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Pre-Service Teachers' Perceptions toward the Use of ICT: The SQD Scale

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Abstract

The role of technology in the field of education continues to grow and the widespread adoption of online education in recent years has secured the importance attached to Information and Communication Technologies (ICT). In line with this, the current study aims to unveil pre-service teachers' perceptions of how well their teacher training programs prepare them for effective ICT utilization and the level of support they receive from their teacher training programs as to effective ICT use by employing the synthesis of qualitative evidence (SQD) scale. With this aim in mind, the study adopts a convergent-parallel mixed methods design and the data have been garnered from a total of 191 pre-service English language teachers studying at 9 different teacher training programs across Türkiye. The analyses of the quantitative and qualitative data indicate that a majority of pre-service teachers think that the level of support they receive from their teacher training programs in terms of effective ICT use is not satisfactory. The perceptions of the participants that consider their teacher training programs (in)effective in terms of ICT use have also been presented within the study. Finally, several suggestions have been provided for teacher training programs with the aim of training pre-service with better and higher ICT utilization skills.

Key words: Pre-service teacher training, ICT, Teacher training programs

Introduction

We have been experiencing a technological transformation in the last two decades and global (such as the outbreak of the Covid-19 pandemic) as well as local (such as the devastating earthquake series that destroyed 11 cities in Türkiye) adversities have accentuated the role of technology in the field of education because online education emerges as the best option during such crisis moments. As we experience technological innovations and more frequent shifts to online education, expectations from teacher training programs (Mouza et al., 2014; Tondeur et al., 2016; Tondeur et al., 2020) as well as expected roles and competencies of pre-service teachers are changing and increasing accordingly (Ay et al., 2015). To be more precise, 21st century teachers are required to combine various pedagogical skills with Information and Communication Technologies (ICT) if they are to cater for the needs of their future students by emphasizing communication, collaboration, critical thinking, creativity, problem-solving and socio-cultural competencies (Angeli & Valanides, 2009; Santos & Castro, 2021; So & Kim, 2009; Valtonen et al., 2015; Valtonen et al., 2017; Voogt & Roblin, 2012). It should be noted that the current generation of pre-service teachers have been labeled as *digital natives* (Prensky, 2001) and they have generally been assumed to have excelled in ICT skills as to personal and social uses; however, as has been suggested by several researchers (Agyei & Voogt, 2011; Harvey & Caro, 2017; Kartal et al., 2016; Le2009; Mouza & Karchmer-Klein, 2013; Niess, 2008; Valtonen et al., 2011; Valtonen et al., 2015; Valtonen et al., 2020), they still need systematic guidance in combining technology with their didactic skills. In other words, the fact that they can use certain social networking sites or mobile applications deftly does not necessarily mean that they can use technology in the best way in their instructional practices; thus, they need to be trained both *about* technology and teaching *with* technology. In support of this, many online foreign language teaching web-sites and applications (such as Preply, Lingoda, Duolingo, Rype, etc.) have recently emerged and gained quick popularity, implying that foreign language teachers need to be equipped with the competences to utilize technology in their instructional practices. It should be noted at this point that although they are not synonyms, the terms *ICT* and *technology* have been used interchangeably throughout this research paper.

The central role played by teacher training programs in preparing pre-service teachers to effectively utilize technology has been underscored by previous research (Boling & Beatty, 2012; Hofer & Grandgenett, 2012; Jaipal & Figg, 2010; Kwangsawad, 2016; Mouza et al., 2014; Schmidt et al., 2009; Tondeur et al., 2016; Tondeur et al., 2020; Valtonen et al., 2017; Voogt et al., 2016; Yurdakul et al., 2012). For instance, Yurdakul et al. (2012) assert that rather than *techno-centric* approach emphasizing knowledge and skills in using technology, *techno-pedagogical* approach blending technology and pedagogy in practice would yield more favorable

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outcomes in teacher training. Similarly, Kwangsawad (2016) claims that pre-service teachers need to be aware of ICT tools, how to properly use them, and how to make the best use of them pedagogically appropriate to the content they are to teach. However, it may not be possible for all teacher training programs to attain such perfectionistic goals. Furthermore, it has even been argued that teacher training programs have often failed to prepare pre-service teachers sufficiently to utilize ICT tools, and mere exposure, without adequate practice opportunities, contributes to such failure (Angeli & Valanides, 2009; Mouza & Karchmer-Klein, 2013; So & Kim, 2009; Wang et al., 2018).

In direct contrast with this, several researchers have concluded that teacher training programs proved to be quite effective in training pre-service teachers in terms of ICT utilization. For instance, pre-service teachers' development of ICT utilization skills throughout their teacher training program in the USA context was handled by Hofer and Grandgenett (2012), who found that the participants improved their skills at the end of a three-semester MA program. Similarly, Harvey and Caro (2017) construed that explicit teaching of ICT use throughout the teacher training program yielded favorable results. In a similar vein, Öz (2015) aimed to identify the extent to which English language teacher training programs in Turkish context prepare pre-service teachers in using ICT tools and concluded that, according to the perceptions of the pre-service teachers, teacher training programs have mostly been effective. Additionally, Sarıçoban et al. (2019) targeted at measuring the technological pedagogical and content knowledge (TPACK) level of pre-service English language teachers in Türkiye and observed that they regarded themselves sufficient in all sub-components of TPACK, implying that their teacher training program prepared them satisfactorily for ICT utilization.

Tondeur et al. (2016) suggest that assisting pre-service teachers in designing ICT-rich lessons and offering sufficient constructive feedback emerge as the main challenges for teacher training programs. In this respect, the strategies employed by teacher training programs in training technologically competent pre-service teachers have shown great variety and lack a coherent and consistent systematicity. Correspondingly, Tondeur et al. (2012) have introduced and advocated a model, according to which teacher training programs should: *a)* employ teacher trainers as role models, *b)* encourage reflection on instructional uses of technology, *c)* teach how to use and integrate technology, *d)* foster collaboration among peers, *e)* offer scaffolding, and *f)* provide continuous feedback. More specifically, the model specifies that teacher trainers employed by teacher training programs should function as role models for pre-service teachers and encourage them to reflect on instructional uses of ICT, teach how to use ICT for instructional purposes and provide continuous feedback, offer scaffolding when necessary, and stimulate collaboration among peers with the aim of fostering peer-learning and peer-assessment.

In this respect, the present study has employed the synthesis of qualitative evidence (SQD) scale, developed and validated by Tondeur et al. (2016). The SQD scale is based on the suggested model and aims to reveal pre-service teachers' perceptions of how well their teacher training programs prepare them for effective ICT use and the level of support they receive from their teacher training programs as to effective ICT utilization. The SQD scale in tandem with the TPACK-practical scale has recently been employed in Turkish context by Baran et al. (2019), who aimed to explore pre-service teachers' perceptions of the support their teacher education programs provide for developing their TPACK. The findings of their study demonstrated a positive correlation between teacher education strategies and preservice teachers' TPACK; however, their study was quantitative by its nature. On the other hand, the distinctive feature of the present study lies in the fact that the quantitative data has been triangulated by the qualitative data collected via an open-ended survey form. Therefore, it would be safe to argue that the present study promises to delve into the perceptions of pre-service teachers as to ICT use more profoundly. In addition, the perceptions of pre-service teachers as to the support they have been provided by their teacher training programs (including the specific courses offered by the program) have been taken into consideration, leading to more reliable and relevant conclusions. As a result, the conclusions drawn by the study may have implications for policy makers, curriculum designers, and teacher trainers. Furthermore, the suggestions may be employed as a guide for reviewing and updating their teacher training practices. The findings of the present study promise to enable all the stakeholders to better understand the type(s) of support needed by pre-service teachers as to effective utilization of ICT in Turkish context. With all these aims in mind, the present study is intended to provide answers to the following research questions:

1. What are the pre-service teachers' perceptions toward the use of ICT strategies in their teacher training program?

1.1. Do the pre-service teachers agree that their teacher training program has prepared them sufficiently to teach English using ICT effectively?

1.2. What course(s) offered by the teacher training program are considered as helpful for integrating ICT into teaching English by the pre-service teachers?

Methodology

The current study has been designed to identify pre-service teachers' perceptions of how well their teacher training programs prepare them for effective ICT use and the level of support they receive from their teacher training programs in terms of effective ICT utilization. To achieve this aim, a convergent-parallel mixed method design has been adopted and the data have been collected from pre-service English language teachers from a variety of teacher training programs across Türkiye. The SQD scale developed by Tondeur et al. (2016) has been employed for the collection of quantitative data and an open-ended survey form designed by the researcher has been utilized for the collection of qualitative data. Further information as to the design of the research, participants, data collection tools and processes has been presented in the following sections of the article.

Research Design

This mixed methods study has been conducted to address pre-service teachers' perceptions of how well their teacher training programs prepare them for effective ICT use in their instructional practices and the level of support they receive from their teacher training programs in terms of effective ICT utilization. In line with this aim, a convergent-parallel mixed methods design has been employed. Both qualitative and quantitative data have been collected, merged and interpreted in a convergent-parallel mixed methods design to gather complementary data on a specific phenomenon at the same time (Creswell, 2012). To be more precise, qualitative and quantitative data are collected and analyzed separately, but at the same time, to provide multiple perspectives on the focus of the study (Creswell, 2012; Edmonds & Kennedy, 2017). As has been suggested by Creswell (2012), the researcher aimed to improve the impact of the study by collecting and combining different types of data bearing on the same phenomenon and consolidate the reliability and validity of the research via the triangulation of data.

Participants

The present study has adopted the technique of *convenience sampling* (Dörnyei, 2007; Nunan, 1992) as the participants have been included within the study due to their convenient proximity and accessibility to the researcher. Demographic information as to the participants of the study has been presented in Table 1.

Table 1. Demographic information of the participants

	Number of Participants			
University	Female	Male	Total	University %
Süleyman Demirel Univ.	20	13	33	17,3
Necmettin Erbakan Univ.	10	7	17	8,9
Yozgat Bozok Univ.	13	5	18	9,5
Ondokuz Mayıs Univ.	15	9	24	12,5
Pamukkale Univ.	18	8	26	13,6
Alanya Alaaddin Keykubat Univ.	10	7	17	8,9
Bayburt Univ.	11	6	17	8,9
Amasya Univ.	12	6	18	9,5
Trabzon Univ.	13	8	21	10,9
Total	122	69	191	100

As can be seen in Table 1., a total of 191 pre-service English language teachers studying at 9 different teacher training programs across Türkiye participated in the study. 122 female and 69 male pre-service English language teachers were accessed in the study, and it can be argued that a representative sample of participants has been included in terms of gender distribution.

Data Collection Tools

Though there are a multitude of instruments that can be used to rate pre-/in-service teachers' ICT utilization skills and practices (Baser et al., 2016; Chien et al., 2012; Kartal et al., 2016; Schmid et al., 2020; 2021; Schmidt et al., 2009; Valtonen et al., 2017; Valtonen et al., 2020; Yeh et al., 2014; Yurdakul et al., 2012), the Synthesis of Qualitative Evidence (SQD) scale, developed and validated by Tondeur et al. (2016), has been adopted within the study for the collection of quantitative data since it specifically focuses on the contribution of teacher training programs to the development of pre-service teachers' ICT utilization skills and practices. More specifically, Tondeur et al. (2016) developed the SQD scale with the aim of revealing the extent of support and training offered by teacher training programs from the viewpoint of pre-service teachers in terms of utilization of ICT tools in their instructional practices. The items of the SQD scale are based upon the inner circle of the SQD model that lists effective strategies for ICT use in instructional practices (Tondeur et al., 2012) as well as a synthesis of 19 qualitative studies and the SQD scale is argued to demonstrate highly satisfactory psychometric

properties in that the reliability and validity of the SQD scale were confirmed via the analysis of the data gathered from 688 pre-service teachers in Belgium context (Tondeur et al., 2016). To be more precise, the SQD scale involves 24 items that are rated on a 6-point Likert-type scale (ranging from *1: totally disagree* to *6: totally agree*) and clustered around 6 key factors at micro and institutional levels (1: role model [ROL], 2: reflection [REF], 3: instructional design [DES], 4: collaboration [COL], 5: authentic experiences [AUT], 6: feedback [FEE]). The items under the *role model* factor focus on pre-service teachers' exposure to good samples of ICT use by their teacher trainers/professors. Likewise, the items under the *reflection* factor emphasize the pre-service teachers' opportunity to reflect on and discuss the role of ICT in education. The items under the *instructional design* factor deal with pre-service teachers' employment of ICT in their instructional design. In a similar fashion, the items under the *collaboration* factor highlight the need for cooperation between and among the pre-service teachers in their endeavors to make the best use of ICT in their instructional practices. The items under the *authentic experiences* factor cluster around the pre-service teachers' use of ICT in their classroom experiences such as microteaching and practicum. Finally, the items under the *feedback* factor delve into the quality, quantity, and continuity of feedback pre-service teachers receive from their trainers/professors. Considering the scope of the factors and items, it would be justified to argue that the SQD scale is sufficiently comprehensive to pinpoint pre-service teachers' perceptions of how well their teacher training programs prepare them for effective ICT use and the level of support they receive from their teacher training programs as to effective ICT utilization.

In support of this, the reliability of the overall scale (Cronbach's $\alpha = .98$) as well as the individual factors of the scale (ROL: $\alpha = .91$, REF: $\alpha = .89$, DES: $\alpha = .90$, COL: $\alpha = .87$, AUT: $\alpha = .83$, FEE: $\alpha = .93$) have been computed by Tondeur et al. (2016). The items of the original SQD scale were in English and as the participants of the present study are pre-service English language teachers, the SQD scale has been implemented without any changes. According to the results of the reliability analysis conducted for the present study, the overall SQD scale ($\alpha = .91$) as well as the factors (ROL: $\alpha = .87$, REF: $\alpha = .84$, DES: $\alpha = .89$, COL: $\alpha = .85$, AUT: $\alpha = .82$, FEE: $\alpha = .91$) proved to be highly reliable.

As for the collection of the qualitative data, an open-ended survey form (consisting of two open-ended questions [1: *Do you think that your teacher training program has prepared you sufficiently to teach English using ICT effectively? Why?*, 2: *What courses you have taken throughout your teacher training program do you consider as useful for teaching English using ICT effectively?]*) has been produced by the researcher and attached at the end of the SQD scale. The views of two colleagues as to the suitability and comprehensibility of the open-ended questions for the SQD scale have been granted prior to the implementation of the study. As a next step, the participants have been requested to answer these questions in a wholehearted manner. The underlying reason for the collection of qualitative data is to confirm or deny the findings offered by the quantitative data analyses and delve more into the perceptions of the participants as to the main aim of the research.

Data Collection Process

The data collection process for this study started in April, 2023, subsequent to the approval of Süleyman Demirel University Ethics Council (March 22, 2023/134-7), and ended at the end of May, 2023. The data collection tools have been uploaded on an online platform (forms.google.com) and the link has been shared with the pre-service English language teachers through their advisors because online education has been adopted by higher education institutions across Türkiye at that period. The participants have been informed about the content as well as the aim of the study in detail and their consents have been gathered before they have been requested to participate in the study.

Data Analysis

Both quantitative and qualitative data have been collected in this mixed methods study. For the analysis of quantitative data, descriptive analyses such as mean score, percentage, standard deviation and score category breakdown have been computed and the results have been presented in tables. Likewise, qualitative data collected through the open-ended survey form has been analyzed employing the thematic analysis technique, which enables the identification of significant codes and categories emerging from the raw data (Boyatzis, 1998). More specifically, the researcher engaged himself with the relevant literature, the nature of the research questions and his professional experience along with the collected data. To make sure that representative codes and categories have been identified reliably and consistently, the data have been read, reread, overviewed, and annotated systematically through manual coding (O'leary, 2004). Consequently, the findings of the thematic analysis have been presented via the interpretations of the researcher along with the verbatim quotations of the participants' responses. As the study has been conducted by a single researcher, inter-rater/-coder reliability computations have been ignored, which can be regarded as a limitation of the study.

Ethics Approval

The current study has been conducted after the approval of Süleyman Demirel University Ethics Council (March 22, 2023/134-7) was granted.

Findings

1. What are the pre-service teachers' perceptions toward the use of ICT strategies in their teacher training program?

The first – and the main – research question of the study aims to reveal the perceptions of pre-service teachers as to the use of ICT strategies in their teacher training program. In this respect, quantitative data have been collected and analyzed employing descriptive analyses such as mean score, percentage, standard deviation, and score category breakdown. The results of the analyses can be seen in Table 2.

Table 2. Descriptive statistics for SQD and its factors

Factors*/SQD	N	$\bar{X}$	Score Category Breakdown**	Percentage of scores (%)	sd
ROL	191	2.787	Slightly disagree	46.45	.82
REF	191	2.670	Slightly disagree	44.5	.78
DES	191	2.745	Slightly disagree	45.75	.95
COL	191	2.785	Slightly disagree	46.41	.94
AUT	191	2.798	Slightly disagree	46.63	.84
FEE	191	2.593	Disagree	43.21	.75
SQD	191	2.720	Slightly disagree	45.33	.85

*Factors of the SQD: ROL: Role Model; REF: Reflection; DES: Instructional Design; COL: Collaboration; AUT: Authentic Experiences; FEE: Feedback.
**Score category breakdown has been computed as: 1.00-1.83: totally disagree; 1.84-2.66: disagree; 2.67-3.50: slightly disagree; 3.60-4.33: slightly agree; 4.34-5.16: agree; 5.17-6.00: totally agree.

As can be inferred from Table 2., the participants *slightly disagree* ($\bar{X}$=2,72) that their teacher training program sufficiently prepares them for effective ICT use and the level of support they receive from their teacher training programs in terms of effective ICT integration is satisfactory. More specifically, the participants of the study *slightly disagree* with the ROL ($\bar{X}$=2,78), REF ($\bar{X}$=2,67), DES ($\bar{X}$=2,74), COL ($\bar{X}$=2,78), AUT ($\bar{X}$=2,79) and *disagree* with the FEE ($\bar{X}$=2,59) factors. In other words, according to the perceptions of the participants, teacher training programs fail to employ teacher trainers as role models, encourage reflection on instructional uses of technology, teach how to use and integrate technology, foster collaboration among peers, offer scaffolding, and provide continuous feedback.

Do the pre-service teachers think that their teacher training program has prepared them sufficiently to teach English using ICT effectively?

The first sub-research question of the study aims to reveal whether pre-service teachers think that their teacher training program has prepared them sufficiently to teach English using ICT effectively. In an effort to answer this research question, qualitative data has been collected through an open-ended survey form and analyzed via the thematic analysis technique. The findings of the thematic analysis, including categories, codes, frequencies, and percentages, have been presented in Table 3.

Table 3. Categories and codes for teacher training programs

	category	f/%	code	f/%
Do you think that your teacher training program has prepared you sufficiently to teach English using ICT effectively?	insufficient	109/57	Lack of role models	47/24
			Gap between theory and practice	53/28
			Insufficient training & coursework	63/33
			Lack of feedback	51/26
			Lack of technological equipment	46/24
			Lack of practice opportunities	65/34
	sufficient	82/43	Support offered by the professors	34/18
			Relevant coursework	38/20
			Microteachings & Practicum	48/25
			Getting feedback	37/19
			Observing good examples	40/20

As can be inferred from Table 3., 57% (n=109) of the participants have reported that their teacher training program has failed to prepare them sufficiently to teach English using ICT effectively whereas 43% (n=82) of the participants assume that their teacher training program has prepared them sufficiently to teach English using ICT effectively. The participants have stated that *lack of role models* (n=47), *gap between theory and practice* (n=53), *insufficient training & coursework* (n=63), *lack of feedback* (n=51), *lack of technological equipment* (n=46), and *lack of practice opportunities* (n=65) contribute to their teacher training programs' failure to prepare them sufficiently to teach English using ICT effectively. For instance, the participants reported that their professors have failed to be good role models for them in terms of ICT utilization (*PST3: Our professors ask for help when integrating technology [for example when they are using the smart boards], and they expect us to use them effectively. This is nonsense.*). In a similar vein, some of the participants referred to the gap between theory and practice (*PST9: We learn about how to teach with technology, but we are not exposed to any practice in terms of integrating technology.*) and called for more opportunities to allow them to transform what they have learned into observable practices. In addition, insufficient training and coursework emerged as another weakness of their teacher training program (*PST12: We did not take any courses that focused on teaching English using technology.*).

On the other hand, the participants who suppose that their teacher training program has prepared them sufficiently to teach English using ICT effectively based their answers on reasons such as *support offered by the professors* (n=34), *relevant coursework* (n=38), *microteachings & practicum* (n=48), *getting feedback* (n=37), and *observing good examples* (n=40). More precisely, some of the participants expressed their satisfaction in terms of the support offered by their professors (*PST19: Our professors encouraged us to make the best use of technology while we were designing/conducting our classes.*). On the surface, this finding may seem contradictory because some of the participants complain that their professors failed to act as role models in terms of ICT use. In contrast, some other participants appreciate the support offered by their professors as to ICT utilization. However, as the participants of the present study involved 9 different teacher training programs across Türkiye, this seemingly contradictory finding may be attributed to local variations among teacher training programs across the country. Similarly, some of the participants have stated that relevant coursework provided by their teacher training program contributed to their ICT utilization skills (*PST22: I think that some of the courses I took contributed greatly to my ICT integration skills.*), paying special attention to the courses that include practice components (*PST33: In some of our courses, we are required to conduct microteachings and, in our final year, we complete our practicum. I think that we get the chance to apply what we learned thanks to these courses.*). In direct contrast to the findings of the quantitative data presented above, some of the participants report that such practice-based courses assisted them in developing their ICT utilization skills through the feedback they or their peers received (*PST41: When I observe my classmates' microteachings and practicum teaching sessions, I take note of good activities designed by them. I sometimes design similar activities in my own teachings.* / *PST24: Our professors or mentor teacher give feedback to my classmates after they do their microteachings or practicum lessons. I also pay attention to the feedback and try to avoid making similar mistakes in my future teachings.*). As can be inferred from these findings, there are seemingly conflicting perceptions, which can be attributed to local and/or institutional variations; nonetheless, it is clear that the participants opine that the gap between theory and practice, and lack of role models, training & coursework, feedback, technological equipment, and practice opportunities contribute to their negative perceptions. In addition, the participants appreciate the support offered by the professors, and the benefits of relevant coursework, microteachings & practicum, getting feedback and observing good examples.

What course(s) offered by the teacher training program are considered as helpful for integrating ICT into teaching English by the pre-service teachers?

The second sub-research question of the research intends to identify the courses offered by the teacher training program that are considered as helpful and useful for utilizing ICT in teaching English by the pre-service English language teachers. In this respect, qualitative data has been collected and analyzed. The findings of the thematic analysis, including categories, codes, frequencies and percentages, have been presented in Table 4.

Table 4. Findings of the thematic analysis for the courses

	category	f/%	code	f/%
What courses offered by your teacher training program do you consider	None of the courses	102/53	None of the courses	102/53
	Some of the courses	89/47	Practicum	69/36
			Teaching of English Language Skills	60/31
			Teaching English to Young	58/30

as helpful for integrating ICT into teaching English?	Learners Teaching of Integrated Language Skills	56/29
	Materials Development	45/24
	Instructional Technologies	44/23
	Microteaching	43/23

As can be inferred from Table 4., 53% (n=102) of the participants think that none of the courses offered by their teacher training program has been helpful for the utilization of ICT tools in teaching English. In contrast, 47% (n=89) of the participants have reported that some of the courses they have taken throughout their teacher training program have contributed to their ICT utilization skills in teaching English. More precisely, the participants opine that several courses they have taken throughout their teacher training program such as *practicum* (n=69), *teaching of English language skills* (n=60), *teaching English to young learners* (n=58), *teaching of integrated language skills* (n=56), *materials development* (n=45), *instructional technologies* (n=44), and *microteaching* (n=43) have helped them to embed ICT into teaching English effectively. Additionally, some of the participants asserted that the individual professor, rather than the name of the specific course, may be more influential in terms of ICT use (*PST17: In terms of integration of ICT, I think that what matters is the professor. For example, one of our professors casted the screen of his smart phone on the smart board, which was novel for me. Then, I learned that it was possible to cast the screen of your smart phone on the smart board. This happened in our academic reading class.*).

