230. <https://doi.org/10.2307/1164671>
- Revelle, W. (2016). *How to: Use the psych package for factor analysis and data reduction Northwestern University, Department of Psychology*. <https://randilgarcia.github.io/smith-r-workshop/factor.pdf>
- Sakin, A. (2007). *Okul öncesi öğretmenlerin mesleki etik davranışlar hakkındaki görüşleri ile ahlaki yargı düzeyleri ve öğretmenlik tutumlarının incelenmesi*. [Yayınlanmış doktora tezi]. Marmara Üniversitesi.
- Tabachnick, B. G., and Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Pearson/Allyn and Bacon.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, (2018)48, 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Tarkoçin, S., ve Yıldızhan Bora, B. (2018). Okul öncesi öğretmenlerinin mesleki etik ile ilgili görüşlerinin incelenmesi (Bingöl ili örneği). *Eğitim ve Toplum Araştırmaları Dergisi*, 5(2), 101-125. <https://dergipark.org.tr/tr/download/article-file/612435>
- Thurstone, L. L. (1947). *Multiple factor analysis, a development and expansion of the vectors of mind*. University of Chicago Press.
- Tican Başaran, S., Ekinci, N., ve Arıkan, S. (2017) Öğretim elemanlarının etik ilkelere uygun davranma düzeyi üzerine bir araştırma. *Yükseköğretim Dergisi*, 7(3), 197-208. <https://dergipark.org.tr/tr/pub/yuksekogretim/issue/41134/497220>

- TED. (2009). Öğretmen *Yeterlikleri*. https://www.ted.org.tr/wp-content/uploads/2019/04/Ogretmen_Yeterlik_Kitap.pdf
- Wheaton, B. (1987). Assessment of fit in overidentified models with latent variables. *Sociological Methods and Research*, 16(1), 118-154. <https://doi.org/10.1177/0049124187016001005>
- Woods, C. M. (2006). Careless responding to reverse-worded items: Implications for confirmatory factor analysis. *Journal of Psychopathology and Behavioral Assessment*, 28(3), 189–194. <https://doi.org/10.1007/s10862-005-9004-7>
- Worthington, R. L., and Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, 34(6), 806-838. <https://doi.org/10.1177/0011000006288127>
- Yaşlıoğlu, M. M. (2017). Sosyal bilimlerde faktör analizi ve geçerlilik: Keşfedici ve doğrulayıcı faktör analizlerinin kullanılması. *İstanbul Üniversitesi İşletme Fakültesi Dergisi*, 46(Özel Sayı), 74-85. <https://dergipark.org.tr/tr/download/article-file/369427>
- Yeşilyurt, E., ve Kılıç, M. E. (2014). Ortaokul öğrencilerinin algılarına göre öğretmenlerin etik değerlere uyma düzeylerinin değerlendirilmesi. *EKEV Akademi Dergisi*, (60), 471–486. <https://dergipark.org.tr/en/download/article-file/2567797>

Appendices

ÖĞRETMENLERİN ÖĞRENCİLERLE İLİŞKİLERDE ETİK İLKELERE UYGUN DAVRANMA DURUMU ÖLÇEĞİ: ÖĞRETMEN FORMU

Meslektaşlarınız olarak, öğretmen arkadaşlarınızın öğrenme öğretme ortamlarındaki davranışlarını göz önünde bulundurarak aşağıdaki etik ilkelere uygun davranma durumunu uygun seçeneği işaretleyerek belirtiniz.

		Tamamen uygun davranırlar	Büyük oranda uygun davranırlar	Orta düzeyde uygun davranırlar	Büyük oranda uygun davranmazlar	Hiç uygun davranmazlar
Öğrenciler ile ilişkilerde etik ilkeler						
1	Meslektaşlarım, eğitim ve öğretim faaliyetlerini saygı üzerine dayandırırılar.					
2	Meslektaşlarım, öğrencilerini sever, sevdiğini hissettirirler.					
3	Meslektaşlarım, öğrenciyi utandıracak, onurunu kıracak söz ve davranışlardan kaçınırlar.					
4	Meslektaşlarım, öğrencilere iyi örnek (söz, davranış, hal, hareket, görüntüleri vb. ile) olurlar.					
5	Meslektaşlarım, bilgi birikimleriyle öğrencilerde öğrenme isteği/azmi uyandırırılar.					
6	Meslektaşlarım, öğrencilere kötü örnek oluşturacak tutum ve davranışlardan kaçınırlar.					
7	Meslektaşlarım, özellikleri bakımından farklılık gösteren öğrencilere diğerleri gibi anlayış/hoşgörü ile yaklaşırılar.					
8	Meslektaşlarım, mesleğini icra ederken insan haklarına saygı duyarlar.					
9	Meslektaşlarım, bütün öğrencilere adil ve eşit davranırlar.					
10	Meslektaşlarım, öğrencilerin gelişimlerini (fiziksel, duygusal, sosyal, kültürel, ahlaki) gözetirler.					
	Bu maddeyi okuyorsam orta düzeyde uygun davranırlar seçeneğini işaretleyeceğim.					
11	Meslektaşlarım, gelişimleri doğrultusunda öğrencileri ile samimi ve güvene dayalı iletişim kurarlar.					
12	Meslektaşlarım, öğrencileri derslerde kendilerini ifade etmeleri konusunda cesaretlendirirler.					