Discussion

The findings of the study clearly indicate that, as has been confirmed by the statements of the pre-service teachers, the level of support they have received from their teacher training programs in terms of effective ICT use is not satisfactory and they *slightly disagree* that their teacher training program sufficiently prepares them for effective ICT utilization. Put differently, they suppose that teacher training programs fail to employ teacher trainers as role models, encourage reflection on instructional uses of ICT, teach how to use and integrate ICT tools, foster collaboration among peers, offer scaffolding, and provide continuous feedback in terms of ICT use. Baran et al. (2019) used the same data collection tool in Turkish context with pre-service teachers from three different state universities and observed that the most commonly utilized strategies were *reflection* and *modeling* whereas *feedback* and *instructional design* strategies received the lowest scores. However, the current study reveals that all the strategies covered by the SQD scale received low scores and the participants either *disagreed* or *slightly disagreed* with the strategies offered by their teacher training institutions. In a similar fashion, it was found in the study of Tondeur et al. (2016) that teacher training programs experienced several challenges in helping pre-service teachers to construct ICT-rich lessons and offering adequate feedback. On the other hand, Sarıçoban et al. (2019)'s study concluded that Turkish pre-service teachers' perceptions of their teacher training programs and their ICT competencies were quite satisfactory. Likewise, Öz (2015) also reported that the teacher training program of the participants proved to be successful in that it provided the pre-service teachers with the necessary skills and knowledge of technology to be implemented in their practical teaching. These conflicting conclusions drawn by different studies may be explained with reference to inter-institutional variations among teacher training programs across the country.

In a similar sense, the findings of the qualitative data indicate that less than half of the participants regarded their teacher training programs as *satisfactory* in terms of teaching English using ICT effectively. To start with, the participants have stated that a lack of role models contributes to this failure. Regardless of the level they are teaching, teacher trainers/professors should keep up with the latest technology and benefit from it in their classrooms. In this respect, Kwangsawad (2016) claims that teacher trainers should display the responsibility of acting as models of technology integration. Likewise, Kaufman (2015) maintains that in order for pre-service teachers to combine technology with their instructional practices, teacher trainers themselves should act as role models to encourage them. Furthermore, the participants have referred to the gap between theory and practice, implying that pre-service teachers need to be allowed and encouraged to make use of ICT in their practice-based courses such as microteaching and practicum. This imbalance between theory and practice has been underscored by previous research (Coskun & Daloglu, 2010; Kilic, 2010) and the need to increase the amount of practice-based courses have been frequently recommended. Additionally, many of the pre-service teachers assume that they have not had enough training and/or coursework to effectively utilize ICT tools, which comes to mean that the curricula of teacher training programs need a comprehensive revision. This revision should include supplementing more practice-based courses that encourage effective ICT use in their content.

The participants that state their pre-service teacher training program has prepared them sufficiently for the utilization of ICT in their instruction maintain that they have received the necessary support and encouragement from their professors. This finding may appear contradictory since some of the participants

regard their teacher training programs as satisfactory whereas others consider them unsatisfactory. As an explanation, it can be argued that there are variations in terms of curricula among different teacher training programs across the country, and this inter-institutional diversity may contribute to this inconsistency. Moreover, even within the same teacher training program, the same course can be given by different professors and a variation in terms of ICT use can also be observed between different professors, which may also lead to this discrepancy. In this respect, some of the participants have reported that they have taken relevant courses to enable them to effectively use ICT in their instruction. To be more precise, the pre-service teachers have referred to the positive impact of practice-based components (such as microteachings and practicum) of their teacher training programs. In such practice-based courses, pre-service teachers get the chance to observe their peers and benefit from the feedback offered to not only themselves but their peers as well. In this regard, it would be justified to argue that pre-service teachers should be provided with more opportunities to apply what they have learned through more frequent and extensive microteachings/practicum courses.

As for the courses offered by the teacher training programs, a slight majority of the pre-service teachers maintain that none of the courses offered by their teacher training program has been helpful for utilizing ICT tools in teaching English. This can also be interpreted as a clear indication of the need to revise and update the curricula of teacher training programs and install more courses that focus on practice components. On the other hand, some of the pre-service teachers have stated that courses they have taken throughout their teacher training program such as *practicum*, *teaching of English language skills*, *teaching English to young learners*, *teaching of integrated language skills*, *materials development*, *instructional technologies*, and *microteaching* have helped them to use ICT in teaching English effectively. As can be understood from the responses of the participants, courses that involve practice components have been considered to be more helpful for the utilization of ICT in teaching English. It should not go without saying that, for some of the participants, the professor rather than the course itself is a determinant for the effective utilization of ICT. This statement corroborates the fact that a professor/teacher can guide his/her learners in using technology (by him-herself employing technology) even when s/he is teaching something not so related to technology.

Conclusion

It would be safe to argue that pre-/in-service teachers with a high level of ICT skills can make the best use of appropriate technologies when training their students. In this respect, the current study has aimed to address pre-service English language teachers' perceptions of how well their teacher training programs prepare them for effective ICT use in their instructional practices and the level of support they receive from their teacher training programs in terms of effective ICT utilization. Teacher training programs have been regarded as educational *mosaics* involving a variety of courses, students with diverse backgrounds, and instructional support mechanisms, implying that the analysis of these programs should be conducted at multiple points via a variety of methods (Hofer & Grandgenett, 2012). As has been suggested by Martin (2015), teacher training programs should feed pre-service teachers with sufficient preparation by enriching their didactic competences with innovative instructional technologies. In support of this, it has been claimed that the latest technology needs to be embedded into content-specific, practice-based methods courses in a holistic fashion to foster pre-service teachers' self-confidence and to successfully integrate technology (Baran et al., 2019; Golas, 2010; Hersh, 2013; Mouza et al., 2014; Tondeur et al., 2016; 2020; Voogt et al., 2016; Wang et al., 2018). To achieve this, pre-service teacher training programs need to offer intensive, coordinated, systematic, and dedicated efforts if they are to develop pre-service teachers' ICT utilization skills (Angeli & Valanides, 2009; Tondeur et al., 2016). This implies that teacher training institutions need to be restructured holistically to allow for the successful integration of content, pedagogy, and technology (So & Kim, 2009).

Consistent with the findings of the present study, it has been assumed that the knowledge and skill of effective ICT use develops over time through long-term exposure and repeated practice, implying that teacher training programs play the major role in offering both exposure and practice opportunities (Baran & Uygun, 2016; Mouza & Karchmer-Klein, 2013; Yeh et al., 2014). In this respect, Valanides and Angeli (2008) observed that teachers' self-confidence and competence in benefitting from technology increased as they gained experience. On the other hand, Bilici et al. (2016) observed that teacher training programs in Türkiye generally train pre-service teachers in using word processing software and basic internet usage, which is hardly sufficient for preparing them to make the best use of ICT tools. It should also be noted at this point that what pre-service teachers learn today may soon become obsolete as the pace of technological innovations is surprisingly rapid. Consequently, Mouza and Karchmer-Klein (2013) underscore the necessity of continuous professional development in ICT use by referring to the unstable and constantly changing nature of technology, which requires teachers to keep up with innovations in software and hardware. Therefore, effective ICT utilization should not be a concern just for pre-service teachers and in-service teachers should also keep up with the latest technology through in-service trainings designed with this aim in mind.

Suggestions

As a final note, the data was collected through the SQD scale and an open-ended survey within the study; thus, the source of the data was the participants' self-perceptions rather than actual observations of their field performances. Accordingly, a limitation of collecting data via self-report surveys is that even though they provide significant insights in a quick and cost-effective manner (Akyuz, 2018; Baser et al., 2016), participants' self-perceptions only reflect their beliefs or attitudes (Agyei & Voogt, 2011) and may not match with their actual implementations (Koh, 2013; Schmid et al., 2021); therefore, as a suggestion, further studies may also involve observations of the participants' practices to reveal the congruence between their stated beliefs and practices. Furthermore, the study was conducted by a single researcher and the analysis of the qualitative data was implemented by a single rater, which may weaken the reliability of the study. Further studies that involve qualitative data may employ more than one rater to enhance the reliability of the study.

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Investigation of Pre-service Science Teachers' Cognitive Structures and Visual Images of Scientist and Engineer Perception

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Investigation of Pre-service Science Teachers' Cognitive Structures and Visual Images of Scientist and Engineer Perception

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Abstract

This study examines pre-service science teachers' cognitive structures and visual images toward the perception of scientists and engineers. The study group of the research consists of 195 students studying at a state university in Ankara in the 2023-2024 academic year. The survey model, one of the quantitative research methods, was used in the study. The study data were collected with an open-ended question about scientist and engineer, a Word Association Test (WAT) related to the concepts of scientist and engineer, and a draw a scientist and draw an engineer test. The data obtained from the study were analyzed using content analysis. Participants mainly explained the differences between scientists and engineers in their working environments. The pre-service teachers associated scientist with the word laboratory (n=140) the most and obsessive (n=8) the least. They associated engineer with the word machine (n=101) and physics (n=8). In the drawings, scientists were mainly depicted as wearing lab coats, having messy hair, working in the laboratory with experimental materials, being sad or thoughtful, wearing glasses, and being male. Notably, pre-service teachers partially eliminate traditional ideas as the grade level increases. On the other hand, the engineer is mainly seen as a man wearing a work apron or daily clothes, with smooth hair, beardless, working in an open area with construction materials or motor vehicles, partially happy and thoughtful, and wearing a helmet/hat. Whether the grade level increase changed their mind about this idea is not determined.

Keywords: Scientist, Engineer, Pre-service science teachers, Cognitive structure, Visual image

Introduction

Science and engineering are critical to economic growth, technological innovation, and sustainable development. These two fields form the cornerstones of social progress, providing solutions that improve the quality of life and facilitate daily life. While scientific research helps to develop new technologies and solve applied problems by providing an understanding of the natural world, engineering meets the various needs of society by transforming this scientific knowledge into practical applications (National Research Council, 2012; World Economic Forum, 2020). The social perception of scientists and engineers significantly impacts their educational processes and future career choices.

The importance of science and engineering in the education system is related to the tangible benefits of these disciplines for individuals and societies and their potential to improve individuals' thinking and problem-solving skills. Science and engineering education helps individuals to develop scientific thinking, analytical skills, and creative problem-solving abilities. Science education encourages students to understand the natural world, learn through experimentation, and solve problems using scientific methods. On the other hand, engineering education provides opportunities for students to solve real-world problems by giving them the skills to transform this scientific knowledge into practical applications (National Research Council, 2012). Beginnig science and engineering education early can increase students' interest in these fields and influence their future career choices. Education policies and teaching strategies should ensure that these disciplines are effectively presented to students and allow students to explore their abilities and interests in these fields (OECD, 2016).

The importance of science and engineering education can be listed as follows:

1. Economic and Technological Development: Science and engineering education supports economic growth and promotes technological progress. Scientific and engineering knowledge enables the development of innovative products and services, which leads to competitiveness and efficiency in

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the labor market (World Economic Forum, 2020). The importance given to science and engineering in education contributes to increasing social welfare and economic development.

2. Problem Solving and Creative Thinking: Science and engineering education equips students with analytical thinking, creative problem-solving, and critical thinking skills. These skills help students solve complex problems and develop innovative solutions (Linn & Eylon, 2011). Effective representation of these areas in the education system ensures that students are prepared for the challenges they will face in their future careers.

3. Social and Environmental Responsibility: Science and engineering education increases students' sensitivity to social and environmental issues. These disciplines produce solutions to solve environmental problems, increase energy efficiency, and ensure sustainable development. The importance of these areas in education helps students understand and fulfill their social responsibilities (Eilks & Ralle, 2012).

4. Preparing for the Future Workforce: Education in science and engineering is critical in preparing students for the future workforce. Investments in STEM (Science, Technology, Engineering, and Mathematics) education allow students to explore career opportunities in these fields and gain competencies (Davis & Anderson, 2019). In particular, STEM (Science et al.) education provides students with a broad knowledge base and skill set in science and engineering, preparing them for future career opportunities (OECD, 2016). The fact that education systems train a highly qualified workforce in science and engineering ensures the continuity of social development and economic success.

Science and engineering education is vital to individuals' personal and professional development. Representing these fields in education is critical for social and economic development. By effectively presenting science and engineering fields, education policies and teaching strategies can increase students' interest in these disciplines and contribute to raising competent individuals in these fields. Strengthening science and engineering education should be a fundamental investment for future social welfare and economic success.

It is the leading occupational group. The perception of these professions in society can significantly affect the educational process and career choices. Pre-service science teachers' cognitive structures and visual images of these professions are decisive in their educational strategies and teaching approaches. The 2013 science curriculum emphasized inquiry-based teaching and interdisciplinary learning, which increased the importance given to Science-Technology-Engineering-Mathematics (STEM) practices (MoNE, 2013). The 2018 science curriculum emphasizes the importance of engineering and design skills in science education, along with science process and life skills within domain-specific skills (MoNE, 2018). Finally, the science curriculum that came into force in 2024 adopts a teaching approach based on scientific inquiry and engineering designs to continue this process (MoNE, 2024). Therefore, it is essential to understand how educators and students perceive the concepts of scientists and engineers in science education and how they exhibit behaviors in this direction.

The perceptions carried from past to present influence how pre-service teachers present science and engineering professions to their students, which can guide students' perceptions and choices about occupations. Understanding how pre-service teachers perceive images of scientists and engineers enables the design of educational materials and teaching strategies more inclusively and diversely. Examining pre-service science teachers' perceptions of “scientist” and “engineer” is essential to improving the processes of defining and promoting these two professions in the education system.

Investigating pre-service science teachers' perceptions of science and engineering sheds light on developing educational policies and strategies. If education policies accurately promote science and engineering professions and teaching strategies address them from a broad perspective, it can help students discover their abilities and interests in these fields (OECD, 2016). Accordingly, educational systems can enable students to develop a more realistic and comprehensive understanding of science and engineering professions by allowing a wide range of science and engineering professions to be represented.

Sub-problems of the research:

1. How are the cognitive structures of pre-service science teachers towards the concept of “scientist”?

2. How are the cognitive structures of pre-service science teachers towards the concept of “engineer”?

3. How are the visual images of pre-service science teachers towards the concept of "scientist"?

4. How are the visual images of pre-service science teachers towards the concept of “engineer”?

While there are many studies on the perceptions of scientists in the literature, studies on the perceptions of engineers are more recent, and research in this area is limited, especially in Türkiye (Benli et al., 2011; Bilen et al., 2014; Koyunlu et al., 2016). The most striking aspect of this study is that the perceptions of scientists and engineers were examined and compared together. Although studies that examine both professions together can be found in the foreign literature (Fralick et al., 2009; Jung & Kim, 2014; Park & Lee, 2014), there is a limited number of studies on this topic in the Turkish literature (Gülhan & Şahin, 2018). In the literature, Fralick et al. (2009), Jung and Kim (2014), and Park and Lee (2014) are examples of studies that investigated the perceptions of scientists and engineers together. In a study of 1600 middle school students in the US, Fralick et al. (2009) found that scientists are typically portrayed as wearing glasses and lab coats, while engineers are defined as workers or laborers who use tools rather than scientists. Jung and Kim (2014) showed that elementary school students defined scientists from a stereotypical perspective and perceived engineers as "people who design robots, computers, and airplanes" wearing regular clothes. Park and Lee (2014) conducted a study with 512 sixth-grade students in South Korea. They found that students perceived engineers as people who "repair, build, manufacture, work outdoors in work clothes" and characterized them as less intelligent and creative than scientists. It should be noted that most studies have been conducted with middle school students. In this context, it is believed that this study, which examines pre-service science teachers' cognitive structures and visual images concerning the perception of 'scientist and engineer', will fill a significant gap in the literature.

Method

Research Design

In this study, the cognitive structures and visual images of pre-service science teachers' perceptions of "scientist and engineer" were examined, and the survey model, one of the quantitative research methods, was used. The survey model is an approach that defines a situation in the past or present in its current state and covers the processes that are applied to ensure learning and the development of desired behaviors in individuals. In this model, a survey is conducted on the entire population, or a sample is selected to make a general assessment of a large group (Karasar, 2011).

Sample

A convenience sampling method, one of the non-randomized study methods, was used to determine the study group (Fraenkel & Wallen, 2006). In this context, the demographic characteristics of the study group are shown in Table 1.

Table 1. Demographic characteristics of the study group

Grade Level	**Gender**					
	Female		**Male**		**Total**	
	N	%	N	%	N	%
Grade 1	26	86.67	4	13.33	30	100
Grade 2	54	90.00	6	10.00	60	100
Grade 3	42	93.33	3	6.67	45	100
Grade 4	53	88.33	7	11.67	60	100
Total	**175**	**89.74**	**20**	**10.26**	**195**	**100**

Examining Table 1, it can be seen that the study group in the research consists of 195 pre-service science teachers (n_{grade1} = 30, n_{grade2} = 60, n_{grade3} = 45, n_{grade4} = 60). It can be seen that 89.74% of the pre-service teachers were female students, and 10.26% were male students.

Data Collection Tool

The data for this study, which investigated the cognitive structures and visual images of pre-service science teachers' perceptions of scientists and engineers, were collected using qualitative data collection tools. The study data were obtained through an open-ended question about the fields of study of scientists and engineers, a scientist Word Association Test (WAT), an engineer Word Association Test (WAT), a scientist drawing test, and an engineer drawing test.

Open-ended Questions about Scientist and Engineer

One of this study's qualitative data collection tools is the open-ended question directed to the pre-service science teachers. In the study, an open-ended question prepared by the researchers was directed to determine pre-service science teachers' views on the concepts of scientist and engineer. The researchers conducted a literature review and prepared a form as a data collection tool. To ensure the internal and external validity of the open-ended question, the opinions of a field expert and a language expert were taken. The finalized open-ended question was applied face-to-face as a form to the pre-service science teachers in the study group. The participants were asked about the working areas of scientists and engineers and were expected to answer the question within 20 minutes. The pre-service teachers wrote their answers on this form. The 'scientist and engineer' question was asked to evaluate the cognitive structures of pre-service teachers about the characteristics of scientists and engineers. With the open-ended question, pre-service teachers could freely express their cognitive structures, experiences, and opinions. This situation allowed the researcher to obtain in-depth and rich data.

Scientist and Engineer Word Association Test

Word association tests aim to reveal the cognitive networks in students' minds. They assess the adequacy and salience of concepts in long-term memory, examine the accuracy of connections between concepts, and visualize conceptual relationships. They can also be used to compare how new information is related to existing information and to compare initial and final word associations (Ercan et al., 2010). Some rules should be followed when using the word association test. According to Bahar and Özatlı (2003), the concepts to be tested should be presented in an appropriate number of rows. The opposite side of each concept is left blank, and the student is expected to write the word that this concept evokes. The time given can vary between 30 seconds and 1 minute, depending on the average age of the group, and should be shorter as the age increases. If more than one concept is to be questioned, a separate sheet of paper should be provided. Otherwise, the other concepts may influence the answers as the students will see them together. Therefore, the concepts should be presented individually in the presence of a supervisor, and the next concept should be introduced when the time is up.

In this study, the cognitive perceptions of pre-service teachers were examined through the critical concepts of scientists and engineers, and categories were formed based on the frequency distribution of concepts associated with the key concepts. Each key concept was given 30 seconds. Participants were asked to write five words that came to mind within 30 seconds for each key concept in the blank space opposite the critical word. Since Bahar and Özatlı (2003) suggested that the administration time of the Word Association Test (WAT) could vary between 30 seconds and 1 minute depending on the average age of the group and that the time should be shorter as the age increases, the recommended time was minimized. The test was administered to the pre-service teachers.

Draw a Scientist Test and Draw an Engineer Test

In this study, to investigate the visual image of scientists and engineers in the minds of pre-service teachers, they were asked to draw a picture. The students were given 30 minutes to do this, with guidance. The Draw a Scientist Test developed by Chambers (1983) and the Draw an Engineer Test developed by Knight and Cunningham (2004) were used as data collection instruments.

The Draw a Scientist Test is a one-question instrument used to assess the perception of a scientist. Chambers tested this scale with students from kindergarten to fifth grade. The test is analyzed according to the drawings' presence or absence of certain elements. The analysis criteria Chambers (1983) identified include gender, clothing, research tools, and research environment. Schibeci and Sorensen (1983) examined the reliability of this scale and found an inter-coder agreement rate of between 0.78 and 0.98. These results suggest that the scale is valid and reliable for measuring scientists' perceptions.

The Draw an Engineer Test is another one-question instrument designed to assess the perceptions of engineers. The test was administered to 384 students from third to twelfth grade (Knight & Cunningham, 2004). Karataş (2017) analyzed the test results based on four criteria: appearance, objects, tasks, and work environment of engineers, focusing on sixth-grade students. In the study, document analysis was employed for data analysis, and field experts reviewed the results. Pre-service teachers participating in the study were asked to draw an image of an engineer within a given timeframe.

Data Analysis

The data obtained in the study were analyzed using qualitative data analysis. Qualitative data were analyzed by using the steps of the content analysis method. The purpose of content analysis is to interpret similar data by systematically bringing them together. According to Yıldırım and Şimşek (2021), qualitative data are analyzed in four stages in content analysis. These stages are coding the data, finding themes and sub-themes, organizing the data according to the codes and themes, and interpreting the findings. The answers given to the tests and the

drawings were transferred verbatim. In order to ensure the consistency of the research, two field experts coded the data simultaneously and reached a consensus. This study transferred participants' test responses and drawings without modification to maintain authenticity. To ensure the reliability of the analysis, two field experts independently coded the data. Any discrepancies were resolved through discussion, achieving consensus and strengthening the study's consistency.

Participants were assigned special numbers as P_1 for pre-service teacher 1 and P_2 for pre-service teacher 2. The open coding method was used in the qualitative data analysis to identify standard codes and categories from the data. Irrelevant codes and categories were excluded before the analysis was completed. Inductive analysis was the preferred method of content analysis. The researchers labeled and analyzed the data using relevant quotations for the identified categories. The stages of inductive content analysis included planning, coding the data, determining the categories, and interpreting the findings (Yıldırım & Şimşek, 2021).

The framework for analysis was developed using categories, codes, and representative statements. Each researcher coded the data independently. The 'agreement' and 'disagreement' levels between the researchers were identified and documented. Miles and Huberman (2015) proposed the formula reliability = agreement / (agreement + disagreement) to assess the consistency between researchers. Using this formula, the reliability of the two coders was calculated to be 0.90, 0.88, and 0.89 for open-ended questions, word association tests, and drawings, respectively. In qualitative research, a minimum agreement level of .80 between researchers and experts is required to ensure reliability (Creswell, 2013). The coding process for the pre-service teacher's opinion was as follows: appropriate code(s) were identified for the pre-service teachers' statement, and these codes were categorized accordingly. For example, the pre-service teacher's statement, 'Scientists conduct experiments and make discoveries in laboratories, while engineers work in the field to produce,' was coded under the category 'work environments'.

Validity and Reliability of the Study

Data diversity played an important role in ensuring the validity and reliability of the study (Yıldırım & Şimşek, 2021). Various data sources were used, including participants' responses to open-ended questions, word association tests, and student drawings. The researcher's role was closely aligned with the field, allowing for direct observation, direct data collection, and communication with participants when necessary to clarify ambiguities, increasing the study's validity. In addition, the findings were presented in detail, explicitly incorporating the participants' perspectives so that the results could be generalized to similar studies and contexts. To ensure reliability, the researchers analyzed the data independently, minimizing inconsistencies in codes and categories. Their previous experience contributed positively to the study's data collection, analysis, and overall conduct. Participants' opinions and drawings were analyzed and explained in detail throughout the research. Direct quotations from participants' views were included to ensure the findings were presented clearly and comprehensively.

Ethics approval

Gazi University Social and Human Sciences Ethics Committee granted the ethics committee approval of this study with the decision dated 27.02.2024 and numbered 4.

Findings

Open-Ended Question Regarding the Concepts of Scientist and Engineer

The results of the content analysis of pre-service science teachers' responses to the open-ended question about how they explain the terms ‘scientist’ and ‘engineer’ are presented in Table 2.

Table 2. Content analysis results regarding the open-ended question on the concept of scientist and engineer

Categories	Frequency (f)	Percentage (%)	Sample Answers
Study environments	56	28	Scientists conduct experiments and discoveries in the laboratory, while engineers produce in the field.
Reasons for studying	36	18	Scientists try to understand nature and the universe and discover new information, while engineers solve problems.
Modes of study	36	18	Scientists try to prove ideas by testing them, while engineers try to benefit people and make their lives easier.

Fields of study	28	14	Scientists have broader fields of study, while engineers have narrower fields related to mathematics and technology.
Study roles	24	12	Scientists deal with things that have not yet been found, while engineers design.
Study methods	20	10	Scientists make inventions; engineers bring them to life.
Total	**200**	**100**	

An analysis of Table 2 shows that the pre-service science teachers' responses to the concepts of 'scientist' and 'engineer' can be grouped into six categories. Participants mainly explained the differences between scientists and engineers regarding their working environment.

Word Association Test Regarding the Concept of Scientist

The results of the word association test regarding pre-service science teachers' responses to the concept of 'scientist' are presented in Table 3.

Table 3. Content analysis results for the word association test on the concept of scientist

Categories	**Concepts**	**Frequency (f)**	**The total frequency of the category**	**Percentage (%)**
Scientist as a feature	Researcher	80	160	26,66
	Questioner	28		
	Discoverer	24		
	Genius	12		
	Curious	8		
	Obsessed	8		
Scientist as a field	Science	44	116	19,33
	Physics	24		
	Chemistry	20		
	Biology	16		
	Mathematics	12		
Scientist as a study environment	Laboratory	151	272	45,33
	Study room/Office	52		
	Nature	49		
	Library	20		
Scientist as a noun (individual)	Einstein	24	52	8,68
	Aziz Sancar	20		
	Madame Curie	8		
Total			**600**	**100**

Looking at Table 3, the pre-service teachers' responses to the word association test regarding the concept of scientist are grouped into four categories: scientist as a trait, scientist as a field of study, scientist as a work environment, and scientist as a noun. The pre-service teachers associated the word scientist most with the word laboratory (n=151) and least with the word obsessive (n=8).

Word Association Test Regarding the Concept of Engineer

The results of the pre-service teachers' responses to the word association test regarding the concept of engineering are presented in Table 4.

Table 4. Content analysis results regarding the word association test regarding the concept of engineer

Categories	**Concepts**	**Frequency (f)**	**The total frequency of the category**	**Percentage (%)**
Engineer as a process/activity	Technology	99	390	40,24
	Invention	98		
	Product	82		
	Design	66		
	Problem	45		
Engineer as a field of study	Machinery	101	410	42,31
	Electrical	93		

	Computer	89		
	Construction	66		
	Agriculture	42		
	Chemistry	11		
	Physics	8		
Engineer as a feature	Thinking	60	169	17,45
	Solving	51		
	Analytical	38		
	Producing	20		
Total			**969**	**100**

Looking at Table 4, the pre-service science teachers' responses to the word association test regarding the concept of engineering are grouped into three categories (engineer as a process/activity, engineer as a field of study, and engineer as a characteristic). The pre-service teachers associated the word engineer most with the word machine (n=101) and least with the word physics (n=8).

Student Drawings Regarding the Concept of Scientist

The results of the pre-service science teachers' student drawings on the concept of scientist are presented in Table 5.

Table 5. Content analysis results for drawings related to the concept of scientist

Checklist		**Grade 1**		**Grade 2**		**Grade 3**		**Grade 4**		**Total**	
		f	%	f	%	f	%	f	%	f	%
Clothing features	Laboratory coat	21	25	28	33.33	19	22.61	16	19.04	84	100
	Suit	1	5	6	30	5	25	8	40	20	100
	Causal/Sport	3	18.75	4	25	4	25	5	31.25	16	100
	Unspecified	5	6.66	22	29.33	17	22.66	31	41.33	75	100
Head region features	Messy hair	15	30	14	28	11	22	10	20	50	100
	Well-groomed hair	5	7.93	20	31.74	16	25.39	22	34.92	63	100
	Hairless	10	2.19	26	31.70	18	21.95	28	34.14	82	100
Facial region features	Bearded	12	20.68	14	24.13	20	34.48	12	20.68	58	100
	Beardless	18	13.13	46	33.57	25	18.24	48	35.03	137	100
Other pictures drawn with the scientist	Human	2	18.18	3	27.27	4	36.36	2	18.18	11	100
	Animal	3	21.42	3	21.42	3	21.42	5	35.74	14	100
	Plant	2	14.28	3	21.42	3	21.42	6	42.85	14	100
	Chemical experimental materials	21	14.89	43	30.49	33	23.40	44	31.20	141	100
	Telephone	-	-	-	-	-	-	-	-	-	-
	Microscope	1	25	2	50	-	-	1	25	4	100
	Telescope	1	25	1	25	2	50	-	-	4	100
	Electrical materials	-	-	-	-	-	-	-	-	-	-
	Food ingredients	-	-	-	-	-	-	-	-	-	-
	Airplane, car, etc.	-	-	-	-	-	-	-	-	-	-
	Computer	-	-	2	100	-	-	-	-	2	100
	Book	-	-	2	66.66	-	-	1	33.33	3	100
	No other picture with the scientist	-	-	1	50	-	-	1	50	2	100
Gender	Female	8	12.30	19	29.23	16	24.61	22	33.84	65	100
	Male	16	20.77	25	32.46	16	20.77	20	25.97	77	100
	**Gender unclear	6	11.32	16	30.18	13	24.52	18	33.96	53	100
Working environment	Laboratory	21	15	42	30	33	23.57	44	31.42	140	100
	Workroom	4	44.44	-	-	2	22.22	3	33.33	9	100
	Home	-	-	-	-	-	-	-	-	-	-
	Forest	-	-	-	-	-	-	-	-	-	-
	Space	-	-	-	-	1	100	-	-	1	100
	Location not specified	5	11.11	18	40	9	20	13	28.89	45	100
Facial expression	Happy	5	10.41	10	20.83	12	25	21	43.75	48	100
	Angry	-	-	-	-	-	-	-	-	-	-
	Grumpy	-	-	-	-	-	-	-	-	-	-
	Sad	8	24.24	9	27.27	4	12.12	12	36.36	33	100
	Thoughtful	9	16.36	21	38.18	8	14.54	17	30.90	55	100
	Unidentified facial expression	8	18.18	20	45.45	6	13.63	10	22.72	44	100
	Glasses	12	18.18	18	27.27	20	30.30	16	24.24	66	100
	Hat/Cap	-	-	-	-	-	-	-	-	-	-

Accessories	Necklace/Earrings/Hair	-	-	-	-	-	-	-	-	-	-
	Buckle/Belt/Tie/Collar	-	-	-	-	-	-	-	-	-	-
	Handkerchief/Badge/Cloak/Scarf										
	Accessories not specified	18	13.95	42	32.55	25	19.37	44	34.10	129	100

When Table 5 is analyzed, it is seen that the pre-service teachers mostly drew the scientist as a man in a lab coat, with unkempt hair, working in the laboratory with experimental materials, sad or thoughtful, wearing glasses and a beardless. Notably, as the grade level increases, pre-service teachers partially get rid of this ordinary way of thinking.

Some examples of the pictures the pre-service science teachers drew on the concept of scientists are presented below.

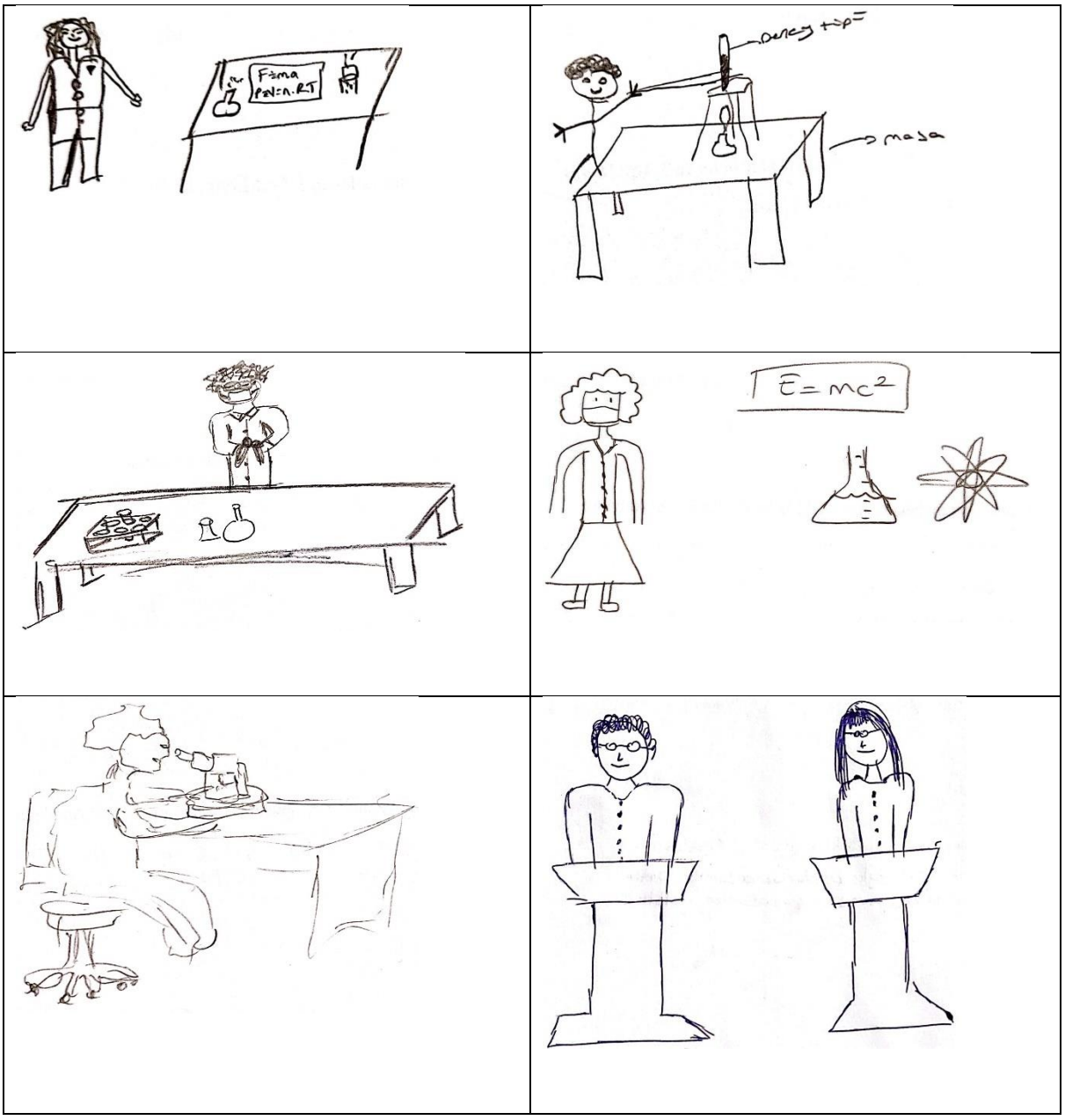

Figure 1. Examples of drawings by pre-service teachers regarding the concept of a scientist

Student Drawings Findings Regarding the Concept of Engineer

The results of the pre-service science teachers' student drawings on the concept of engineering are presented in Table 6.

Table 6. Content analysis results for drawings related to the concept of engineer

Checklist		**Grade 1**		**Grade 2**		**Grade 3**		**Grade 4**		**Total**	
		f	%	f	%	f	%	f	%	f	%
Clothing features	Work apron	14	16.27	25	29.06	20	23.25	27	31.39	86	100
	Suit	-	-	-	-	-	-	-	-	-	-
	Causal/Sport	10	13.88	20	27.77	18	25	24	33.33	72	100
	Unspecified	6	16.21	15	40.54	7	18.91	9	24.32	37	100
Head region features	Messy hair	14	15.73	24	26.96	23	25.84	28	31.46	89	100
	Well-groomed hair	13	19.40	20	29.85	12	17.91	22	32.83	67	100
	Hairless	3	7.69	16	41.02	10	25.64	10	25.64	39	100
Facial region features	Bearded	5	31.25	4	25	3	18.75	4	25	16	100
	Beardless	25	13.96	56	31.28	42	23.46	56	31.28	179	100
Other pictures drawn with the engineer	Human	-	-	-	-	-		-	-	-	-
	Computer	5	17.85	8	28.57	6	21.42	9	32.14	28	100
	Motor Vehicle (Plane, car, etc.)	3	7.89	10	26.31	12	31.57	13	34.21	38	100
	Construction Materials	12	17.39	29	24.16	14	20.28	24	34.78	69	100
	Telephone	-	-	-	-	-		-	-	-	-
	Electrical cable	3	37.5	2	25	1	12.5	2	25	8	100
	Robot	-	-	-	-	-		-		-	-
	Paper materials	-	-	-	-	-	-	1	100	1	100
	Food ingredients	-	-	-		-	-	-	-	-	-
	Ruler	5	17.85	6	21.42	8	28.57	9	32.14	28	100
	Machine	2	15.38	5	38.46	4	30.76	2	15.38	13	100
	Book	-	-	-	-	-	-	-	-	-	-
	No other picture with the engineer	-	-	-	-	-	-	-	-	-	-
Gender	Female	2	8	5	20	8	32	10	40	25	100
	Male	28	16.47	55	32.35	37	21.76	50	29.41	170	100
	**Gender unclear	-	-	-	-	-	-	-	-	-	-
Working environment	Workshop	2	14.28	4	28.57	3	21.42	5	35.71	14	100
	Workroom	5	38.46	3	23.07	2	15.38	3	23.07	13	100
	Home	-	-	-	-	-	-	-	-	-	-
	Open area/Field	9	8.33	38	35.18	30	27.77	31	28.70	108	100
	Factory	8	25	8	25	6	18.75	10	31.25	32	100
	Location not specified	6	21.42	7	25	4	14.28	11	39.28	28	100
Facial expression	Happy	12	21.42	11	19.64	12	21.42	21	37.5	56	100
	Angry	-	-	-	-	-	-	-	-	-	-
	Grumpy	-	-	-	-	-	-	-	-	-	-
	Sad	5	17.24	8	27.58	4	13.79	12	41.37	29	100
	Thoughtful	11	19.29	21	36.84	8	14.03	17	29.82	57	100
	Unidentified facial expression	2	5.26	20	52.63	6	15.78	10	26.31	38	100
Accessories	Glasses	10	20.83	12	25	10	20.83	16	33.33	48	100
	Helmet/Hat	20	17.54	37	32.45	22	19.29	35	30.70	114	100
	Bracelet	-	-	-	-	-	-	-	-	-	-
	Necklace/Earring/	-	-	-	-	-	-	-	-	-	-
	Hairpin/Belt/Tie/	-	-	-	-	-	-	-	-	-	-
	Collar	-	-	-	-	-	-	-	-	-	-
	Handkerchief/ Badge/Cloak/Scarf										
	Accessories not specified	5	13.15	11	28.94	13	34.21	9	23.68	38	100

Table 6 shows that the pre-service teachers mainly draw male engineers who wear work uniforms or casual clothes, have neat hair and beards, work outdoors with construction materials or motor vehicles, are partly happy and thoughtful, and wear hard hats. It is noteworthy that the traditional ideas of the pre-service teachers remain the same as the grade increases.

Some examples of pictures of the engineering concept drawn by pre-service science teachers are presented below.

Figure 2. Examples of drawings by pre-service teachers regarding the concept of engineer

Results and Discussion

This study investigated pre-service science teachers' cognitive structures and visual images concerning their perceptions of "scientists" and "engineers".

According to the first result of the study, the answers given by the pre-service science teachers to the concepts of scientist and engineer were collected in six categories. These categories describe scientists and engineers in terms of working environments (n=56), reasons for working (n=36), ways of working (n=36), working areas (n=28), working roles (n=24), and working methods (n=20). The pre-service teachers explicitly explained the differences between scientists and engineers and emphasized the differences between them. They define scientists as people who do experiments and discoveries in the laboratory, try to understand the universe, and have broad fields of work. Engineers work in the field, solve problems, make functional designs and applications for people, and have narrow fields of work. This finding shows that pre-service teachers must correct their perceptions of engineers and scientists and know more about engineers than scientists. When examining the literature, Gülhan and Şahin (2018) and Fralick et al. (2009) also concluded that engineers are less known than scientists. This may be because pre-service teachers do not interact much with engineers in their professional careers.

The responses of the pre-service science teachers to the word association test regarding the concept of scientist were grouped into 4 categories (scientist as a characteristic, scientist as a field of study, scientist as a working environment, and scientist as a noun). In terms of characteristics, the pre-service science teachers associated the scientist mainly with the words of the researcher (n=80), science (n=44), and laboratory (n=151) experiment (n=140). This situation may be because pre-service science teachers perceive scientists as people who carry out research and experiments in science. The students who also mentioned the names of scientists most often repeated the word Einstein (n=24). In the study conducted by Öztürk İrtem and Hastürk (2021), it was found that students mostly preferred the laboratory as the working environment of the scientist. When examining the literature, it is noteworthy that similar results were obtained (Barman et al., 1997; Camcı Erdoğan, 2013; Fralick et al., 2009; Gonsoulin, 2001; Güler & Akman, 2006; Kaya et al., 2008; Korkmaz & Kavak, 2010; Küçük & Bağ, 2012; Öcal, 2007; Özel, 2012; Özel & Doğan, 2013; Özsoy & Ahi, 2014; Turgut et al., 2017; Türkmen, 2008). This finding can be said to indicate that students have limited knowledge about the characteristics, working environment, and field of study of scientists and that they have traditional ideas.

The responses of pre-service science teachers to the word association test regarding the concept of engineering were grouped into 3 categories (engineer as a process/activity, engineer as a field of study, engineer as a characteristic). Pre-service teachers associated the concept of engineer most with the word machinery (n=101) and least with physics (n=8). When looking at the field of study category, pre-service teachers expressed engineer with the words machinery (n=101), electricity (n=93), computers (n=89), construction (n=66), agriculture (n=42), chemistry (n=11), and physics (n=8). Participants described engineering as a more physically demanding occupation. Knight and Cunningham's (2004) study concluded that students generally perceived engineers as people involved in construction and repair work. Similarly, Cunningham, Lachapelle, and Lindgren (2005) found that students thought engineers were mainly involved in repair and construction work. In their study of middle school students, Öztürk İrtem and Hastürk (2021) found that students most often drew civil engineers and computer engineers when examining information about the field of engineering.

It is observed that pre-service science teachers mainly draw traditionally thought-out male scientists with lab coats, messy hair, working in the lab with experimental materials, sad or thoughtful, and wearing glasses. Significantly, they deviate from these traditional ideas to some extent as they progress through the grades. Öztürk İrtem and Hastürk (2021) found that secondary school students mostly pictured a male scientist working in the laboratory and with laboratory equipment as the gender of the scientist. Similar results supporting this study can be found in the literature (Benli et al., 2011; Barman et al., 1997; Camcı Erdoğan, 2013; Fralick et al., 2009; Gonsoulin, 2001; Güler & Akman, 2006; Kaya et al., 2008; Korkmaz & Kavak, 2010; Küçük & Bağ, 2012; Öcal, 2007; Özel, 2012; Özel & Doğan, 2013; Özsoy & Ahi, 2014; Turgut et al., 2017; Türkmen, 2008).

Considering the engineering drawings of the pre-service science teachers, we see that they mainly draw male engineers wearing hard hats, wearing work aprons or casual clothes in traditional thoughts, with neat hair and no beard, working outdoors with construction materials or motor vehicles, partly happy and thoughtful. It is noteworthy that the traditional thoughts of the pre-service teachers remain the same as the level of education increases. Similar results have been obtained in studies with different groups of students. It is striking that the participants mostly portray the gender of engineers as male (Capobianco et al., 2011; Fralick et al., 2009; Gülhan & Şahin, 2018; Karataş et al., 2011; Knight & Cunningham, 2004; Öztürk et al., 2021). This situation can be explained by examining the role of gender stereotypes in career choice. It is believed that breaking

gender stereotypes in career choices is essential for the professional careers of female students, and solutions to this situation should be developed.

Since most of the pre-service teachers were female students, the views of the study group were not analyzed based on the gender factor. However, in a similar study conducted by Balçın and Yavuz Topaloğlu (2019) with students at the 4th-grade level of primary education, it was stated that male students exhibited more positive perceptions towards the concepts of scientist and engineer than female students.

Suggestions

Based on the findings of this study, several suggestions were made to curriculum developers, educators, and researchers:

Suggestions for curriculum developers:

- In this study, pre-service science teachers' cognitive structures and visual images of scientists and engineers were found to be at a traditional level. Curriculum developers can provide a broader understanding by offering pre-service teachers different perspectives through interdisciplinary studies and hands-on activities.
- It is important that as the pre-service teachers' level increases, they partially move away from the traditional understanding of scientists. However, they do not move away from the conventional understanding of engineers. In this context, a more comprehensive and realistic understanding can be developed using real-world examples in the curriculum.

Suggestions for educators:

- More active studies can be included so that pre-service teachers have a realistic perception.
- The study found that pre-service teachers gave more traditional answers. In order to develop students' cognitive structures and visual images, cognitive and behavioral gains aimed at getting to know scientists and engineers can be incorporated using different methods and techniques.
- Concrete examples (success stories of scientists and engineers, etc.) of how scientists and engineers can be represented differently can be presented to pre-service teachers.
- Educators should encourage pre-service teachers to closely observe the working conditions and environments of scientists and engineers in real life through out-of-school learning environments.
- Up-to-date, interactive, and participatory methods should support teaching content and materials. Students should be provided with up-to-date information, encouraged to work in groups and explore modern definitions in depth through discussion.

Suggestions for researchers:

- The lack of some demographic information in the study is one of the study's limitations. Given the different demographic characteristics of the students, their cognitive and affective schemas and visual images of scientists and engineers can be examined.
- Descriptive and experimental studies can be carried out to identify the factors that influence students' perceptions of scientists and engineers and to evaluate their impact on students' perceptions.
- The study found that as students progressed through the school, their perceptions of scientists became less traditional, while their perceptions of engineers remained the same. In this context, long-term monitoring and experimental studies can be carried out to better understand the factors influencing this perception, using both in-class and out-of-class educational programs.

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Fen Bilgisi Öğretmen Adaylarının Bilim İnsanı ve Mühendis Algısına Yönelik Bilişsel Yapılarının ve Görsel İmajlarının İncelenmesi

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Özet

Bu çalışmanın amacı, fen bilgisi öğretmen adaylarının bilim insanı ve mühendis algısına yönelik bilişsel yapılarının ve görsel imajlarının incelenmesidir. Araştırmanın çalışma grubu, 2023-2024 eğitim-öğretim yılında Ankara'da bir devlet üniversitesinde öğrenim görmekte olan 195 öğrenciden oluşmaktadır. Araştırmada nicel araştırma yöntemlerinden tarama modeli kullanılmıştır. Araştırmanın verileri, bilim insanı ve mühendis ile ilgili açık uçlu bir soru, bilim insanı ve mühendis kavramlarına ilişkin kelime ilişkilendirme testi, bir bilim insanı ve bir mühendis çiz testi ile toplanmıştır. Araştırmadan elde edilen veriler, içerik analizi kullanılarak incelenmiştir. Katılımcılar bilim insanı ve mühendis arasındaki farklılıkları çoğunlukla çalışma ortamları ile açıklamışlardır. Öğretmen adayları, bilim insanını en çok laboratuvar (n=140) kelimesi ile en az takıntılı (n=8) kelimesi ile ilişkilendirmişlerdir. Mühendisi ise en çok makine (n=101) kelimesi ile en az fizik (n=8) kelimesi ile ilişkilendirmişlerdir. Çizimlerde bilim insanı çoğunlukla laboratuvar önlüklü, dağınık saçlı, deney malzemeleri ile laboratuvarda çalışan, üzgün ya da düşünceli, gözlüklü ve erkek olarak ifade ettikleri görülmektedir. Sınıf seviyesi arttıkça, öğretmen adaylarının geleneksel düşüncelerden kısmen sıyrıldığı dikkat çekmektedir. Mühendisi ise, çoğunlukla geleneksel düşüncelerde iş önlüğü ya da günlük kıyafet giymiş, düzgün saçlı, sakalsız, inşaat malzemeleri ya da motorlu taşıtlar ile açık alanda çalışan, kısmen mutlu ve düşünceli, baret takmış erkek olarak çizdikleri görülmektedir. Sınıf seviyesinin artması bu düşünceyi değiştirmemektedir.

Anahtar kelimeler: Bilim insanı, Mühendis, Fen bilgisi öğretmen adayları, Bilişsel yapı, Görsel imaj

Giriş

Bilim ve mühendislik, günümüzde toplumların ekonomik büyüme, teknolojik yenilik ve sürdürülebilir gelişimleri için kritik öneme sahiptir. Bu iki alan, toplumsal ilerlemenin temel taşlarını oluşturarak hayat kalitesini artıran ve günlük yaşamı kolaylaştıran çözümler sunmaktadır. Bilimsel araştırmalar, doğal dünyanın anlaşılmasını sağlayarak yeni teknolojilerin geliştirilmesine ve uygulamalı problemleri çözmeye yardımcı olurken; mühendislik, bu bilimsel bilgileri pratik uygulamalara dönüştürerek, toplumun çeşitli ihtiyaçlarını karşılamaktadır (National Research Council, 2012; World Economic Forum, 2020). Bilim insanları ve mühendislerin toplumsal algısı hem eğitim süreçleri hem de gelecekteki meslek seçimleri üzerinde önemli bir etkiye sahiptir.

Eğitim sistemi içinde bilim ve mühendisliğin önemi, sadece bu disiplinlerin bireyler ve toplumlar için sağladığı somut faydalarla değil, aynı zamanda bireylerin düşünme yetilerini geliştirme ve problem çözme becerilerini artırma potansiyeliyle de ilişkilidir. Bilim ve mühendislik eğitimi, bireylerin bilimsel düşünme, analitik beceri ve yaratıcı problem çözme yeteneklerini geliştirmelerine yardımcı olur. Bilim eğitimi, öğrencileri doğal dünyayı anlamaya, deney yaparak bilgi edinmeye ve bilimsel yöntemleri kullanarak sorunları çözmeye teşvik eder. Mühendislik eğitimi ise, bu bilimsel bilgileri pratik uygulamalara dönüştürme becerilerini kazandırarak, öğrencilere gerçek dünyadaki problemleri çözme fırsatları sunar (National Research Council, 2012). Bilim ve mühendislik eğitimine erken yaşlardan itibaren başlanması, öğrencilerin bu alanlara olan ilgisini artırabilir ve gelecekteki kariyer seçimlerini etkileyebilir. Eğitim politikaları ve öğretim stratejileri, bu disiplinlerin öğrencilere etkin bir şekilde sunulmasını sağlamalı ve öğrencilerin bu alanlardaki yeteneklerini ve ilgilerini keşfetmelerine olanak tanımalıdır (OECD, 2016).