13	Meslektaşlarım, iyi bireyler (bedenen, ruhen sağlıklı, iyi ahlaklı, kendine güvenen, sorumluluk sahibi) yetiştirmek için gereken çabayı gösterirler.					
14	Meslektaşlarım, öğrencileri ile ilgili gizli bilgileri yasal zorunluluklar ve acil durumlar dışında paylaşmazlar.					
15	Meslektaşlarım, kişisel durumlarını (üzüntü, sıkıntı, mutsuzluk vb.) öğrencilere yansıtmazlar.					
16	Meslektaşlarım, öğrenciyi (beden, ruh sağlığını, fiziksel, sosyal gelişimini, eğitimini vb.) olumsuz etkileyecek şekilde davranmazlar.					
17	Meslektaşlarım, öğrencinin kötü muameleye uğradığını fark ettiğinde gerekli tedbirleri alırlar.					
18	Meslektaşlarım, öğrencinin kötü muameleye uğradığını fark ettiğinde durumu yetkili makamlara bildirirler.					

ÖĞRETMENLERİN ÖĞRENCİLERLE İLİŞKİLERDE ETİK İLKELERE UYGUN DAVRANMA DURUMU ÖLÇEĞİ: ÖĞRENCİ FORMU

Öğretmenlerinizin öğrenme öğretme ortamlarındaki davranışlarını göz önünde bulundurarak aşağıdaki etik ilkelere uygun davranma durumunu uygun seçeneği işaretleyerek belirtiniz.

		Tamamen uygun davranırlar	Büyük oranda uygun davranırlar	Orta düzeyde uygun davranırlar	Büyük oranda uygun davranmazlar	Hiç uygun davranmazlar
Öğrenciler ile ilişkilerde etik ilkeler						
1	Öğretmenlerim, eğitim ve öğretim faaliyetlerini saygı üzerine dayandırırır.					
2	Öğretmenlerim, öğrencilerini sever, sevdiğini hissettirirler.					
3	Öğretmenlerim, öğrenciyi utandıracak, onurunu kıracak söz ve davranışlardan kaçınırlar.					
4	Öğretmenlerim, öğrencilere iyi örnek (söz, davranış, hal, hareket, görüntüleri vb. ile) olurlar.					
5	Öğretmenlerim, bilgi birikimleriyle öğrencilerde öğrenme isteği/azmi uyandırırır.					
6	Öğretmenlerim, öğrencilere kötü örnek oluşturacak tutum ve davranışlardan kaçınırlar.					

Development of Teachers' Compliance with Professional Ethics in Relations with Students Scales

7	Öğretmenlerim, özellikleri bakımından farklılık gösteren öğrencilere diğerleri gibi anlayış/hoşgörü ile yaklaşır.					
8	Öğretmenlerim, mesleğini icra ederken insan haklarına saygı duyarlar.					
9	Öğretmenlerim, bütün öğrencilere adil ve eşit davranırlar.					
10	Öğretmenlerim, öğrencilerin gelişimlerini (fiziksel, duygusal, sosyal, kültürel, ahlaki) gözetirler.					
	Bu maddeyi okuyorsam orta düzeyde uygun davranırlar seçeneğini işaretleyeceğim.					
11	Öğretmenlerim, gelişimleri doğrultusunda öğrencileri ile samimi ve güvене dayalı iletişim kurarlar.					
12	Öğretmenlerim, öğrencileri derslerde kendilerini ifade etmeleri konusunda cesaretlendirirler.					
13	Öğretmenlerim, iyi bireyler (bedenen, ruhen sağlıklı, iyi ahlaklı, kendine güvenen, sorumluluk sahibi) yetiştirmek için gereken çabayı gösterirler.					
14	Öğretmenlerim, öğrencileri ile ilgili gizli bilgileri yasal zorunluluklar ve acil durumlar dışında paylaşmazlar.					
15	Öğretmenlerim, kişisel durumlarını (üzüntü, sıkıntı, mutsuzluk vb.) öğrencilere yansıtmazlar.					
16	Öğretmenlerim, öğrenciyi (beden, ruh sağlığını, fiziksel, sosyal gelişimini, eğitimini vb.) olumsuz etkileyecek şekilde davranmazlar.					
17	Öğretmenlerim, öğrencinin kötü muameleye uğradığını fark ettiğinde gerekli tedbirleri alırlar.					
18	Öğretmenlerim, öğrencinin kötü muameleye uğradığını fark ettiğinde durumu yetkili makamlara bildirirler.					