Bilim ve mühendislik eğitiminin önemi aşağıda belirtilen şekilde sıralanabilir:

1. Ekonomik ve Teknolojik Gelişme: Bilim ve mühendislik eğitimi, ekonomik büyümeyi destekler ve teknolojik ilerlemeyi teşvik eder. Bilimsel ve mühendislik bilgisi, yenilikçi ürünlerin ve

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hizmetlerin geliştirilmesine olanak tanır, bu da iş gücü piyasasında rekabetçilik ve verimlilik sağlar (World Economic Forum, 2020). Eğitimde bilim ve mühendislik alanlarına verilen önem, toplumsal refahın artırılmasına ve ekonomik kalkınmanın sağlanmasına katkıda bulunur.

2. Problem Çözme ve Yaratıcı Düşünme**:** Bilim ve mühendislik eğitimi, öğrencilere analitik düşünme, yaratıcı problem çözme ve eleştirel düşünme becerilerini kazandırır. Bu beceriler, öğrencilerin karmaşık problemleri çözmelerine ve yenilikçi çözümler geliştirmelerine yardımcı olur (Linn & Eylon, 2011). Eğitim sisteminde bu alanların etkili bir şekilde temsil edilmesi, öğrencilerin gelecekteki kariyerlerinde karşılaşacakları zorluklara hazırlıklı olmalarını sağlar.
3. Sosyal ve Çevresel Sorumluluk**:** Bilim ve mühendislik eğitimi, öğrencilerin sosyal ve çevresel sorunlara duyarlılığını artırır. Bu disiplinler, çevre sorunlarının çözülmesine, enerji verimliliğinin artırılmasına ve sürdürülebilir kalkınmanın sağlanmasına yönelik çözümler üretir. Eğitimde bu alanlara verilen önem, öğrencilerin toplumsal sorumluluklarını anlamalarına ve bu sorumlulukları yerine getirmelerine yardımcı olur (Eilks & Ralle, 2012).
4. Geleceğin İş Gücüne Hazırlık: Bilim ve mühendislik alanlarında yapılan eğitim, öğrencileri gelecekteki iş gücüne hazırlamada kritik bir rol oynar. Özellikle STEM (Bilim, Teknoloji, Mühendislik ve Matematik) eğitimine yönelik yatırımlar, öğrencilere bu alanlardaki kariyer fırsatlarını keşfetme ve bu fırsatlara yönelik yeterlilik kazandırma imkânı sunar (Davis & Anderson, 2019). Özellikle STEM eğitimi, bilim ve mühendislik alanlarında öğrencilere geniş bir bilgi tabanı ve beceri seti sunarak, gelecekteki kariyer fırsatlarına yönelik hazırlık sağlar (OECD, 2016). Eğitim sistemlerinin, bilim ve mühendislik alanlarında yüksek nitelikli iş gücü yetiştirmesi, toplumsal kalkınmanın ve ekonomik başarının sürekliliğini sağlar.

Bilim ve mühendislik eğitimi, bireylerin kişisel ve profesyonel gelişimlerinde önemli bir yer tutar. Bu alanların eğitimdeki temsili, toplumsal ve ekonomik kalkınma için kritik öneme sahiptir. Eğitim politikaları ve öğretim stratejileri, bilim ve mühendislik alanlarını etkin bir şekilde sunarak öğrencilerin bu disiplinlere olan ilgilerini artırabilir ve bu alanlarda yetkin bireyler yetiştirilmesine katkıda bulunabilir. Bilim ve mühendislik eğitiminin güçlendirilmesi, gelecekteki toplumsal refah ve ekonomik başarı için temel bir yatırım olarak değerlendirilmelidir.

Bilim ve mühendislik, modern toplumların gelişiminde ve teknolojik ilerlemesinde kritik roller oynayan iki temel meslek grubudur. Bu mesleklerin toplum içindeki algısı hem eğitim sürecinde hem de meslek seçimlerinde önemli etkiler yaratabilir. Fen bilgisi öğretmen adaylarının bu meslekler hakkındaki bilişsel yapıları ve görsel imajları, eğitim stratejileri ve öğretim yaklaşımları üzerinde belirleyici bir rol oynamaktadır. 2013 fen bilimleri öğretim programı ile ön plana çıkan araştırma-sorgulama temelli öğretim ve disiplinlerarası öğrenme Fen-Teknoloji-Mühendislik-Matematik (FeTeMM) uygulamalarına verilen önemin artmasını sağlamıştır (MEB, 2013). 2018 yılında yayımlanan fen bilimleri dersi öğretim programında benzer mantıkla alana özgü beceriler içerisinde bilimsel süreç becerileri ve yaşam becerileri ile birlikte mühendislik ve tasarım becerilerinin de fen eğitimindeki önemi vurgulanmaktadır (MEB, 2018). Son olarak 2024 yılında yürürlüğe giren fen bilimleri dersi öğretim programı bu sürecin devamı olarak bilimsel sorgulama ve mühendislik tasarımlarına dayalı bir öğretim yaklaşımını benimsemektedir (MEB, 2024). Bu nedenle fen eğitiminde eğitimcilerin ve öğrencilerin bilim insanı ve mühendis kavramlarını nasıl algıladıkları, bu doğrultuda nasıl davranışlar sergiledikleri büyük önem arz etmektedir.

Geçmişten günümüze taşıdığımız algılar, öğretmen adaylarının öğrencilerine bilim ve mühendislik mesleklerini nasıl sunacaklarını etkiler ve bu da öğrencilerin meslekler hakkındaki algılarını ve seçimlerini yönlendirebilir. Bilim insanı ve mühendis imajlarının öğretmen adayları tarafından nasıl algılandığını anlamak, eğitim materyallerinin ve öğretim stratejilerinin daha kapsayıcı ve çeşitli bir şekilde tasarlanmasını sağlar. Bu bağlamda, fen bilgisi öğretmen adaylarının "bilim insanı" ve "mühendis" algılarının incelenmesi, eğitim sisteminde bu iki mesleği tanımlama ve tanıtma süreçlerini geliştirmek açısından büyük önem taşımaktadır.

Fen bilgisi öğretmen adaylarının bilim ve mühendislik algılarının araştırılması, eğitim politikalarının ve stratejilerinin geliştirilmesine ışık tutar. Eğitim politikalarının bilim ve mühendislik mesleklerini doğru bir şekilde tanıtması ve öğretim stratejilerinin bu meslekleri geniş bir perspektiften ele alması öğrencilerin bu alanlardaki yeteneklerini ve ilgilerini keşfetmelerine yardımcı olabilir (OECD, 2016). Bu doğrultuda, eğitim sistemleri bilim ve mühendislik mesleklerinin geniş bir yelpazede temsil edilmesine olanak tanıyarak öğrencilerin bu alanlara yönelik daha gerçekçi ve kapsamlı bir anlayış geliştirmelerini sağlayabilir.

Bu bağlamda araştırmada fen bilgisi öğretmen adaylarının bilim insanı ve mühendis kavramları ile ilgili algısına yönelik bilişsel yapılarının ve görsel imajlarının incelenmesi hedeflenmektedir. Bu nedenle araştırmanın problem cümlesinde fen bilgisi öğretmen adaylarının bilim insanı ve mühendis kavramlarına yönelik algılarının nasıl olduğu sorusuna odaklanılmaktadır.

Araştırmanın alt problemleri:

1. Fen bilgisi öğretmen adaylarının "bilim insanı" kavramına yönelik bilişsel yapıları nasıldır?
2. Fen bilgisi öğretmen adaylarının "mühendis" kavramına yönelik bilişsel yapıları nasıldır?
3. Fen bilgisi öğretmen adaylarının "bilim insanı" kavramına yönelik görsel imajları nasıldır?
4. Fen bilgisi öğretmen adaylarının "mühendis" kavramına yönelik görsel imajları nasıldır?

Alanyazında, bilim insanı algısı üzerine yapılan birçok araştırma mevcutken, mühendislik algısı ile ilgili çalışmalar daha yenidir ve özellikle Türkiye'de bu alanda yapılan araştırmalar sınırlıdır (Benli, Dökme ve Sarıkaya, 2011; Bilen, Irkıçatal ve Ergin, 2014; Koyunlu Ünlü ve Dökme, 2016). Bu çalışmanın en dikkat çekici yönü, bilim insanı ve mühendislik algısının birlikte ele alınması ve karşılaştırılmasıdır. Her iki meslek alanının beraber incelendiği çalışmalar yabancı literatürde (Fralick ve diğerleri, 2009; Jung ve Kim, 2014; Park ve Lee, 2014) bulunsa da Türkçe literatürde bu konuda yapılmış çalışa sınırlı sayıdadır (Gülhan ve Şahin, 2018). Alan yazınında, bilim insanı ve mühendislik algısını birlikte inceleyen araştırmalar arasında Fralick ve diğerleri (2009), Jung ve Kim (2014) ve Park ve Lee (2014) örnek olarak verilebilir. Fralick ve diğerleri (2009) ABD'de 1600 ortaokul öğrencisi ile yaptıkları çalışmada, bilim insanlarının genellikle gözlüklü ve laboratuvar önlüğü giymiş olarak çizildiğini, mühendislerin ise bilim insanlarından daha çok araç kullanan emekçiler veya işçiler olarak tanımlandığını tespit etmişlerdir. Jung ve Kim (2014), ilköğretim öğrencilerinin bilim insanlarını klişeleşmiş bir bakış açısıyla tanımladıklarını, mühendisleri ise normal giysiler giymiş, "robot, bilgisayar, uçak tasarlayan kişiler" olarak algıladıklarını göstermiştir. Park ve Lee (2014) ise Güney Kore'de 512 altıncı sınıf öğrencisiyle gerçekleştirdikleri araştırmada, öğrencilerin mühendisleri "tamir, inşaat, imalat yapan, iş elbiseleriyle açık havada çalışan" kişiler olarak gördüklerini ve onları bilim insanlarına kıyasla daha az zeki ve yaratıcı olarak nitelendirdiklerini belirtmiştir. Yapılan çalışmaların büyük çoğunluğunun ortaokul öğrencileri ile gerçekleştirildiği görülmektedir. Bu bağlamda Fen Bilgisi öğretmen adaylarının "bilim insanı ve mühendis" algısına yönelik bilişsel yapılarının ve görsel imajlarının incelendiği bu araştırmanın, alanyazındaki önemli bir boşluğu dolduracağı düşünülmektedir.

Yöntem

Araştırma Modeli

Fen Bilgisi öğretmen adaylarının "bilim insanı ve mühendis" algısına yönelik bilişsel yapılarının ve görsel imajlarının incelendiği bu çalışmada nicel araştırma yöntemlerinden tarama modeli kullanılmıştır. Tarama modeli, geçmişte ya da günümüzdeki bir durumu mevcut haliyle tanımlayan ve öğrenmenin sağlanması ile bireyde istenilen davranışların gelişmesi için uygulanan süreçleri kapsayan bir yaklaşımdır. Bu modelde, geniş bir grup içinden genel bir değerlendirme yapmak amacıyla, evrenin tamamı ya da buradan seçilen bir örneklem üzerinde tarama gerçekleştirilir (Karasar, 2011).

Çalışma Grubu

Araştırmanın çalışma grubunu belirlerken seçkisiz olmayan çalışma yöntemlerinden birisi olan uygun örnekleme yönteminden faydalanılmıştır (Fraenkel & Wallen; 2006). Bu bağlamda araştırmanın çalışma grubuna yönelik demografik özellikler Tablo 1'de verilmiştir.

Tablo 1. Çalışma grubu demografik özellikleri

Sınıf Düzeyi	**Cinsiyet**					
	Kız		**Erkek**		**Toplam**	
	N	%	n	%	n	%
1. Sınıf	26	86,67	4	13,33	30	100
2. Sınıf	54	90,00	6	10,00	60	100
3. Sınıf	42	93,33	3	6,67	45	100
4. Sınıf	53	88,33	7	11,67	60	100
Toplam	**175**	**89,74**	**20**	**10,26**	**195**	**100**

Tablo 1 incelendiğinde, araştırmada yer alan çalışma grubunun 195 fen bilgisi öğretmen adayından ($n_{1.sınıf}$ = 30, $n_{2.sınıf}$ = 60, $n_{3.sınıf}$ = 45, $n_{4.sınıf}$ = 60) oluştuğu görülmektedir. Öğretmen adaylarının %89,74'sı kız öğrencilerden ve %10,26'sı erkek öğrencilerden oluştuğu görülmektedir.

Veri Toplama Aracı

Fen Bilgisi öğretmen adaylarının bilim insanı ve mühendis algısına yönelik bilişsel yapılarının ve görsel imajlarının incelendiği bu araştırmanın verileri nitel veri toplama araçları ile toplanmıştır. Çalışmanın verileri,

bilim insanı ve mühendisin çalışma alanları ile ilgili açık uçlu bir soru, bilim insanı kelime ilişkilendirme testi, mühendis kelime ilişkilendirme testi, bir bilim insanı çiz ve bir mühendis çiz testi ile elde edilmiştir.

Bilim İnsanı ve Mühendis ile ilgili Açık Uçlu Soru

Bu araştırmanın nitel veri toplama araçlarından biri, öğretmen adaylarına yönlendirilen açık uçlu sorudur. Araştırmada fen bilgisi öğretmen adaylarının bilim insanı ve mühendis kavramlarına ilişkin görüşlerini belirlemek için araştırmacılar tarafından hazırlanan açık uçlu bir soru yöneltilmiştir. Araştırmacılar tarafından konu ile ilgili alanyazın taraması yapılarak veri toplama aracı olarak bir form şeklinde hazırlanmıştır. Açık uçlu sorunun iç ve dış geçerliliğini sağlamak için bir alan uzmanı ve bir dil uzmanının görüşü alınmıştır. Son haline getirilen açık uçlu soru çalışma grubunda yer alan fen bilgisi öğretmen adaylarına bir form şeklinde yüz yüze uygulanmıştır. Katılımcılara bilim insanı ve mühendisin çalışma alanları sorulmuştur ve 20 dakika içerisinde verilen soruyu cevaplamaları beklenmiştir. Öğretmen adayları yanıtlarını bu forma yazmışlardır. "Bilim insanı ve mühendis" sorusu, öğretmen adaylarının bilim insanı ve mühendisin özelliklerine yönelik bilişsel yapılarını değerlendirmek amacıyla sorulmuştur. Açık uçlu soru ile öğretmen adayları konuyla ilgili bilişsel yapılarını, deneyimlerini ve görüşlerini özgürce ifade etme fırsatı bulmuşlardır. Bu durum araştırmanın derinlemesine ve zengin veriler elde etmesine olanak tanımıştır.

Bilim İnsanı ve Mühendis Kelime İlişkilendirme Testi

Kelime ilişkilendirme testleri, öğrencilerin zihinlerindeki bilişsel ağları ortaya çıkarmayı amaçlar. Bu testlerle, uzun süreli hafızada yer alan kavramların yeterlilik ve anlam düzeyi değerlendirilir, kavramlar arasındaki bağlantıların doğruluğu incelenir ve kavramsal ilişkiler görselleştirilir. Ayrıca, yeni bilgiler ile mevcut bilgilerin nasıl ilişkilendirildiği ve ilk ile son kelime ilişkileri karşılaştırılabilir (Ercan, Taşdere ve Ercan, 2010). Kelime ilişkilendirme testi uygulanırken bazı kurallara uyulması gerekir. Bahar ve Özatlı'ya (2003) göre, testte sorgulanmak istenen kavramlar, uygun sayıda alt alta sıralanarak sunulmalıdır. Her bir kavramın karşısı boş bırakılarak, öğrenciden bu kavramın çağrıştırdığı kelimeyi yazması beklenir. Verilen süre, grubun yaş ortalamasına bağlı olarak 30 saniye ile 1 dakika arasında değişebilir ve yaş arttıkça süre kısalmalıdır. Eğer birden fazla kavram sorgulanacaksa, her kavram için ayrı bir kâğıt hazırlanmalıdır. Aksi takdirde, öğrenci tüm kavramları bir arada göreceği için cevapları diğer kavramlardan etkilenebilir. Bu nedenle, kavramlar gözetmen eşliğinde tek tek sunulmalı ve sürenin sonunda bir sonraki kavrama geçilmelidir.

Bu araştırmada, bilim insanı ve mühendis anahtar kavramları üzerinden öğretmen adaylarının bilişsel algıları incelenmiş ve anahtar kavramın ilişkilendirildiği kavramların frekans dağılımı üzerinden kategoriler oluşturulmuştur. Her bir anahtar kavram için 30 saniye süre verilmiştir. Katılımcılardan her bir anahtar kavram için 30 saniye içerisinde zihinlerinde canlanan beş kelimeyi anahtar kelimenin karşısında boş bırakılan yere yazmaları istenmiştir. Bahar ve Özatlı (2003) Kelime İlişkilendirme Testi (KİT) uygulama süresini, grubun yaş ortalamasına bağlı olarak 30 saniye ile 1 dakika arasında değişebileceğini ve yaş arttıkça sürenin kısalması gerektiğini önerdiği için önerilen süre en aza indirilerek öğretmen adaylarına uygula yapılmıştır.

Bir Bilim İnsanı Çiz Testi ve Bir Mühendis Çiz Testi

Bu araştırmada, öğretmen adaylarının bilim insanı ve mühendise yönelik zihinlerinde var olan görsel imajı inceleyebilmek amacıyla, resmetmeleri istenmiştir. Öğrencilere bunun için 30 dakika süre verilmiştir ve herhangi bir yönlendirme yapılmamıştır. Çalışmada Chambers'ın (1983) geliştirmiş olduğu *Bir Bilim İnsanı Çiz Testi* ile birlikte Knight ve Cunningham (2004) tarafından geliştirilen *Bir Mühendis Çiz Testi* veri toplama aracı olarak kullanılmıştır.

Bir Bilim İnsanı Çiz Testi, bilim insanı algısını değerlendirmek için kullanılan tek sorudan oluşan bir ölçme aracıdır. Chambers, bu ölçeği anaokulu düzeyinden beşinci sınıf düzeyine kadar olan öğrencilerle test etmiştir. Testin analizi, çizimlerde belirli unsurların bulunup bulunmamasına göre yapılmaktadır. Chambers (1983) tarafından belirtilen analiz kriterleri arasında cinsiyet, giydiği kıyafet, araştırma araçları, araştırma ortamı gibi unsurlar yer almaktadır. Schibeci ve Sorensen (1983), bu ölçeğin güvenilirliğini incelemiş ve 0.78 ile 0.98 arasında değişen bir kodlayıcılar arası benzerlik oranı bulmuşlardır. Bu sonuçlar, ölçeğin bilim insanı algısını tespit etmede geçerli ve güvenilir bir araç olduğunu göstermektedir.

Bir Mühendis Çiz Testi, mühendis algısını değerlendirmek için kullanılan yine tek sorudan oluşan bir başka ölçme aracıdır. Test, üçüncü sınıftan lise on ikinci sınıfa kadar uzanan bir aralık içerisinde yer alan 384 öğrenci ile uygulanmıştır (Knight & Cunningham, 2004). Karataş (2017), testin altıncı sınıf öğrencileriyle yapılan uygulamasında, test sonuçlarını görünüm, objeler, mühendislerin görevleri ve çalışma ortamı kriterleri açısından analiz etmiştir. Bu araştırmada da veri analizi sürecinde doküman incelemesi kullanılmış ve alan uzmanları tarafından değerlendirilmiştir. Öğretmen adaylarından verilen süre içerisinde bir mühendis resmi çizmeleri istenmiştir.

Verilerin Analizi

Araştırmada elde edilen veriler nitel veri analizi kullanılarak analiz edilmiştir. Nitel veriler, içerik analizi yöntemi basamaklarından faydalanılarak analiz edilmiştir. İçerik analizinde amaç benzerlik gösteren verilerin sistematik olarak bir araya getirilerek yorumlanmasıdır. Yıldırım ve Şimşek'e (2021) göre nitel veriler, içerik analizinde dört aşamada analiz edilmektedir. Bu aşamalar; verilerin kodlanması, temaların ve alt temaların bulunması, verilerin kodlara ve temalara göre düzenlenmesi ve bulguların yorumlanmasıdır. Uygulanan testlere verilen yanıtlar ve çizilen resimler birebir aktarılmıştır. Araştırmanın tutarlılığını sağlamak için iki alan uzmanı tarafından verilerin eş zamanlı kodlanması ve uzlaşmaya varması ile belirlenmiştir.

Nitel verilerin analizi sırasında açık kodlama yöntemi kullanılarak verilerden ortak kod ve kategoriler belirlenmiştir. İlgisiz kodlar ve kategoriler elendikten sonra analiz tamamlanmıştır. İçerik analiz yöntemleri arasından tümevarımcı analiz tercih edilmiştir. Bu süreçte araştırmacılar, verileri etiketlemiş ve ilgili kategorilere uygun alıntılar yaparak analiz aşamalarını gerçekleştirmiştir. Tümevarımcı içerik analizinin aşamaları planlama, veri kodlama, kategori belirleme ve bulguları yorumlama şeklinde ilerlemiştir (Yıldırım ve Şimşek, 2021).

Katılımcılara öğretmen adayı 1 için $Ö_1$, öğretmen adayı 2 için $Ö_2$ şeklinde özel numaralar atanmıştır. Analizin çerçevesi, kategori, kod ve örnek ifadeler kullanılarak oluşturulmuştur. Veriler, her bir araştırmacı tarafından bağımsız olarak kodlanmıştır. Araştırmacılar arasındaki "Görüş Birliği" ve "Görüş Ayrılığı" durumu belirlenerek işaretlenmiştir. Araştırmacılar arasındaki tutarlılığı değerlendirmek için Miles ve Huberman'ın (2015) önerdiği Güvenirlik = Görüş Birliği / (Görüş Birliği + Görüş Ayrılığı) formülü kullanılmış ve iki kodlayıcının güvenirlik oranı hesaplanmıştır. Sırasıyla açık uçlu soru, kelime ilişkilendirme testi ve çizimler için güvenirlik değerleri .90, .88 ve .89 olarak elde edilmiştir. Nitel araştırmalarda güvenirliğin sağlanabilmesi için araştırmacı ile uzman arasındaki uyumun en az .80 olması gerekmektedir (Creswell, 2013). Örneğin, öğretmen adayının görüşünün kodlanmasında şu adımlar izlenmiştir: Öğretmen adaylarının görüşlerine ilişkin kodlama süreci şu şekilde gerçekleşmiştir: Öğretmen adayının ifadesine uygun kod(lar) belirlenmiş ve bu kodlar kategorilere ayrılmıştır. Örneğin, öğretmen adayının "Bilim insanları laboratuvarlarda deneyler ve keşifler yapar, mühendisler ise sahada çalışarak üretim yapar" ifadesi "çalışma ortamları" kategorisi altında kodlanmıştır.

Araştırmanın Geçerlik ve Güvenirliği

Araştırmanın geçerlik ve güvenirliğini sağlamak için veri çeşitliliği önemli bir rol oynamıştır (Yıldırım ve Şimşek, 2021). Araştırmada, katılımcıların açık uçlu soruya verdikleri cevaplar, kelime ilişkilendirme testleri ve öğrenci çizimleri gibi çeşitli veri kaynakları kullanılmıştır. Araştırmacıların alana yakın rolleri sayesinde doğrudan gözlem yapabilmeleri, verileri kendileri toplayabilmeleri, gerektiğinde katılımcılarla iletişime geçerek anlaşılmayan durumları teyit etmeleri geçerliği artırıcı faktörler olarak görülmüştür. Ayrıca, bulgular detaylı biçimde sunulmuş ve katılımcıların görüşlerine yer verilmiştir, bu da araştırma bulgularının benzer çalışmalara ve durumlara genellenebilir olduğunu düşündürmektedir. Güvenirliği sağlamak adına, araştırmacılar verileri ayrı ayrı analiz etmiş ve kod ile kategorilerdeki farklılıkları en aza indirmeye çalışmıştır. Araştırmacıların daha önceki deneyimleri, sürecin yürütülmesi, veri toplanması ve değerlendirilmesinde fayda sağlamıştır. Araştırma sürecinde katılımcılardan elde edilen görüşler ve çizimler analiz edilerek detaylı bir şekilde açıklanmıştır. Katılımcıların görüşlerinden doğrudan alıntılar yapılarak bulgular açık ve anlaşılır bir biçimde sunulmuştur.

Etik Kurul Beyanı

Araştırma Gazi Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu'nun 27.02.2024 tarih ve 4 sayılı onayı ile gerçekleştirilmiştir.

Bulgular ve Yorumlar

Bilim İnsanı ve Mühendis Kavramı ile İlgili Açık Uçlu Soruya İlişkin Elde Edilen Bulgular

Fen bilgisi öğretmen adaylarının "bilim insanı ve mühendis" kavramlarını nasıl açıkladıklarına yönelik açık uçlu soruya verdikleri cevaplara ilişkin içerik analizi sonuçları Tablo 2'de verilmiştir.

Tablo 2. Bilim insanı ve mühendis kavramıyla ilgili açık uçlu soruya ilişkin içerik analizi sonuçları

Kategoriler	Kategoriye Ait Frekans (f)	Yüzde (%)	Örnek Cevaplar
Çalışma ortamları	56	28	Bilim insanları laboratuvarda deney ve keşif yapar, mühendisler ise sahada üretir.

Çalışma nedenleri	36	18	Bilim insanları doğayı evreni anlamaya çalışır ve yeni bilgiler keşfeder, mühendisler ise problem çözer.
Çalışma şekilleri	36	18	Bilim insanları fikirleri deneyerek kanıtlamaya çalışır, mühendisler ise insanlara faydalı olup hayatlarını kolaylaştırmaya çalışır.
Çalışma alanları	28	14	Bilim insanlarının çalışma alanları daha geniş, mühendislerin ise daha dar matematik/teknik ile ilgilidir.
Çalışma rolleri	24	12	Bilim insanları bulunmamış şeylerle uğraşır, mühendisler ise tasarım yapar.
Çalışma yöntemleri	20	10	Bilim insanları buluş yapar, mühendisler ise hayata geçirir.
Toplam	**200**	**100**	

Tablo 2 incelendiğinde, Fen Bilgisi öğretmen adaylarının bilim insanı ve mühendis kavramlarına verdikleri cevaplar altı kategoride toplanmıştır. Öğretmen adayları bilim insanı ve mühendis arasındaki farklılıkları çoğunlukla çalışma ortamları ile açıklamışlardır.

Bilim İnsanı Kavramı ile İlgili Kelime İlişkilendirme Testine İlişkin Elde Edilen Bulgular

Fen bilgisi öğretmen adaylarının bilim insanı kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplara ilişkin elde edilen bulgular Tablo 3'de verilmiştir.

Tablo 3. Bilim insanı kavramı kelime ilişkilendirme testine ilişkin içerik analizi sonuçları

Kategoriler	**Kategorilerde yer alan kavramlar**	**Frekans (f)**	**Kategoriye ait toplam frekans**	**Yüzde (%)**
Özellik olarak bilim insanı	Araştırmacı	80	160	26,66
	Sorgulayan	28		
	Keşfeden	24		
	Dahi	12		
	Meraklı	8		
	Takıntılı	8		
Çalışma alanı olarak bilim insanı	Fen Bilimleri	44	116	19,33
	Fizik	24		
	Kimya	20		
	Biyoloji	16		
	Matematik	12		
Çalışma ortamı olarak bilim insanı	Laboratuvar	151	272	45,33
	Çalışma odası/Ofis	52		
	Doğa	49		
	Kütüphane	20		
Birey (isim) olarak bilim insanı	Einstein	24	52	8,68
	Aziz Sancar	20		
	Madame Curie	8		
Toplam			**600**	**100**

Tablo 3 incelendiğinde, Fen Bilgisi öğretmen adaylarının bilim insanı kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplar 4 kategoride toplanmıştır: özellik olarak bilim insanı, çalışma alanı olarak bilim insanı, çalışma ortamı olarak bilim insanı, isim olarak bilim insanı. Öğretmen adayları, bilim insanını en çok laboratuvar (n=151) kelimesi ile en az takıntılı (n=8) kelimesi ile ilişkilendirmişlerdir.

Mühendis Kavramı ile İlgili Kelime İlişkilendirme Testine İlişkin Elde Edilen Bulgular

Fen bilgisi öğretmen adaylarının mühendis kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplara ilişkin elde edilen bulgular Tablo 4'de verilmiştir.

Tablo 4. Mühendis kavramı kelime ilişkilendirme testine ilişkin içerik analizi sonuçları

Kategoriler	**Kategorilerde yer alan kavramlar**	**Frekans (f)**	**Kategoriye ait toplam frekans**	**Yüzde (%)**
Süreç/Faaliyet olarak mühendis	Teknoloji	99	390	40,24
	İcat	98		
	Ürün	82		
	Tasarım	66		
	Problem	45		
Çalışma alanı olarak mühendis	Makine	101	410	42,31
	Elektrik	93		
	Bilgisayar	89		
	İnşaat	66		
	Ziraat	42		
	Kimya	11		
	Fizik	8		
Özellik olarak mühendis	Düşünen	60	169	17,45
	Çözen	51		
	Analitik	38		
	Üreten	20		
Toplam			**969**	**100**

Tablo 4 incelendiğinde, Fen Bilgisi öğretmen adaylarının mühendis kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplar 3 kategoride toplanmıştır: süreç/faaliyet olarak mühendis, çalışma alanı olarak mühendis, özellik olarak mühendis. Öğretmen adayları, mühendisi en çok makine (n=101) kelimesi ile en az fizik (n=8) kelimesi ile ilişkilendirmişlerdir.

Bilim İnsanı Kavramı ile İlgili Öğrenci Çizimlerine İlişkin Elde Edilen Bulgular

Fen bilgisi öğretmen adaylarının bilim insanı kavramına yönelik öğrenci çizimlerine ilişkin elde edilen bulgular Tablo 5'de verilmiştir.

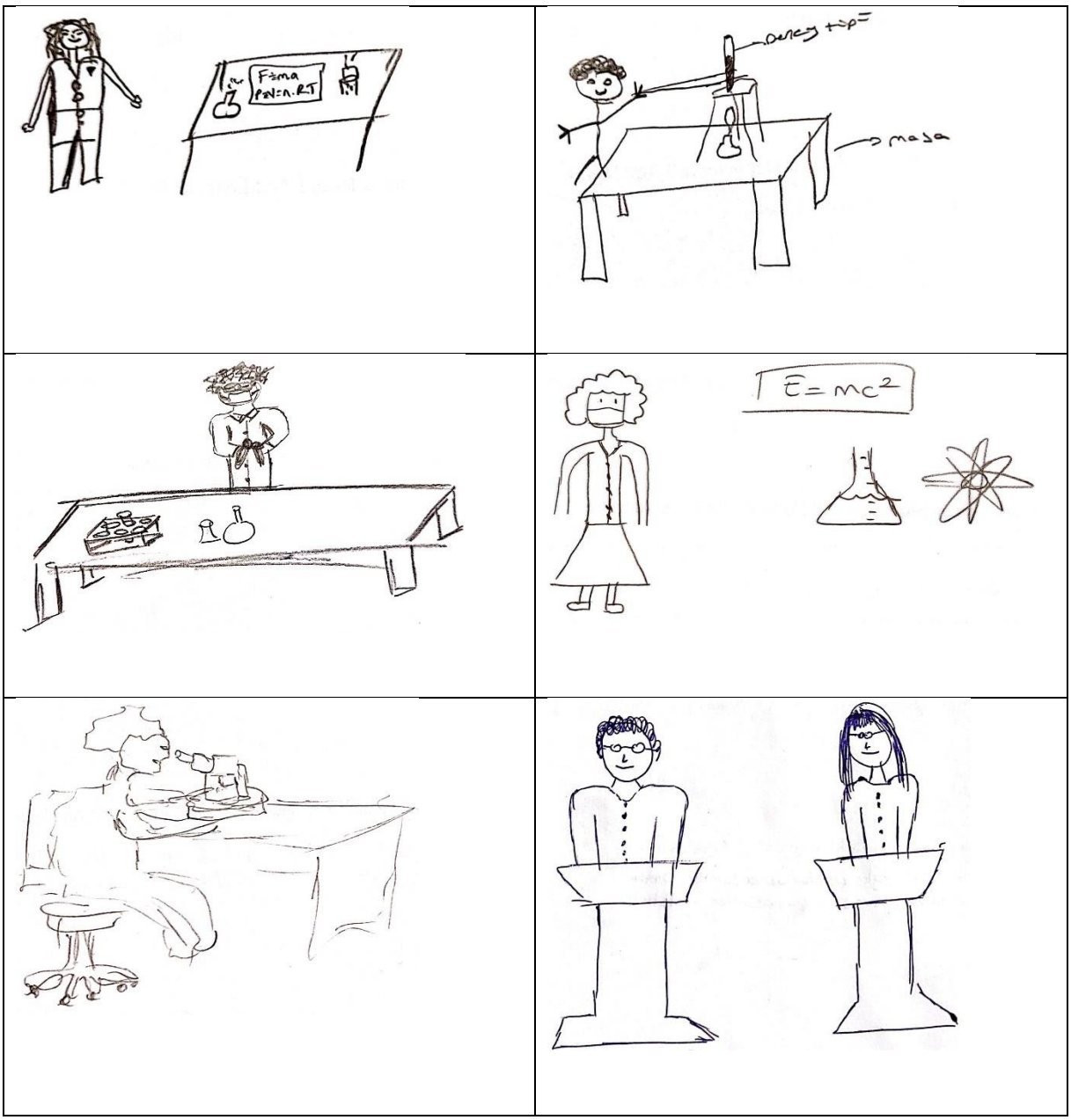
Tablo 5. Bilim insanı kavramı ile ilgili çizimlere ilişkin içerik analizi sonuçları

Kontrol Listesindeki Özellikler		**1. Sınıf**		**2. Sınıf**		**3. Sınıf**		**4. Sınıf**		**Toplam**	
		f	%	f	%	f	%	f	%	f	%
Kıyafet özellikleri	Laboratuvar önlüğü	21	25	28	33.33	19	22.61	16	19.04	84	100
	Takım elbise	1	5	6	30	5	25	8	40	20	100
	Günlük/Spor	3	18.75	4	25	4	25	5	31.25	16	100
	Belirtilmemiş	5	6.66	22	29.33	17	22.66	31	41.33	75	100
Baş bölgesi özellikleri	Dağınık saç	15	30	14	28	11	22	10	20	50	100
	Bakımlı saç	5	7.93	20	31.74	16	25.39	22	34.92	63	100
	Saçsız	10	2.19	26	31.70	18	21.95	28	34.14	82	100
Yüz bölgesi özellikleri	Sakallı	12	20.68	14	24.13	20	34.48	12	20.68	58	100
	Sakalsız	18	13.13	46	33.57	25	18.24	48	35.03	137	100
Bilim insanı ile beraber çizilen diğer resimler	İnsan	2	18.18	3	27.27	4	36.36	2	18.18	11	100
	Hayvan	3	21.42	3	21.42	3	21.42	5	35.74	14	100
	Bitki	2	14.28	3	21.42	3	21.42	6	42.85	14	100
	Kimyasal deney malzemeleri	21	14.89	43	30.49	33	23.40	44	31.20	141	100
	Telefon	-	-	-	-	-	-	-	-	-	-
	Mikroskop	1	25	2	50	-	-	1	25	4	100
	Teleskop	1	25	1	25	2	50	-	-	4	100
	Elektrik malzemeler	-	-	-	-	-	-	-	-	-	-
	Gıda içerikleri	-	-	-	-	-	-	-	-	-	-
	Uçak, araba vb.	-	-	-	-	-	-	-	-	-	-
	Bilgisayar	-	-	2	100	-	-	-	-	2	100
	Kitap	-	-	2	66.66	-	-	1	33.33	3	100
	Bilim insanıyla başka resim-çizilmedi		-	1	50	-	-	1	50	2	100
Cinsiyet	Kadın	8	12.30	19	29.23	16	24.61	22	33.84	65	100
	Erkek	16	20.77	25	32.46	16	20.77	20	25.97	77	100
	**Cinsiyet belirsiz	6	11.32	16	30.18	13	24.52	18	33.96	53	100
Çalışma ortamı	Laboratuvar	21	15	42	30	33	23.57	44	31.42	140	100
	Çalışma odası	4	44.44	-	-	2	22.22	3	33.33	9	100
	Ev	-	-	-	-	-	-	-	-	-	-
	Orman	-	-	-	-	-	-	-	-	-	-
	Uzay	-	-	-	-	1	100	-	-	1	100
	Yer belirtilmedi	5	11.11	18	40	9	20	13	28.89	45	100
	Mutlu	5	10.41	10	20.83	12	25	21	43.75	48	100
	Sinirli	-	-	-	-	-	-	-	-	-	-

Yüz ifadesi	Huysuz	-	-	-	-	-	-	-	-	-	-
	Üzgün	8	24.24	9	27.27	4	12.12	12	36.36	33	100
	Düşünceli	9	16.36	21	38.18	8	14.54	17	30.90	55	100
	Tanımlanamayan yüz ifadesi	8	18.18	20	45.45	6	13.63	10	22.72	44	100
Aksesuarlar	Gözlük	12	18.18	18	27.27	20	30.30	16	24.24	66	100
	Şapka / Kap	-	-	-	-	-	-	-	-	-	-
	Kolye/Küpe/Saç	-	-	-	-	-	-	-	-	-	-
	Tokası/Kemer/Kravat/Yaka Mendil/Rozet/Pelerin/Eşarp	-	-	-	-	-	-	-	-	-	-
	Aksesuarlar belirtilmedi	18	13.95	42	32.55	25	19.37	44	34.10	129	100

Tablo 5 incelendiğinde, öğretmen adaylarının çoğunlukla olağan düşünce tarzı ile bilim insanını laboratuvar önlüklü, dağınık saçlı, deney malzemeleri ile laboratuvarda çalışan, üzgün ya da düşünceli, gözlüklü, sakalsız bir erkek olarak çizdikleri görülmektedir. Sınıf seviyesi arttıkça, öğretmen adaylarının bu sıradan düşünme tarzından kısmen sıyrıldığı dikkat çekmektedir.

Fen bilgisi öğretmen adaylarının bilim insanı kavramı ile ilgili çizdikleri resimlere ait bazı örnekler aşağıda sunulmuştur.



Şekil 1. Bilim insanı kavramı ile ilgili öğretmen adaylarının çizimlerinden örnekler

Mühendis Kavramı ile İlgili Öğrenci Çizimlerine İlişkin Elde Edilen Bulgular

Fen bilgisi öğretmen adaylarının mühendis kavramına yönelik öğrenci çizimlerine ilişkin elde edilen bulgular Tablo 6'da verilmiştir.

Tablo 6. Mühendis kavramı ile ilgili çizimlere ilişkin içerik analizi sonuçları

Kontrol Listesindeki Özellikler		**1. Sınıf**		**2. Sınıf**		**3. Sınıf**		**4. Sınıf**		**Toplam**	
		f	%	f	%	f	%	f	%	f	%
Kıyafet özellikleri	İş önlüğü	14	16.27	25	29.06	20	23.25	27	31.39	86	100
	Takım elbise	-	-	-	-	-	-	-	-	-	-
	Günlük/Spor	10	13.88	20	27.77	18	25	24	33.33	72	100
	Belirtilmemiş	6	16.21	15	40.54	7	18.91	9	24.32	37	100
Baş bölgesi özellikleri	Dağınık saç	14	15.73	24	26.96	23	25.84	28	31.46	89	100
	Bakımlı saç	13	19.40	20	29.85	12	17.91	22	32.83	67	100
	Saçsız	3	7.69	16	41.02	10	25.64	10	25.64	39	100
Yüz bölgesi özellikleri	Sakallı	5	31.25	4	25	3	18.75	4	25	16	100
	Sakalsız	25	13.96	56	31.28	42	23.46	56	31.28	179	100
Mühendis ile beraber çizilen diğer resimler	İnsan	-	-	-	-	-		-	-	-	-
	Bilgisayar	5	17.85	8	28.57	6	21.42	9	32.14	28	100
	Motorlu Taşıt (Uçak, araba vb.)	3	7.89	10	26.31	12	31.57	13	34.21	38	100
	İnşaat malzemeleri	12	17.39	29	24.16	14	20.28	24	34.78	69	100
	Telefon	-	-	-	-	-		-	-	-	-
	Elektrik kablosu	3	37.5	2	25	1	12.5	2	25	8	100
	Robot	-	-	-	-	-		-		-	-
	Kâğıt malzemeler	-	-	-	-	-	-	1	100	1	100
	Gıda içerikleri	-	-	-		-	-	-	-	-	-
	Cetvel	5	17.85	6	21.42	8	28.57	9	32.14	28	100
	Makine	2	15.38	5	38.46	4	30.76	2	15.38	13	100
	Kitap	-	-	-	-	-	-	-	-	-	-
	Mühendisle beraber başka resim çizilmedi	-	-	-	-	-	-	-	-	-	-
Cinsiyet	Kadın	2	8	5	20	8	32	10	40	25	100
	Erkek	28	16.47	55	32.35	37	21.76	50	29.41	170	100
	**Cinsiyet belirsiz	-	-	-	-	-	-	-	-	-	-
Çalışma ortamı	Atölye	2	14.28	4	28.57	3	21.42	5	35.71	14	100
	Çalışma odası	5	38.46	3	23.07	2	15.38	3	23.07	13	100
	Ev	-	-	-	-	-	-	-	-	-	-
	Açık alan/Saha	9	8.33	38	35.18	30	27.77	31	28.70	108	100
	Fabrika	8	25	8	25	6	18.75	10	31.25	32	100
	Yer belirtilmedi	6	21.42	7	25	4	14.28	11	39.28	28	100
Yüz ifadesi	Mutlu	12	21.42	11	19.64	12	21.42	21	37.5	56	100
	Sinirli	-	-	-	-	-	-	-	-	-	-
	Huysuz	-	-	-	-	-	-	-	-	-	-
	Üzgün	5	17.24	8	27.58	4	13.79	12	41.37	29	100
	Düşünceli	11	19.29	21	36.84	8	14.03	17	29.82	57	100
	Tanımlanamayan yüz ifadesi	2	5.26	20	52.63	6	15.78	10	26.31	38	100
Aksesuarlar	Gözlük	10	20.83	12	25	10	20.83	16	33.33	48	100
	Baret/Şapka	20	17.54	37	32.45	22	19.29	35	30.70	114	100
	Bileklik	-	-	-	-	-	-	-	-	-	-
	Kolye/Küpe/Saç	-	-	-	-	-	-	-	-	-	-
	Tokası/Kemer/Kravat/Yaka	-	-	-	-	-	-	-	-	-	-
	Mendil/Rozet/Peleri in/Eşarp										
	Aksesuarlar belirtilmedi	5	13.15	11	28.94	13	34.21	9	23.68	38	100

Tablo 6 incelendiğinde, öğretmen adaylarının çoğunlukla geleneksel düşüncelerde iş önlüğü ya da günlük kıyafet giymiş, düzgün saçlı, sakalsız, inşaat malzemeleri ya da motorlu taşıtlar ile açık alanda çalışan, kısmen mutlu ve düşünceli, baret takmış erkek mühendisler çizdikleri görülmektedir. Sınıf seviyesi arttıkça, öğretmen adaylarının geleneksel düşüncelerin aynı kaldığı dikkat çekmektedir.

Fen bilgisi öğretmen adaylarının mühendis kavramı ile ilgili çizdikleri resimlere ait bazı örnekler aşağıda sunulmuştur.

Şekil 2. Mühendis kavramı ile ilgili öğretmen adaylarının çizimlerinden örnekler

Sonuç ve Tartışma

Bu araştırmada, Fen Bilgisi öğretmen adaylarının "bilim insanı ve mühendis" algısına yönelik bilişsel yapıları ve görsel imajları incelenmiştir.

Araştırmadan elde edilen ilk sonuca göre, Fen Bilgisi öğretmen adaylarının bilim insanı ve mühendis kavramlarına verdikleri cevaplar altı kategoride toplanmıştır. Bu kategoriler: çalışma ortamları (n=56), çalışma nedenleri (n=36), çalışma şekilleri (n=36), çalışma alanları (n=28), çalışma rolleri (n=24) ve çalışma yöntemleri (n=20) bakımından bilim insanı ve mühendisi açıklamaktadır. Öğretmen adayları bilim insanı ve mühendisi net ifadelerle ve farklılıkları vurgulayarak açıklamışlardır. Öğretmen adayları, bilim insanlarını laboratuvarda deney ve keşif yapan, evreni anlamaya çalışan, geniş çalışma alanlarına sahip kişiler olarak; mühendisleri ise, sahada çalışan, problem çözen, insanlara faydalı tasarım ve uygulama yapan, dar çalışma alanlarına sahip kişiler olarak tanımlamaktadırlar. Bu bulgu, öğretmen adaylarının mühendis ve bilim insanı algılarında yanlışlar olduğu ve mühendisleri bilim insanlarına göre daha az bildiklerini göstermektedir. Alanyazın incelendiğinde, Gülhan ve Şahin (2018) ve Fralick ve diğerleri de (2009) araştırmalarında mühendislerin bilim insanlarına göre daha az bilindiği sonucuna ulaşmışlardır. Bu durumun öğretmen adaylarının mesleki kariyerlerinde mühendisler ile pek etkileşimlerinin olmamasından kaynaklandığı düşünülebilir.

Fen Bilgisi öğretmen adaylarının bilim insanı kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplar 4 kategoride toplanmıştır (özellik olarak bilim insanı, çalışma alanı olarak bilim insanı, çalışma ortamı olarak bilim insanı, isim olarak bilim insanı). Öğretmen adayları, bilim insanını özellikleri bakımından en çok araştırmacı (n=80), fen bilimleri (n=44), laboratuvar (n=151) ve deney (n=140) kelimeleri ile ilişkilendirmişlerdir. Bu durumun, fen bilgisi öğretmen adaylarının bilim insanlarını Fen Bilimleri alanında araştırma ve deneyler yapan kişiler olarak algılamalarından kaynaklanabileceği düşünülebilir. Bilim insanlarının isimlerine de yer veren öğrenciler, en fazla Einstein (n=24) kelimesini tekrar etmişlerdir. Öztürk İrtem ve Hastürk (2021) yaptıkları çalışmada, öğrencilerin çoğunlukla bilim insanının çalışma ortamı olarak laboratuvarı tercih ettikleri görülmüştür. Alanyazın incelendiğinde, benzer sonuçlara ulaşıldığı dikkat çekmektedir (Barman ve diğerleri, 1997; Camcı Erdoğan, 2013; Fralick ve diğerleri, 2009; Gonsoulin, 2001; Güler ve Akman, 2006; Kaya ve diğerleri, 2008; Korkmaz ve Kavak, 2010; Küçük ve Bağ, 2012; Öcal, 2007; Özel, 2012; Özel ve Doğan, 2013; Özsoy ve Ahi, 2014; Turgut ve diğerleri, 2017; Türkmen, 2008). Elde edilen bu bulgu, öğrencilerin bilim insanının özellik, çalışma ortamı ve çalışma alanı ile ilgili kısıtlı bilgiye sahip olduğunu ve geleneksel düşüncelere sahip oldukları söylenebilir.

Fen Bilgisi öğretmen adaylarının mühendis kavramına yönelik kelime ilişkilendirme testine verdikleri cevaplar 3 kategoride toplanmıştır (Süreç/faaliyet olarak mühendis, çalışma alanı olarak mühendis, özellik olarak mühendis). Öğretmen adayları, mühendisi en çok makine (n=101) kelimesi ile en az fizik (n=8) kelimesi ile ilişkilendirmişlerdir. Çalışma alanları kategorisine bakıldığında, öğretmen adayları mühendisi en çok makine (n=101), elektrik (n=93), bilgisayar (n=89), inşaat (n=66), ziraat (n=42), kimya (n=11) ve fizik (n=8) ile ifade etmişlerdir. Katılımcılar mühendislerin çalışma alanlarını daha çok fiziksel güç gerektiren işler olarak ifade etmişlerdir. Knight ve Cunningham (2004) tarafından yapılan araştırmada, öğrencilerin mühendisleri genellikle inşaat ve onarım işleriyle ilgilenen kişiler olarak algıladıkları sonucuna varılmıştır. Benzer şekilde, Cunningham, Lachapelle ve Lindgren (2005) de öğrencilerin mühendislerin çoğunlukla tamir ve inşaat işleriyle meşgul olduklarını düşündüklerini belirlemişlerdir. Öztürk İrtem ve Hastürk (2021) ortaokul öğrencileri ile yaptıkları çalışmada, mühendisin branşına ait bilgiler incelendiğinde öğrencilerin en fazla inşaat mühendisi ve bilgisayar mühendisi çizdiklerini gözlemlemişlerdir.

Fen Bilgisi öğretmen adaylarının çoğunlukla geleneksel düşüncelerde laboratuvar önlüklü, dağınık saçlı, deney malzemeleri ile laboratuvarda çalışan, üzgün ya da düşünceli, gözlüklü ve erkek bilim insanlar çizdikleri görülmektedir. Sınıf seviyesi arttıkça, öğretmen adaylarının geleneksel düşüncelerden kısmen ayrıldığı dikkat çekmektedir. Öztürk İrtem ve Hastürk (2021) çalışmalarında ortaokul öğrencilerinin bilim insanının cinsiyeti olarak daha çok laboratuvarda ve laboratuvar araç gereçleri ile çalışan bir erkek bilim insanı resmettikleri görülmüştür. Alanyazında çalışmayı destekleyen benzer sonuçlar görülmektedir (Benli, Dökme ve Sarıkaya, 2011; Barman ve diğerleri, 1997; Camcı Erdoğan, 2013; Fralick ve diğerleri, 2009; Gonsoulin, 2001; Güler ve Akman, 2006; Kaya ve diğerleri, 2008; Korkmaz ve Kavak, 2010; Küçük ve Bağ, 2012; Öcal, 2007; Özel, 2012; Özel ve Doğan, 2013; Özsoy ve Ahi, 2014; Turgut ve diğerleri, 2017; Türkmen, 2008).

Fen Bilgisi öğretmen adaylarının mühendis çizimleri incelendiğinde, çoğunlukla geleneksel düşünme tarzından hareketle iş önlüğü ya da günlük kıyafet giymiş, düzgün saçlı, sakalsız, inşaat malzemeleri ya da motorlu taşıtlar ile açık alanda çalışan, kısmen mutlu ve düşünceli, baret takmış erkek mühendisler çizdikleri görülmektedir. Sınıf seviyesi arttıkça, öğretmen adaylarının geleneksel düşüncelerin aynı kaldığı dikkat çekmektedir. Farklı çalışma grupları ile yapılan çalışmalarda da benzer sonuçlar elde edilmiştir. Katılımcıların mühendislerin cinsiyetini çoğunlukla erkek olarak resmettikleri dikkat çekmektedir (Capobianco, Diefes-Dux, Mena ve Weller, 2011; Fralick, Kearn, Thompson ve lyons, 2009; Gülhan ve Şahin,2018; Karataş, Micklos ve

Bodner, 2011; Knight ve Cunningham, 2004; Öztürk İrem ve Hastürk, 2021). Bu durumu meslek seçimlerinde toplumsal cinsiyet kalıp yargılarının rolünün varlığı ile açıklayabiliriz. Meslek seçimlerinde toplumsal cinsiyet kalıp yargılarının kırılmasının kız öğrencilerin mesleki kariyerleri açısından önemli olduğu ve bu duruma yönelik çözümler üretilmesi gerektiği düşünülmektedir.

Öğretmen adaylarının büyük çoğunluğunun kız öğrencilerden oluşmasından dolayı çalışma grubunun görüşleri cinsiyet faktörü üzerinden incelenmemiştir. Ancak alanyazınına bakıldığında benzer bir çalışmada Balçın ve Yavuz Topaloğlu (2019)'nun ilköğretim 4.sınıf düzeyinde öğrenciler ile gerçekleştirdikleri araştırmalarında erkek öğrencilerin kız öğrencilere kıyasla bilim insanı ve mühendis kavramlarına yönelik daha fazla olumlu algı sergiledikleri belirtmişlerdir.

Öneriler

Bu araştırmada elde edilen sonuçlara göre; uygulayıcılara, program geliştiricilere ve araştırmacılara çeşitli önerilerde bulunulmuştur:

Program geliştiricilere yönelik öneriler:

- Araştırmada Fen Bilgisi öğretmen adaylarının bilim insanı ve mühendise yönelik bilişsel yapılarının ve görsel imajlarının geleneksel düzeyde olduğu görülmektedir. Program geliştiriciler disiplinlerarası çalışmalarla ve uygulamalı etkinliklerle çeşitli perspektifler sunarak adaylara daha geniş bir anlayış kazandırabilir.
- Öğretmen adaylarının sınıf seviyesi arttıkça bilim insanı ile ilgili geleneksel anlayıştan kısmen uzaklaştıkları ancak mühendis algısındaki geleneksellikten uzaklaşmadıkları dikkat çekmektedir. Bu bağlamda programda, gerçek dünya örnekleri kullanılarak daha kapsamlı ve gerçekçi bir anlayış geliştirilebilir.

Eğitimcilere yönelik öneriler:

- Öğretmen adaylarının gerçekçi bir algıya sahip olabilmeleri için etkileşimli ve daha fazla aktif olacakları çalışmalara yer verilebilir.
- Araştırmada öğretmen adaylarının daha geleneksel cevaplar verdikleri görülmüştür. Öğrencilerin bilişsel yapılarının ve görsel imajlarının gelişmesi için farklı yöntem ve tekniklerle bilim insanını ve mühendisi tanımaya yönelik bilişsel ve davranışsal kazanımlara yer verilebilir.
- Öğretmen adaylarına bilim insanı ve mühendisin geniş yelpazede nasıl temsil edilebileceğine dair somut örnekler (bilim insanları ve mühendislerin başarı öyküleri vb.) sunulabilir.
- Eğitimciler tarafından okul dışı öğrenme ortamları aracılığıyla öğretmen adaylarının bilim insanı ve mühendisin gerçek yaşamdaki çalışma şartları ve ortamlarını yakından gözlemlemeleri teşvik edilmelidir.
- Eğitim içerikleri ve materyalleri güncel, etkileşimli ve katılımcı yöntemlerle desteklenmelidir. Öğrencilere güncel bilgiler sunulmalı; öğrencilerin grup çalışmaları yapmaları, tartışmalar aracılığıyla modern tanımlamaları derinlemesine incelemeleri sağlanmalıdır.

Araştırmacılara yönelik öneriler:

- Araştırmada bazı demografik bilgilerin eksikliği araştırmanın sınırlılıkları arasındadır. Öğrencilerin farklı demografik özellikleri dikkate alınarak bilim insanı ve mühendise yönelik bilişsel ve duyuşsal şemaları ve görsel imajları araştırılabilir.
- Öğrencilerin bilim insanı ve mühendise yönelik algılarını etkileyen faktörleri belirlemek ve öğrenci algıları üzerindeki etkisini değerlendirmek için betimsel ve deneysel araştırmalar yapılabilir.
- Araştırmada sınıf seviyesi arttıkça bilim insanına yönelik algıların geleneksellikten uzaklaştığı ancak mühendis algısında bir değişiklik olmadığı dikkat çekmektedir. Bu bağlamda, sınıf içi ve sınıf dışı eğitim programlarının etkin kullanımı ile bu algıya etki eden faktörleri daha doğru anlamak için uzun vadeli izleme çalışmaları ve deneysel çalışmalar yapılabilir.

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The Views of Primary School Teachers and Parents on Homework at the Primary School Level

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The Views of Primary School Teachers and Parents on Homework at the Primary School Level

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Abstract

This study aims to determine primary school teachers and parents' views on homework at the primary school level. The research was conducted using a phenomenological design and qualitative research methods. The study group consisted of 27 primary school teachers, who were working in various public schools, and 31 parents of primary school students, all from a province in Türkiye during the 2023–2024 academic year. The research was conducted with the appropriate sampling technique, which is within the scope of purposeful sampling techniques. The researcher created semi-structured interview forms to collect the research data. The researcher used content analysis to describe the research data. The data analysis revealed six main themes that pertain to the opinions of primary school teachers, and five main themes, categories, and codes that reflect the opinions of parents. The study's results revealed that primary school teachers frequently assigned homework to students to reinforce and practice their learning. Parents' support is crucial for the academic, affective, social, and behavioral benefits that homework offers students. The study's results show that parents have positive and negative judgments about homework and assume motivating, guiding, and supervising roles during homework assignments.

Key words: Primary school teacher, Primary school, Homework, Parents

Introduction

Teachers typically assign homework to students to complete during out-of-school hours (Cooper et al., 2000). Scholars acknowledge homework as a crucial teaching strategy that fosters study habits and enhances academic achievement (Cooper et al., 2000; Fan et al., 2017; Wu et al., 2023). For both teachers and parents, homework is considered an important part of daily life and a frequently used practice in education (Dettmers et al., 2019; Fan et al., 2017). Therefore, educational researchers, policymakers, and practitioners have long focused on homework, which supports students' learning outside the classroom (Good, 2022; Guerrero & Reiss, 2020; Zhang & Bray, 2020). Many studies on homework have focused on levels other than primary school (Chin et al., 2022; Magalhães et al., 2020). This situation may be attributed to a lack of a clear perspective on homework at the primary school level, which can be seen as a contributing factor to the outcomes described (Fan et al., 2017).

Homework in Primary School

Global recognition exists for homework (Rahmani et al., 2024). The value and practice of homework vary from country to country. While some primary school children are spending more and more time on homework (Jerrim et al., 2020), less than 7% of fourth graders worldwide have no homework at all (Mullis et al., 2012). In the UK, the early years of education homework policy mandates one hour of homework per week for children aged five to seven, and half an hour of homework per night for children aged seven to eleven, with a uniform homework policy across all schools (Medwell & Wray, 2019). Many elementary schools in the US have begun to adopt a new trend of no-homework policies (Dolean & Lervag, 2022). Asian countries such as Shanghai and Singapore give students plenty of homework and after-school tutoring (Bartholomaeus et al., 2023), while in Finland there is almost no homework or additional work in the first years of schooling (Pierre, 2007; Sharp et al., 2001). In Türkiye there is no overarching policy on homework at the primary school level (Kalsen et al., 2020). The limited number of homework studies at the primary school level is the reason for the lack of unity in practice (Fan et al., 2017; Lehner-Mear, 2021; Medwell & Wray, 2019; Negru & Sava, 2023; Norhayati & Rahya, 2023).

Research has determined that homework assignments can enhance students' recall of factual information, bolster their self-regulation skills by enhancing their comprehension and information processing abilities, and aid in the development of better study habits and self-discipline (Dilekçi, 2023; Ramdass &

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Zimmerman, 2011). In addition, there are concrete research results showing that homework assignments provide academic benefits and positively affect students' achievement (Dolean & Lervag, 2022; Fan et al., 2017). However, it cannot be generalized that homework always has a significant effect on student achievement at the primary school level (Chin et al., 2022; Cooper et al., 2000, 2006; Fan et al., 2017; Paschal et al., 1984; Trautwein et al., 2002; Tsang et al., 2022). There are also studies in the literature that found almost no relationship between the amount of homework and academic achievement in primary school students (Cooper et al., 2000, 2006; Fan et al., 2017; Trautwein et al., 2002). Furthermore, it has been found that the amount of homework can be a source of stress for students, reduce quality time with family and friends, lead to negative interactions with school (Galloway et al., 2013; I. R. Katz, 2007; Moè et al., 2020; Pressman et al., 2015), reduce academic interest, prevent access to leisure and social activities, and lead to problems such as cheating (Cooper et al., 2000). Studies on the negative effects of intensive homework assigned by teachers provide remarkable results (Magalhães et al., 2020; Wilder, 2023).

There is also research that emphasizes the long-term benefits of homework at the primary school level (Medwell & Wray, 2019; Norhayati & Rahya, 2023). These benefits include teaching students beneficial study habits, promoting self-confidence and self-discipline, improving time management skills, and contributing to character development (Epstein et al., 2021; Holland et al., 2021; Medwell & Wray, 2019; Norhayati & Rahya, 2023). Teachers must clearly clarify the purpose, appropriateness, method, assessment criteria, rewards, and positive feedback of homework assignments to motivate students to complete them (Benckwitz et al., 2023; Dettmers et al., 2019; Rizk & Hillier, 2021). Only with this clarity can we effectively realize the potential benefits of homework.

The lack of a clear uniformity of practice across countries and a clear definition of the benefits of homework at the primary school level send mixed messages to teachers and parents. This ambiguity suggests that we should reconsider homework policies and practices during the primary school years (Benckwitz et al., 2023; Carrillo-López et al., 2022), a time that shapes students' academic achievement and skills, self-concept, confidence in their own abilities, and motivation to succeed. Existing literature emphasizes the importance of homework in improving academic achievement and promoting self-discipline among students (Cooper et al., 2006; Mbaluka et al., 2021). However, the literature also highlights the potential disadvantages of homework, such as the risk of excessive workload and negative influences (Benckwitz et al., 2023; Cooper et al., 2006; Halim et al., 2023; Skaggs, 2007; Trautwein et al., 2002). The role of homework in education has been the subject of considerable debate among those closely involved in the educational process, including parents and teachers (Halim et al., 2023). Especially in primary school, there is a lack of qualitative studies that examine teachers' and parents' expectations and attitudes towards homework in more depth. Therefore, although there are studies on the subject worldwide, there is a need for more research that addresses the perspectives of teachers and parents in depth. Understanding the perspectives of primary school teachers and parents on homework can guide the structure of homework, thereby preparing primary school students for effective educational practices beyond school hours. In light of these considerations, this study aims to determine the views of primary school teachers and parents, who are key stakeholders in the educational process, on homework in primary schools. Within the framework of these aims, the following research questions are sought to be answered:

1. What are the views of primary school teachers on homework?

2. What are the views of parents about homework?

Method

The qualitative research method was preferred. Qualitative methodology enables the investigation of events and situations in their natural settings and creates a deeper perspective on individuals' understanding and experiences (Huberman, 2014; Patton, 2014; Thomas et al., 2022). Qualitative research focuses on how people perceive and interpret their experiences (Holloway, 1997). The study was designed using the phenomenology model, which is appropriate for determining the views of teachers and parents on homework assignments at the primary school level. Phenomenology scrutinizes individuals' experiences of a phenomenon, their interpretation of these experiences, and their impact on them (Creswell, 2013).

Study Group

The study group consists of 27 primary school teachers and 31 parents of primary school students working in public schools in a province in the Eastern Anatolia Region of Türkiye in the 2023–2024 academic year. The convenience sampling technique, which falls under the category of purposeful sampling techniques, determined the study's participants. Given the study's aims and objectives, purposive sampling assumes that certain groups of people may hold significant and differing perspectives on the ideas and issues under investigation, thereby warranting their inclusion in the sample (Campbell et al., 2020). Kelly et al. (2010) uses purposeful sampling to

select respondents who are most likely to provide relevant and useful information, and Palinkas et al. (2015) uses it to identify and select cases that will effectively use limited research resources. Each participant, including teachers and parents, voluntarily participated in the study and provided a consent form. The study used codenames (T1, T2, T3... and E1, E2, E3, etc.) to identify the participants instead of their real names. Table 1 presents the self-characteristics of the participants.

Table 1.Participants' Self Characteristics

Participant	Gender	Female	17
Teacher		Male	10
	Professional Seniority	1-5 Years	5
		6–10 Years	3
		11-15 Years	4
		16-20 Years	7
		21 Years and older	8
	Region of Duty	Province Center	15
		District	7
		Village	5
Parent	Gender	Woman	25
		Male	6
	Graduation	Above Bachelor's Degree	6
		License	15
		Secondary Education	10

Table 1 shows that 27 primary school teachers (17 female and 10 male) and 31 parents (25 female and 6 male) participated in the study. Upon analyzing the professional seniority of the teachers, we found that 5 had 1–5 years of seniority, 3 had 6–10 years, 4 had 11–15 years, 7 had 16–20 years, and 8 had 21 years or more. In addition, 15 of these teachers work in the city center, 7 in the district, and 5 in the village. Six of the parents who participated in the study graduated from postgraduate, 15 from undergraduate, and 10 from secondary education institutions.

Data Collection

Data were collected using a semi-structured interview form. The researcher informed the participants, prior to the start of the interview, about the ethical issues surrounding the confidentiality of the collected information and its intended use within the research. The interview began with the participants' demographic information. Then the questions in the interview form were asked. In addition to the questions in the interview form, follow-up questions such as "... can you give more detailed information about...?" and "... can you explain... with an example?" were asked to the participants, and the participant teachers' and parents' views on homework in primary school were analyzed in detail. Face-to-face interviews lasted approximately 40–45 minutes. A voice recorder recorded the interviews. The interview recordings were played to the participants, and their consent was obtained. The interviews were then transferred one-on-one to paper.

Data collection tool

The researcher prepared a semi-structured interview form to gather primary school teachers' and parents' perspectives on homework at the primary school level. The researcher first drafted the interview form's questions. Two experts in the fields of classroom education and educational sciences examined these questions. These experts evaluated the suitability of the form, assessed its internal validity, and gave the necessary feedback. The experts' feedback guided the finalization of the interview form. This process was implemented to increase the reliability of the form. Below (Appendix 1) are the interview questions used in the study.

Data Analysis

In order to determine the views of primary school teachers and parents on homework at the primary school level, data was collected through interviews with primary school teachers and parents. In this context, the content analysis method was used to describe the responses of teachers and parents in the interviews. Content analysis deals with situations where facts, meanings, and nuances are keywords (Merriam & Tisdell, 2015). The author and the research assistant, who were familiar with qualitative data analysis processes, grammar, and speech marks, carried out the transcription. These were then uploaded to MAXQDA. After the data was entered into MAXQDA, a comprehensive coding framework with frequency values was created. The initial data coding process was conducted by the author and a research assistant to ensure the reliability of the study. During the coding process, the author and the research assistant independently coded the data, then evaluated the coding consistency by making comparisons and discussed the inconsistencies and reached a consensus. This method

increased the objectivity and reliability of the coding process. To ensure reliability in this process, the author and the research assistant independently determined the initial themes of all interviews using the open-coding method. After the initial themes were identified, they were compared, discussed, and organized collaboratively. In order to increase the reliability of the study, approximately 40% of the data were recorded, and the inter-rater agreement rate was assessed using Cohen's Kappa statistic, and it was determined that this rate was at a level that could be considered high (0.92%). Codes were created to identify specific themes and categories in this data. We structured these codes in MAXQDA, and assigned them to the relevant pieces of data. The coded data were analyzed, and similar codes were grouped. Then, themes and categories were created. The study's coding framework comprises themes and categories that align with the research questions. This framework was designed to help guide and organize the codes used in the data analysis process.

Ethics Approval

In this article, journal writing rules, publication principles, research and publication ethics rules, journal ethics rules were followed. The responsibility for any violation that may occur regarding the research belongs to the author. The research was carried out with the approval of Fırat University Social and Human Sciences Scientific Research and Publication Ethics Committee dated 12.07.2024 and numbered 25738.

Findings

The findings obtained from the opinions of primary school teachers and parents about homework are presented in the tables below.

Primary School Teachers' Opinions on the Main Purpose of Homework

The themes and codes obtained from the opinions of primary school teachers about the main purposes of homework assignments are presented in Figure 1.

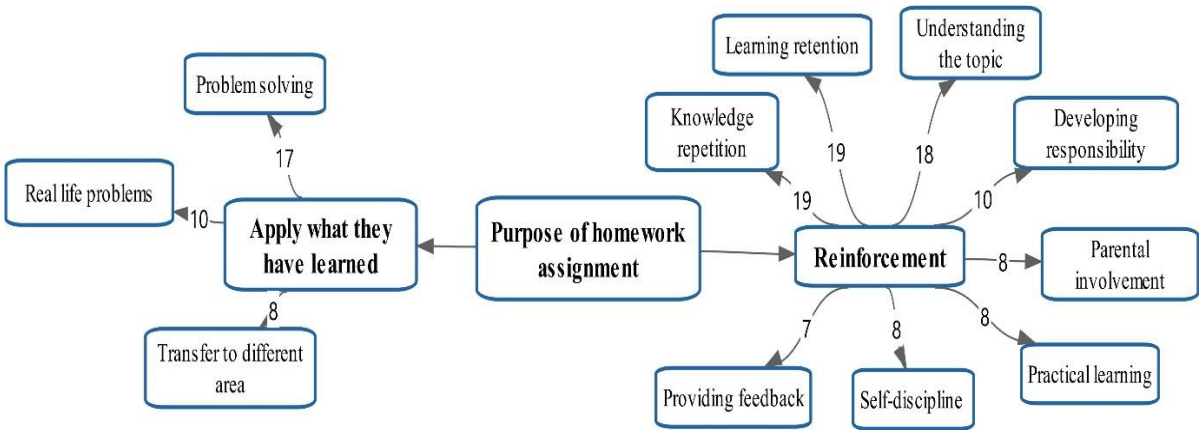

Figure 1. Primary school teachers' opinions on the purposes of assigning homework

The participating teachers stated that students receive homework to reinforce their subjects and apply what they have learned. The study determined that teachers primarily assign homework to students for the purpose of information repetition, learning retention, and subject reinforcement. Teachers also favor homework assignments as they foster problem-solving skills, establish real-life connections, and allow students to apply their acquired knowledge across various fields. The participant of the study, PT7, stated that *"..I usually give homework in order to repeat the subject, stated the study participant, PT7*. I also think *it will help to reinforce the subjects and develop a sense of responsibility...". S*imilarly, PT9 and PT10 explained the reason for giving homework as "…*due to insufficient class time and high class size, I give homework in terms of repetition and reinforcement of the* subjects...". PT18 said, "*Especially in quantitative courses, there is not enough time to solve different problems. Therefore, I give homework and make them solve more problems and practice more...".* In the same vein, PT12 expressed his opinion about the homework he gave to increase the permanence of learning with the following statement: "*When students do not repeat, they forget the course content we teach. In order to repeat, I give homework about the subject we have covered in the class. Thus, it promotes long-term retention...*".

Primary School Teachers' Views on the Importance of Homework

The themes and codes obtained from the primary school teachers' views on the importance of homework for students are presented in Figure 2.

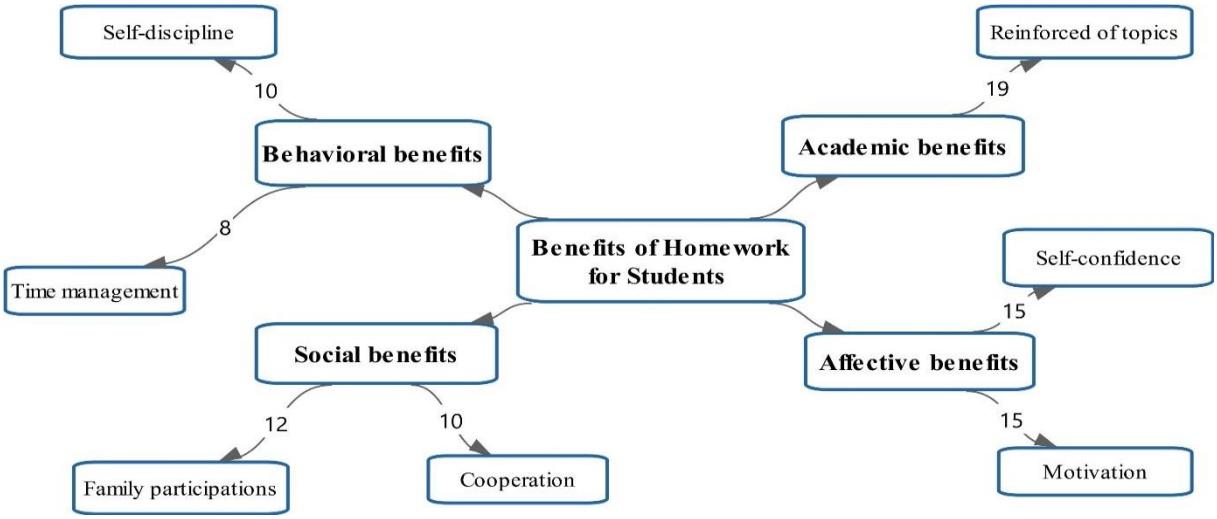

Figure 2. Primary school teachers' views on the importance of homework for students

The opinions of the teachers determined that homework can be beneficial for students in terms of academic, affective, social, and behavioral aspects. Teachers stated that homework would provide academic benefits by reinforcing the subjects, and affective benefits by developing self-confidence and motivation. Furthermore, the study by (Mbaluk, 2021) shows that homework enhances family involvement, promotes social benefits through cooperation, and improves self-discipline and time management skills. The participant in the study, PT21, stated that *"... under the current conditions, we cannot convey everything to children in the classroom environment. For this reason, I aim to gain the support of families by giving homework. I think that homework will reinforce the subjects and especially increase the sense of responsibility..."*. Likewise, PT22 drew attention to the benefits that homework can provide to students and families, saying, *"... I think that it draws families into the process and increases self-discipline and motivation..."*.

Primary School Teachers' Views on How They Prepare Homework

The themes, categories and codes obtained from the primary school teachers' views on how they prepare homework assignments are presented in Figure 3.

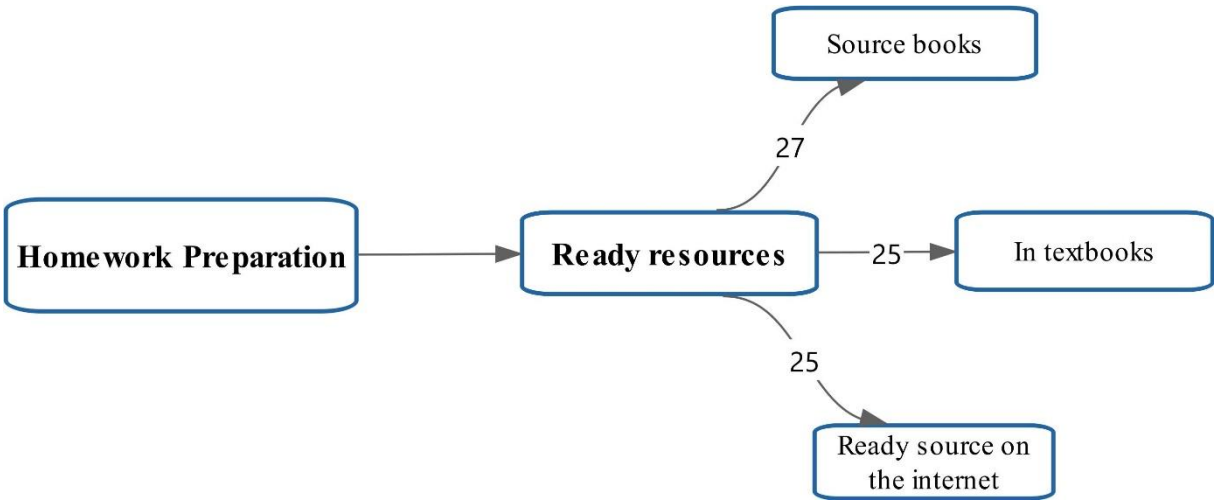

Figure 3. Primary school teachers' opinions on how they prepare homework

According to the teachers who participated in the study, they used ready-made resources such as reference books, textbooks, and the online learning platforms when preparing homework. Among the primary school teachers who participated in the study, PT5 stated that *"... due to lack of time, I assign homework from ready-made reference books. I also assign questions that I access on the internet as homework..."*. PT14 stated that *"... it is not allowed to buy source books. Families react. For this reason, I take ready-made documents from internet pages and assign them as homework..."*. The research revealed that the majority of primary school teachers supported PT5 and PT14.

Primary School Teachers' Opinions on the Frequency of Homework Assignments

The themes, categories and codes obtained from the opinions of primary school teachers about the frequency of homework assignments are presented in Figure 4.

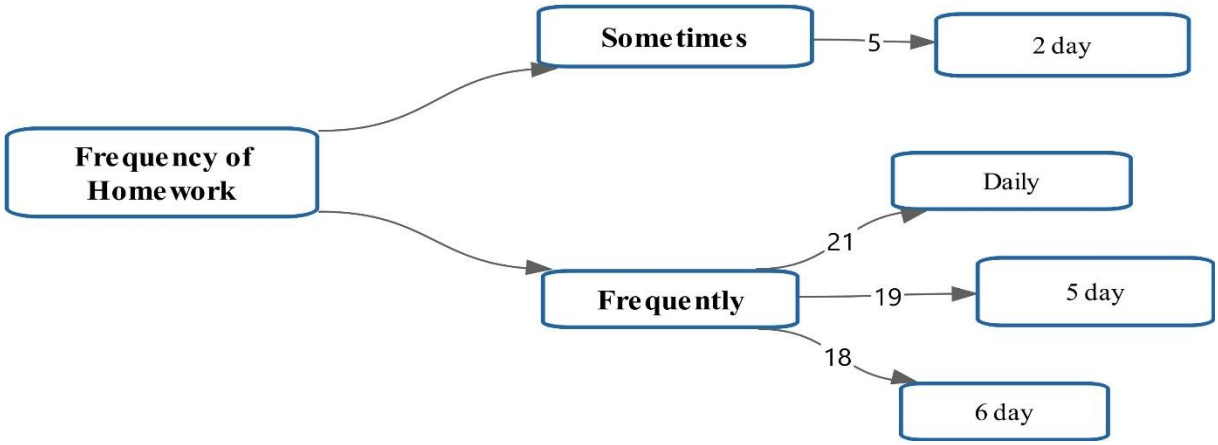

Figure 4. Primary school teachers' opinions on how often they assign homework

The study determined that the participating teachers frequently assigned homework for five, six, and daily periods, and occasionally for shorter periods, like two days. Participant, PT8, stated that *"... actually, I don't want to give homework too much, but the parents press me a lot on this issue. For this reason, I try to give homework almost every day..."* and explained why he gave homework frequently. PT9 stated that *"... I try to give homework daily to reinforce the subjects we cover in the lesson. I only allow my students to rest at weekends without giving homework for a day..."*. On the other hand, PT20 stated that *"... I generally do not give homework. I do not think that homework contributes much to primary school children. For this reason, I sometimes give homework. I usually assign homework on Mondays and Fridays..."*.

Primary School Teachers' Views on How They Evaluate Homework

The themes, categories and codes obtained from the opinions of primary school teachers on how they evaluate homework assignments are presented in Figure 5.

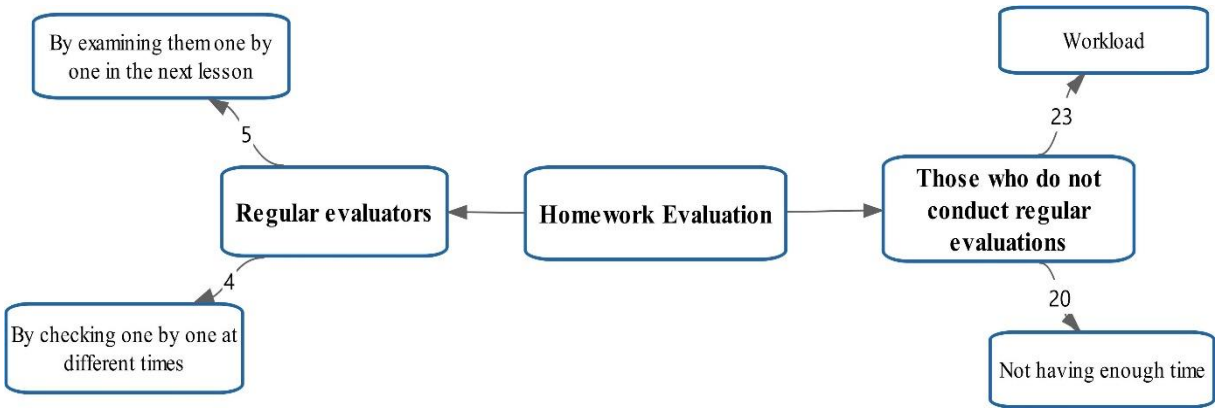

Figure 5. Primary school teachers' opinions on how they evaluate homework assignments

The teachers who participated in the study stated that they examined homework assignments one by one in the following lessons and evaluated them individually at different times. However, there were also opinions that they could not make regular evaluations due to their excessive workload and lack of time. PT12, who participated in the study, stated that *"... I cannot do homework checks because of the high class size..."*. Similarly, PT17 stated that *"... I usually cannot control homework assignments. The duration of the lesson and the number of students prevent me from doing this. I want support from parents in this regard..."*. On the other hand, PT13 stated that *"... since I teach in a village school, my class size is small and at the beginning of the following lesson, I examine the homework one by one and give feedback..."*.

Primary School Teachers' Views on Increasing the Efficiency of Homework

The themes, categories and codes obtained from the opinions of primary school teachers on how to increase the efficiency of homework are presented in Figure 6.

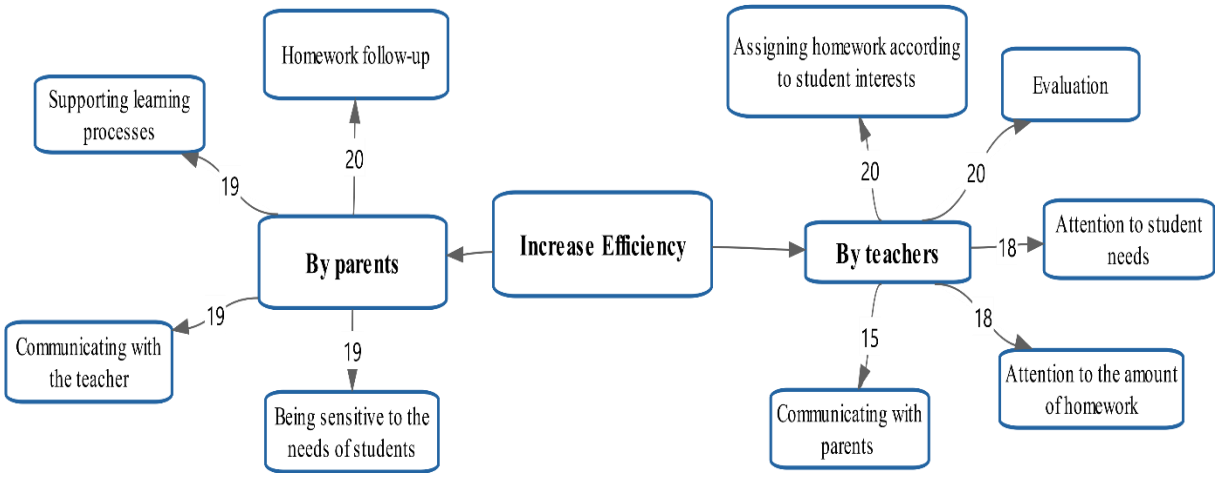

Figure 6. Primary school teachers' views on increasing the efficiency of homework assignments

The teachers who participated in the study emphasized the importance of parental support to increase the effectiveness of homework. Teachers were of the opinion that the effectiveness of homework can be increased by parents by tracking homework, supporting learning processes, communicating with teachers, and being sensitive to students' needs. In addition, teachers were also of the opinion that homework efficiency could be increased by assigning homework according to students' needs, paying attention to students' needs through assessments, paying attention to the amount of homework, and communicating with parents. Participant PT6 *"... the most realistic solution is to get parental support. I can't keep up with the controls, so I think that parents should control homework, provide support while doing homework, and reach out to teachers when they get stuck..."* and emphasized the importance of parental support. PT14 emphasized the importance of parental support by stating that *"... I think it is important for teachers to assign homework according to the subjects that students are deficient in, and at the same time, to apply homework assignments in accordance with children's interests. And I think one of the most important things is not to give too much homework. Parents, on the other hand, should be in contact with their teachers, provide appropriate homework conditions and support students in every sense..."*. PT17 stated that *"... evaluation should be made rather than homework. Homework should be enough not to bore children. It should be enough and of a type that will increase the motivation of the students. Parents should support homework and provide appropriate conditions..."* and expressed their views on the effectiveness and amount of homework.

Parents' Views on Their Children's Homework

The themes, categories and codes obtained from parents' views on their children's homework are presented in Figure 7.

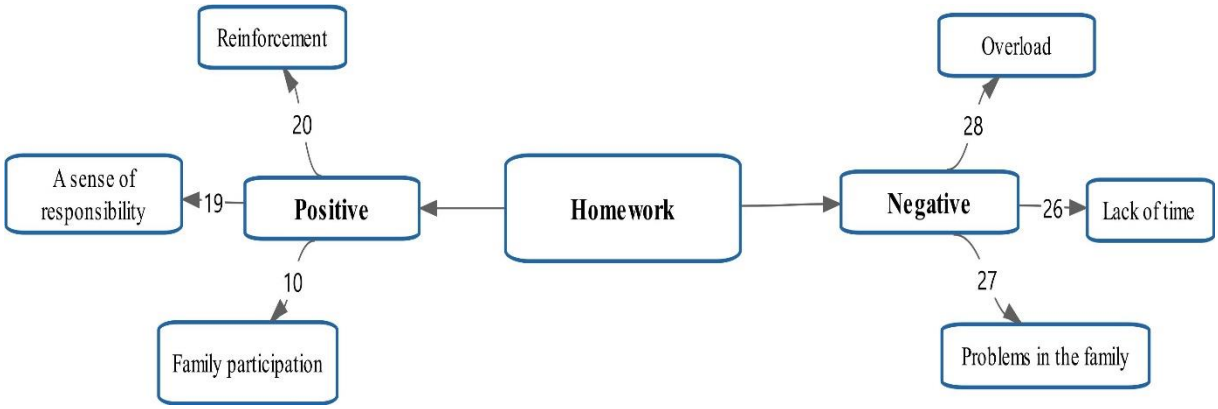

Figure 7. Parents' views on their children's homework

The parents who participated in the study had positive views that homework was reinforcing, contributed to the development of a sense of responsibility, and encouraged family participation. However, they also had negative opinions about homework due to the excessive burden of homework, lack of time and problems within the family. P10, one of the parents who participated in the study, stated that *"... I think homework is useful in understanding the lessons. Also, I am involved and I am aware of her lessons and her situation. However, there is too much homework and my daughter has a lot of difficulty. When she cannot*

complete it, she loses sleep or cries....". P15 stated that *"... homework is important in terms of understanding and retention of the subjects, but it is the reason why I have problems at home. Homework is too much. My daughter wastes a lot of time doing homework and we constantly have problems because of this..."* The majority of parents responded as P10 and P15.

Parents' Views on the Effects of Homework on Children

The themes, categories and codes obtained from parents' views on their children's homework are presented in Figure 8.

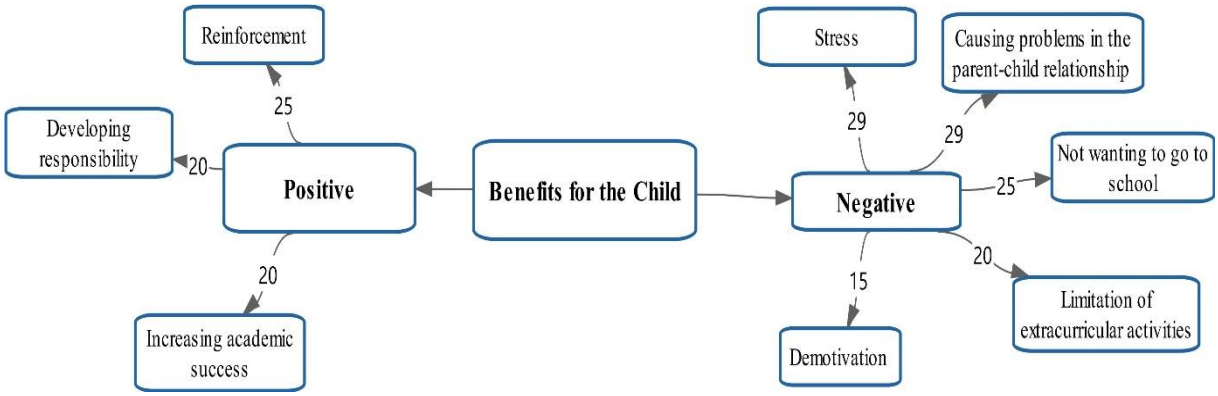

Figure 8. Parents' Views on the effects of homework on children

The parents who participated in the study expressed the view that homework has positive effects on children in terms of reinforcing, developing responsibility and increasing academic achievement. However, in addition to these positive effects, there were also opinions that homework can have negative effects on children such as creating stress, causing problems in parent-child relationships, reluctance to go to school, lack of time for extracurricular activities and low motivation. P4, one of the parents who participated in the study, stated that *"... homework helps to understand the subjects. Also, my daughter does not sleep without doing her homework. It makes me happy to see her in this way about her sense of responsibility..."* and mentioned the positive effects of homework on students. P16 stated, *"... I think that my daughter will understand the subjects better because of homework and accordingly she will be academically successful. However, this child cannot spend much time with her friends and us because of the intensity of her homework...".* P20 stated that *"... homework causes serious stress for my daughter. She cannot complete it because it is too much. When she cannot complete it, she does not want to go to school. In addition, my relationship with my daughter deteriorates in this process. Homework is definitely useful, but its harms should not be ignored..."* and expressed the negative effects of homework.

Parents' Views on Children's Homework Doing Processes

The themes, categories and codes obtained from parents' views on children's homework processes are presented in Figure 9.

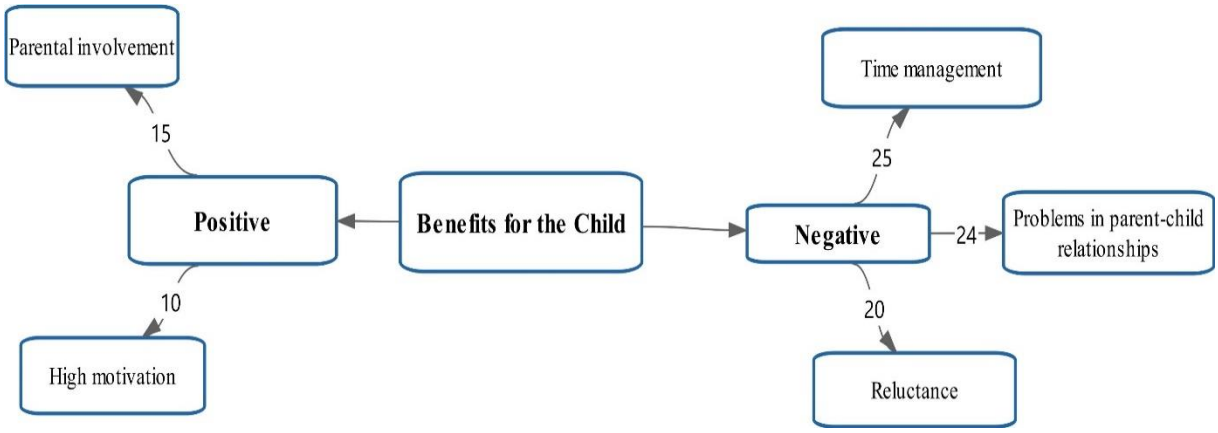

Figure 9. Parents' views on children's homework doing processes

The parents who participated in the study believed that parental involvement in the homework process had positive effects, and that their children's motivation to complete homework was high. However, in addition

to these positive opinions, negative effects such as lack of time management, problems in parent-child relationships, and reluctance were also reported. P13, one of the parents who participated in the study, stated that *"... my daughter has a very high sense of responsibility. For this reason, this increases more with homework and I observe that her motivation is very high in that process..."*. P18 stated *"... my son does not have time management. He does not finish his homework until the middle of the night. He is very reluctant and we have constant fights..."*. P21 stated, *"... I am involved in the process when he does his homework. Sometimes we do it together. These processes are enjoyable for us..."*.

Parents' Views on Their Roles in Children's Homework Doing Processes

The themes, categories and codes obtained from parents' views on their roles in children's homework processes are presented in Figure 10.

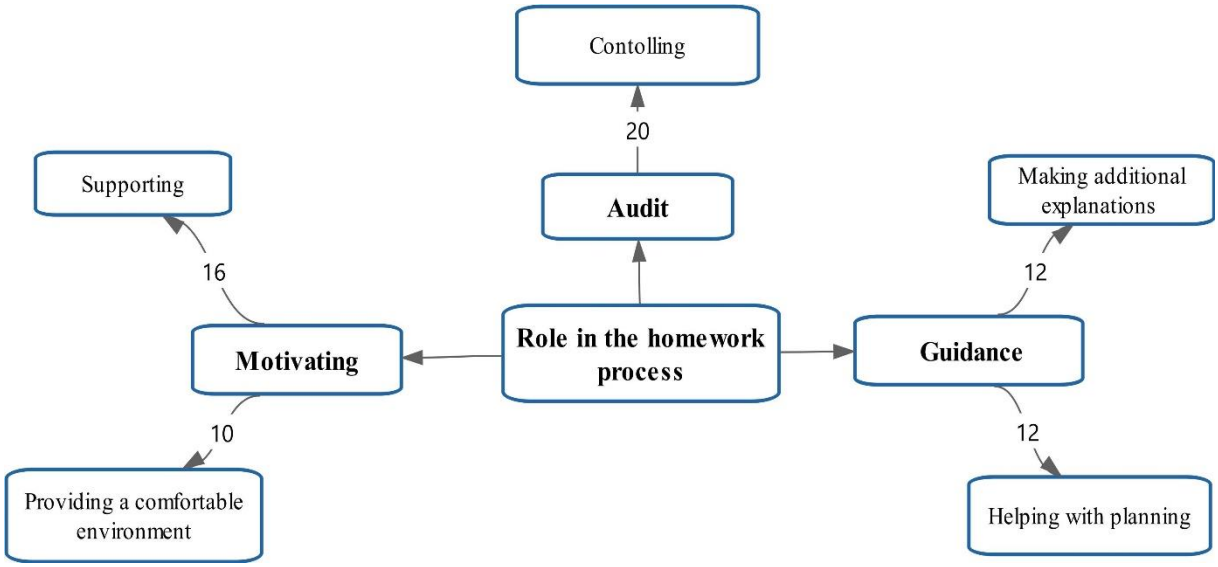

Figure 10. *Parents' Views on Their Roles in Children's Homework Doing Processes*

Regarding the roles of parents in the process of children doing their homework, it was found that they had a motivating role by providing a supportive and comfortable environment. In addition, they were also seen to play a guiding role by helping their children plan and providing additional explanations. In addition, it was found that they assumed a supervisory role by checking homework assignments. P2, one of the parents who participated in the study, stated that *"... I try to support as much as possible, I check their time planning, I check their homework at the end..."*. The majority of the parents gave similar answers to P2. P8 stated that *"... I prepare a suitable room where he will not be distracted to do his homework. I make additional explanations when he does not understand his homework..."*. P5 stated that *"... I can't leave my son's side until he does his homework. I have to constantly check on him..."* and expressed the role she assumed while her child was doing homework.

Parents' Views on How to Improve the Efficiency of Homework

The themes, categories and codes obtained from parents' views on how to increase the efficiency of homework are presented in Figure 11.

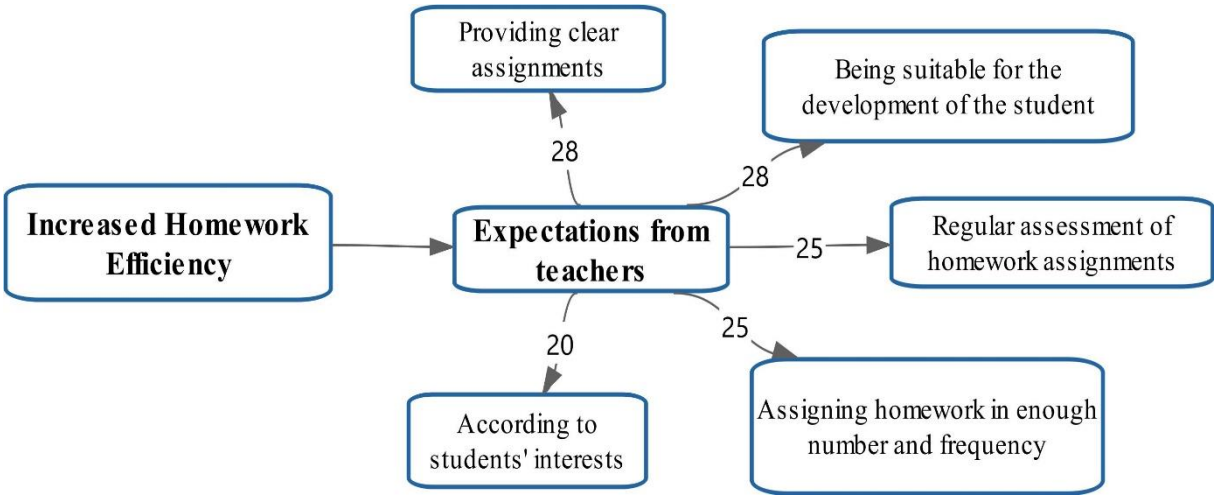

Figure 11. *Parents' Views on How to Improve the Efficiency of Homework*

The parents who participated in the study were of the opinion that they had expectations from teachers regarding homework assignments that were appropriate for students' development and interests, given in an understandable manner, and in sufficient quantity and frequency. They also had expectations that homework assignments should be evaluated regularly. P4, stated that *"... homework should be appropriate for children's needs and given in small amounts. Also, teachers should also check the homework that students do...."*. P8 *"... I don't know how to teach the letters, I don't know what to pay attention to when I make them read. I had the old style of education. Now it is completely different, so these should be taken into consideration when assigning homework. Besides, sometimes even I don't understand the questions. Homework should be assigned according to the level of the students. Also, giving a lot of homework every day alienates children from school and we have problems with children..."*. P1 stated that *"... my daughter gets bored of solving questions. I think other types of homework should be given instead. In addition, homework should be checked and too much homework should not be given without forgetting that these are children..."*

Conclusion Discussion and Recommendations

The aim of the study is to examine the views of primary school teachers and parents on homework at the primary school level. In this context, interviews were conducted with primary school teachers and parents. The results obtained from the interviews indicated that,teachers who participated in the study gave homework assignments in order to repeat information, reinforce learning retention and enhance the understanding of the subjects, improve students' problem-solving skills, relate the covered subjects to real life, and enable them to use the information they have learned in different fields. Similar to teachers' views, parents also expressed positive views that homework is reinforcing, contributes to the development of children's sense of responsibility, and encourages family participation. However, despite these positive views, parents also expressed negative opinions about homework due to its excessive burden, lack of time, and issues within the family. According to the study's findings, teachers' and parents' views on homework are largely similar, but parents also have negative views about homework. In the literature, it has been reported that homework has the potential to enhance children's learning and development by contributing to the reinforcement of intellectual study techniques and basic skills as well as the development of self-esteem, self-efficacy, and self-confidence, improving students' self-discipline, reinforcing what they have learned, and increasing academic achievement (Centeio et al., 2018; Cooper et al., 2006; Dilekçi, 2023; Dolean & Lervag, 2022; Hampden-Thompson et al., 2013; Norhayati & Rahya, 2023; Syla, 2023). However, a significant number of parents and teachers have expressed concerns that homework poses a risk of overloading students with excessive work and has negative effects on student well-being (Cooper et al., 2006; Duru & Çöğmen, 2017; Skaggs, 2007). Therefore, even though most people view homework as beneficial, we should carefully consider its implementation and design to prevent these issues.

The teachers reported that homework can benefit students academically, affectively, socially, and behaviorally. According to teachers, homework would provide academic benefits by reinforcing the subjects, as well as affective benefits by improving self-confidence and motivation (Duru & Çöğmen, 2017; Ok, 2018). They believe that homework can improve parent-student communication, positively affect social skill development through cooperation, and behaviorally improve self-discipline and time management skills. Parents, similarly, have positive views, believing that homework has beneficial effects on children by reinforcing learning, developing responsibility, and increasing academic achievement.. However, despite these

positive effects, parents also reported that homework can have negative effects on children, such as causing stress, problems in parent-child relationships, reluctance to go to school, a lack of time for extracurricular activities, and low motivation. Both teachers and parents perceive homework to benefit students in various ways, as these results reveal. However, the negative effects emphasized by parents indicate that there are important points to be considered when implementing homework assignments. The concerns raised by parents and teachers, particularly about homework's time-consuming nature and the lack of time for extracurricular activities, provide a critical projection for evaluating homework's effectiveness. These concerns reflect the findings of studies that warn against the negative effects of excessive homework and emphasize the need for a balanced approach (Eshun, 2021; Mbogo, 2021; Pollard, 2023). Therefore, teachers can contribute to academic achievement and support students' affective and social development by adjusting the quantity and quality of homework to account for individual differences (Feraco et al., 2023; Reeve et al., 2020). This balance is crucial to maintaining student motivation and interest (Dolean & Lervag, 2022). According to Dolean and Lervag (2022), homework provides additional practice opportunities, which may have different effects on primary school students' learning achievement in the short and medium term. Research results show that doing homework in primary school gives students more self-discipline and improves their time management skills (Cooper et al., 2006). Long-term, planned practice can enable individuals to achieve expert performance in a particular field (Anderson & Graham, 2016; Burns et al., 2015; Ericsson et al., 2018; Nelson et al., 2013). Primary school teachers do not have enough time for extensive practice and review in the classroom (Ballet & Kelchtermans, 2009; Skinner et al., 2021; Van Droogenbroeck et al., 2014). Therefore, homework can enhance students' academic performance by providing opportunities for practice and review of acquired skills beyond the confines of school hours. However, it's crucial to acknowledge that primary school students have faced criticism regarding homework (Bennett & Kalish, 2007; Kohn, 2006). Therefore, teachers need to develop strategies to minimize the negative effects of homework while supporting students' academic development. Furthermore, it is crucial to foster effective communication and collaboration between teachers and parents to guarantee the preparation and implementation of homework that aligns with its intended purpose. The quantity and quality of homework assignments should be adjusted in consideration of students' individual differences in order to contribute to academic achievement and support students' emotional and social development.

The study determined that teachers benefited from ready-made resources like reference books, textbooks, and internet sites when preparing homework assignments. Demir and Yaman's (2020) study reveals that teachers often employ these resources (Demir & Yaman, 2020). However, the use of such resources may pose some problems. For example, the appropriateness and accuracy of the studies on websites are not always known and checked (Demir & Yaman, 2020). This may increase the risk of students encountering false or misleading information. For this reason, it is important for teachers to assign homework while considering students' individual differences. Thus, homework can be useful in supporting students' development in academic, affective, and social areas (Dolean & Lervag, 2022). In addition, the development of students' skills will positively affect their academic motivation and interest in general (Dolean & Lervag, 2022). In conclusion, it is important for teachers to enrich homework by utilizing a variety of resources. However, teachers must ensure that these resources are appropriate. Furthermore, homework assignments prepared in accordance with individual differences will be able to enhance students' development. These perspectives from teachers will increase the effectiveness of homework and contribute positively to students' development in all areas.

The study revealed that the participating teachers frequently assign homework for periods of five days, six days, or daily, and occasionally for shorter durations like two days. In the literature, there are studies that have found that repetitive, monotonous, or long-term homework that students cannot do independently should not be given and that pupils do not like doing such homework (McCrory Calarco et al., 2022; Medwell & Wray, 2019; Wilder, 2023). In addition, children may experience excessive stress and sleep disturbances related to the amount and nature of homework (Holland et al., 2021). Children staying up late to study can lead to severe fatigue and depression (Holland et al., 2021; Zhou et al., 2015). Students' emotions are too important to ignore when completing homework (I. Katz et al., 2012; Kennewell et al., 2022). Boredom with homework can lead to distraction and negative emotional reactions (Xu, 2013). While negative emotions such as anxiety, lack of concentration, fear, and procrastination negatively affect students' academic achievement and well-being, positive emotions support mindfulness, attention, coping, self-efficacy, self-confidence, and a sense of competence (I. Katz et al., 2012; Kennewell et al., 2022). These findings indicate a close relationship between the effectiveness of homework, students' emotional states, and academic achievement. Therefore, teachers should consider students' emotional needs when planning the amount, completion time, and content of homework assignments, and make sure that homework assignments are interesting, motivating, and accessible to students. This approach can enhance the efficacy of homework.

The study found that the participating teachers examined each homework assignment individually and evaluated them at different times. However, some teachers expressed the opinion that their heavy large classroom, and lack of time prevented them from conducting regular evaluations. The literature asserts that

when teachers check primary school students' homework and provide feedback, it reinforces their knowledge, boosts their self-confidence, and encourages them to learn new skills. Conversely, when teachers do not check homework, students tend to avoid it (Anderson & Graham, 2016). These findings emphasize the importance of teachers checking homework regularly and providing feedback. If teachers improve their time management skills and identify strategies to reduce their workload, students may approach homework more positively and benefit more from this process.

Teachers believed that parents who follow homework assignments, support learning processes, communicate with teachers, and are sensitive to students' needs can increase the efficiency of homework. In addition, teachers were also of the opinion that assigning homework according to students' interests and needs, evaluating assignments, paying attention to the amount of homework, and communicating with parents were necessary to increase homework efficiency. Parents, on the other hand, expect teachers to assign homework that is appropriate for students' development and interests, that is understandable, that is given in sufficient quantity and frequency, and that instructors regularly evaluate these assignments. The literature emphasizes that tailoring primary school students' homework to their interests and needs enhances their desire and empathy for homework (Medwell & Wray, 2019; Negru & Sava, 2023). Moreover, parental behaviors that support their children's psychological needs not only benefit their children's mental health but also positively affect their motivation (I. Katz et al., 2012) and effort (Feng et al., 2019) related to homework. Moreover, when parents see their children succeed in homework, their support adopts an autonomous focus that reinforces this success (Dumont et al., 2014). The quality of parental involvement in homework is important for providing a supportive learning environment for students (Feng et al., 2019; I. Katz et al., 2012). The literature frequently emphasizes that homework in a supportive environment contributes more to students and increases their positive attitudes towards school (De Róiste et al., 2012; Pomerantz et al., 2007). This engagement has been positively associated with students' academic performance and well-being (Magalhães et al., 2020; McCrory Calarco et al., 2022).

This study found that parental involvement positively impacted children's homework completion processes, particularly those with high motivation. However, in addition to these positive effects, there were also negative effects of parental involvement in the homework process (Czerniawski & Kidd, 2013; Xu & Yuan, 2003), such as lack of time management, problems in parent-child relationships, and reluctance. The literature reports that children's motivation to continue studying increases when parents participate in the homework process, provide feedback, and appreciate their efforts (Dettmers et al., 2019; Dolean & Lervag, 2022). The literature suggests that the quality of parental involvement in homework is positively associated with students' academic performance and well-being (Dumont et al., 2014; Feng et al., 2019; I. Katz et al., 2011; Magalhães et al., 2020; Pomerantz et al., 2007). The literature has also emphasized that homework can lead to conflicts, increase stress within the family, and limit the amount of time parents and children can spend together (Hampden-Thompson et al., 2013; Holland et al., 2021; Pressman et al., 2015; Valle et al., 2019). Parents think that homework has a positive effect on students' academic performance (Medwell & Wray, 2019; Moorhouse, 2021; Tam & Chan, 2011; Vatterott, 2018; Xu, 2009), which may have influenced their positive view of homework. These results underscore the significance of parental involvement in homework and the need to strike a balance in this involvement. It is important for parents to adopt an approach that boosts their children's self-confidence and motivation while supporting their children's homework and, at the same time, minimizing the negative effects of the homework process on family relationships. Teachers and families working in cooperation can ensure that homework contributes to students' development in the most appropriate way. In conclusion, it is important for both teachers and parents to work in communication in order to increase the efficiency of homework for children. When creating homework assignments, teachers should pay attention to individual differences and communicate with parents to ensure that homework assignments are effective for children. Similarly, parents' support for their children's homework, motivating them, and closely following their learning processes will positively affect children's academic achievement and general well-being. In this context, collaboration between teachers and parents can ensure that homework contributes appropriately to students' development in all areas.

Parents played a motivating role in the homework process by creating a supportive and comfortable environment. Furthermore, the study revealed that parents took on guiding roles by assisting their children with planning and offering further clarifications. Furthermore, they believed that they fulfilled a supervisory role by regularly reviewing their children's homework assignments. The parents who took part in the study expressed that their involvement in their children's homework had a positive impact on their children's completion, resulting in high motivation. However, the study also mentioned negative effects like poor time management, issues in parent-child relationships, and reluctance. The quality of parental involvement in homework is positively associated with students' academic performance and well-being, according to the literature (Dumont et al., 2014; Feng et al., 2019; I. Katz et al., 2011; Magalhães et al., 2020; McCrory Calarco et al., 2022; Pomerantz et al., 2007). As Hoover-Dempsey et al. (1995) emphasize, parental involvement in homework plays a crucial role not only in providing immediate help but also in modeling the positive attitudes and study skills

necessary for school success (Hoover-Dempsey et al., 1995). Children see competent and relatable parents as effective models. Morrison et al. (2000) provide support for this by observing a positive correlation between students' school engagement and their perceptions of parental involvement in their supervision (Morrison et al., 2000). This aspect of parental involvement provides an additional layer to understanding the effectiveness of homework (Negru & Sava, 2023). These findings underscore the significance of parental involvement in homework and the effective methods for achieving it. It is important for parents to adopt an approach that boosts their children's self-confidence and motivation while supporting their children's homework, as well as minimizing the negative effects of the homework process on family relationships. Collaboration between educators and parents can ensure that homework contributes to students' development in the most appropriate way.

The findings of the study show that homework provides academic, affective, social and behavioral benefits to students, but that parental support is important for these benefit to be achieved. In addition, it was determined that parents had positive and negative judgments about homework, assumed motivating, guiding and supervising roles during homework assignments, and that these roles positively affected students' perspectives on homework (Farrell & Danby, 2015; Tam & Chan, 2011).

This study is important because it provides a perspective on the role of homework in education, which has been the subject of considerable debate among those closely involved in the educational process, including teachers and parents. This study may shed light on the limited number of studies investigating the perspectives of parents and teachers in primary school.

In this context, teacher-parent collaboration is important to increase the effectiveness of homework. Teachers at school and teachers at home checking homework and supporting students will increase students' motivation to do homework. Teachers should prepare homework assignments taking into account students' interests, needs and individual differences. Homework assignments should support all developmental areas of students. They should be prepared from a variety of sources and include content that will be of interest to students. Teachers should consider the emotional needs of students when planning the amount, completion time and content of homework assignments and make sure that homework assignments are interesting, motivating and accessible to students. Teachers should regularly check homework assignments and provide feedback.

Parents should support and motivate students' homework and follow up with their children in cooperation with teachers. In addition, the views of primary school students and their perspectives should be sought in order to guide teachers in determining effective homework strategies.

Appendixs 1

Teacher Semi-structured Interview Form:
1. What is your main purpose in assigning homework?
2. What is the importance of homework for students?
3. How do you prepare homework assignments?
4. How often do you assign homework?
5. How do you evaluate homework assignments?
6. How can the efficiency of homework be increased?

Parent Semi-structured Interview Form :
1. What are your views on your children's homework?
2. What are your views on the effect of homework on your child?
3. How is the process of your children doing their homework?
4. What is your role in the process of doing your children's homework?
5. What are your views on increasing the efficiency of homework?

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İlkokul Kademesinde Ev Ödevlerine İlişkin Sınıf Öğretmenleri ve Ebeveynlerin Görüşleri

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Özet

Bu araştırma, ilkokul kademesinde ev ödevlerine ilişkin sınıf öğretmenleri ve ebeveynlerin görüşlerinin belirlenmesini amaçlamaktadır. Araştırma, nitel araştırma yöntemlerinden olgu bilim deseni kullanılarak gerçekleştirilmiştir. Araştırmanın çalışma grubunu 2023-2024 eğitim öğretim yılında Türkiye'nin bir ilinde, çeşitli devlet okullarında görev yapan 27 sınıf öğretmeni ve 31 ilkokul öğrencisinin velisi oluşturmaktadır. Araştırma, amaçlı örnekleme teknikleri kapsamında olan uygun örnekleme tekniği ile yürütülmüştür. Araştırma verileri, araştırmacı tarafından oluşturulan yarı yapılandırılmış görüşme formları ile toplanmıştır. Araştırma verileri içerik analizi yoluyla betimlenmiştir. Verilerin analizi sonucunda sınıf öğretmenlerinin görüşleri ile ilgili 6 ana tema, ebeveynlerin görüşleri ile ilgili 5 ana tema, kategori ve kodlar belirlenmiştir. Araştırma sonuçlarına göre sınıf öğretmenlerinin ev ödevlerini, öğrencilerin öğrendiklerini pekiştirmeleri ve uygulama yapmaları amacıyla sıklıkla verdikleri belirlenmiştir. Ev ödevlerinin öğrencilere akademik, duyuşsal, sosyal ve davranışsal yarar sağladığı, fakat bu yararın sağlanabilmesi için ebeveynlerin desteğinin önemli olduğu belirtilmiştir. Araştırma sonuçları ebeveynlerin ev ödevine karşı olumlu ve olumsuz yargılara sahip olduklarını, ödevler yapılırken motive edici, rehberlik ve denetleme rollerini üstlendiklerini göstermektedir.

Anahtar kelimeler: Sınıf öğretmeni, İlkokul, Ev ödevi, Ebeveyn

Giriş

Ev ödevi, öğrencilere öğretmenler tarafından verilen ve okul dışı saatlerde tamamlanması gereken görevler olarak yaygın bir şekilde tanımlanmaktadır (Cooper vd., 2000). Ev ödevleri, çalışma alışkanlıklarını geliştirme ve akademik başarıyı teşvik etme açısından önemli bir öğretim stratejisi olarak kabul edilmektedir (Cooper vd.., 2000; Fan vd., 2017; Wu vd., 2023). Hem öğretmenler hem de ebeveynler için ev ödevi, günlük yaşamın önemli bir parçası olarak kabul edilmekte ve eğitimde sıkça kullanılan bir uygulama olarak değerlendirilmektedir (Dettmers vd., 2019; Fan vd., 2017). Bu nedenle öğrencilerin sınıf dışında öğrenmelerini desteklemek amacıyla kullanılan ev ödevleri, uzun süredir eğitim araştırmacılarının, politika yapıcıların ve uygulayıcıların ilgi odağı olmuştur (Good, 2022; Guerrero & Reiss, 2020; Zhang & Bray, 2020). Ev ödevleri ile ilgili yapılmış birçok çalışmanın ilkokul dışındaki kademelere odaklandığı görülmektedir (Magalhães vd., 2020). İlkokul kademesinde ev ödevleri ile ilgili net bir bakış açısının oluşamaması, bu durumun bir sonucu olarak değerlendirilebilir (Fan vd., 2017).

İlkokulda Ev Ödevi

Ev ödevi, küresel bir olgu olarak kabul edilmektedir (Rahmani vd., 2024). Ev ödevinin değeri ve uygulanışı ülkeden ülkeye farklılık göstermektedir. İlkokul çağındaki bazı çocukların, ev ödevlerine giderek daha fazla zaman ayırırken (Jerrim vd., 2020), dünya çapında dördüncü sınıf öğrencilerinin %7'sinden azının hiç ev ödevi yapmadıkları belirlenmiştir (Mullis vd., 2012). İngiltere'de, eğitimin ilk yıllarında ev ödevi politikası, beş ila yedi yaş arasındaki çocuklara haftada bir saat, 7-11 yaş arasındaki çocuklara ise gecelik yarım saatlik ev ödevi verilmesini ve tüm okulların aynı ev ödevi politikasına sahip olmasını öngörmektedir (Medwell & Wray, 2019). ABD'deki birçok ilkokul, yeni bir trend olan ödev yapmama politikasını benimsemeye başlamıştır (Dolean & Lervag, 2022). Şangay ve Singapur gibi Asya ülkeleri, öğrencilere bol miktarda ev ödevi ve okul sonrası dersler verirken (Bartholomaeus vd., 2023), Finlandiya'da öğretimin ilk yıllarında neredeyse hiç ödev veya ek çalışma yaptırılmamaktadır (Pierre, 2007; Sharp vd., 2001). Türkiye' de ise ilkokul kademesinde ev ödevlerine yönelik kapsayıcı bir politika bulunmamaktadır (Kalsen vd., 2020). İlkokul kademesinde ev ödevleri ile ilgili uygulama birliğinin sağlanamamasının sebebinin, bu kademeye yönelik ev ödevi çalışmalarının sınırlı olmasından kaynaklandığı söylenebilmektedir (Fan vd., 2017; Lehner-Mear, 2021).

Ev ödevlerinin, olgusal bilginin daha iyi hatırlanmasına katkı sağlayabileceği ve aynı zamanda öğrencilerin anlama ve bilgi işleme düzeyini artırarak öz düzenleme becerilerini güçlendirebileceği, daha iyi

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çalışma alışkanlıkları ve öz disiplinlerini geliştirmelerine yardımcı olabileceği belirlenmiştir (Dilekçi, 2023; Ramdass & Zimmerman, 2011). Bunlarla birlikte, öğrencilere verilen ev ödevlerinin, akademik fayda sağladığı ve başarılarını olumlu yönde etkilediğine yönelik somut araştırma sonuçları bulunmaktadır (Dolean & Lervag, 2022; Fan vd., 2017). Fakat ilkokul kademesinde ev ödevlerinin öğrenci başarısı üzerinde her zaman önemli bir etkisinin olacağı ile ilgili genelleme yapılamamaktadır (Chin vd., 2022; Cooper vd., 2000, 2006; Fan vd., 2017; Paschal vd., 1984; Trautwein vd., 2002; Tsang vd., 2022). Literatürde ilkokul öğrencilerinde ev ödevi miktarı ile akademik başarı arasında neredeyse hiçbir ilişki bulunmadığı çalışmalar da yer almaktadır (Cooper vd., 2000, 2006; Fan vd., 2017; Trautwein vd., 2002). Ayrıca, ödev miktarının fazlalığının öğrenciler için stres kaynağı olabileceği, aileleri ve arkadaşlarıyla geçirecekleri kaliteli zamanı azaltabileceği ve okulla ilgili olumsuz etkileşimlere yol açabileceği (Galloway vd., 2013; I. R. Katz, 2007; Moè vd., 2020; Pressman vd., 2015), akademik ilgiyi azaltabileceği, boş zaman aktivitelerine ve sosyal etkinliklere erişimi engelleyebileceği ve kopya çekme gibi sorunlara yol açabileceği belirlenmiştir (Cooper vd., 2000). Öğretmenler tarafından verilen yoğun ev ödevlerinin olumsuz etkileri üzerine yapılan çalışmalar, dikkat çekici sonuçlar sunmaktadır (Magalhães vd., 2020; Wilder, 2023).

İlkokul kademesindeki ev ödevlerinin, uzun vadeli faydalarını vurgulayan araştırmalar da mevcuttur (Medwell & Wray, 2019; Norhayati & Rahya, 2023). Bu faydalar arasında öğrencilere iyi çalışma alışkanlıkları kazandırılması, özgüvenin ve öz disiplinin teşvik edilmesi, zaman yönetimi becerilerinin geliştirilmesi ve karakter gelişimine katkıda bulunulması gibi faydalar belirtilmektedir (Epstein vd., 2021; Holland vd., 2021; Medwell & Wray, 2019; Norhayati & Rahya, 2023). Öğrencilerin verilen ev ödevlerine motive olmalarını sağlamak için, öğretmenler ev ödevlerinin amaçlarını, uygunluğunu, yapılma şeklini, değerlendirme kriterlerini, ödülleri ve olumlu geri bildirimleri net bir şekilde açıklığa kavuşturması gerekmektedir (Benckwitz vd., 2023; Dettmers vd., 2019; Rizk & Hillier, 2021). Ancak bu netlik ile ev ödevlerinin sağladığı potansiyel faydalar etkin bir şekilde meydana gelecektir.

Ülkeler arasında net bir uygulama birliğinin olmaması ve ilkokul kademesinde ev ödevi ile ilgili faydanın net olarak belirlenememesi, öğretmenler ve velilere karmaşık mesajlar vermektedir. Bu belirsizlik, öğrencilerin akademik başarı ve becerilerinin, benlik kavramlarının, kendi yeteneklerine olan güvenlerinin ve başarılı olma motivasyonlarının biçimlendiği ilkokul döneminde (Benckwitz vd., 2023; Carrillo-López vd., 2022) ev ödevi politikalarının ve uygulamalarının yeniden gözden geçirilmesi gerektiğini ortaya koymaktadır. Mevcut literatür, ev ödevlerinin akademik başarıyı artırma ve öğrenciler arasında öz disiplini teşvik etmedeki önemini vurgulamaktadır (Cooper vd., 2006; Mbaluka vd., 2021). Ancak, literatür aynı zamanda ev ödevlerinin aşırı iş yükü riski ve olumsuz etkiler gibi potansiyel dezavantajlarının da altını çizmektedir (Benckwitz vd., 2023; Cooper vd., 2006; Halim vd., 2023; Skaggs, 2007; Trautwein vd., 2002). Ev ödevlerinin öğrenci eğitimindeki rolü, ebeveynler ve öğretmenler de dâhil olmak üzere eğitim süreciyle yakından ilgili kişiler arasında önemli tartışmalara yol açmaktadır (Halim vd., 2023). Bu bağlamda özellikle ilkokulda, ebeveynlerin ve öğretmenlerin bakış açılarını araştıran çalışmaların sınırlı sayıda olduğu görülmektedir. Sınıf öğretmenlerinin ve ebeveynlerin ev ödevlerine ilişkin düşüncelerini anlamak, ilkokul öğrencilerine okul dışında etkili eğitim uygulamaları hazırlayabilmek için ev ödevlerinin nasıl yapılandırılması gerektiği konusunda yönlendirici olabilecek bilgiler sunmaya yardımcı olabilir. Bu düşünceler ışığında, bu araştırma, eğitim öğretim sürecinin kilit paydaşları olan sınıf öğretmenlerinin ve ebeveynlerin ilkokulda ev ödevleri ile ilgili görüşlerini belirlemeyi amaçlamaktadır. Bu amaçlar çerçevesinde aşağıdaki araştırma sorularına cevap aranmaktadır:

1. İlkokul öğretmenlerinin ev ödevleri hakkındaki görüşleri nelerdir?

2. Ebeveynlerin ev ödevleri hakkındaki görüşleri nelerdir?

Yöntem

Araştırmada nitel araştırma yöntemi tercih edilmiştir. Nitel yöntem, olay ve durumların doğal ortamlarında araştırılmasına olanak tanır ve bireylerin anlayış ve deneyimlerine dair derin bir bakış açısı oluşturur (Huberman, 2014; Patton, 2014; Thomas vd., 2022) Nitel araştırmalar, insanların deneyimlerini nasıl algıladıklarına ve yorumladıklarına odaklanır (Holloway, 1997). Araştırma, ilkokul kademesinde ev ödevi verilmesine ilişkin öğretmen ve ebeveyn görüşlerinin tespiti için uygun olan fenomenoloji (olgubilim) modeli kullanılarak tasarlanmıştır. Fenomenoloji, bir olgunun bireyler tarafından nasıl deneyimlendiğini, bu deneyimlerin onlar için ne anlama geldiğini ve onları nasıl etkilediğini incelemektedir (Creswell, 2013).

Çalışma Grubu

Araştırmanın çalışma grubu, 2023-2024 eğitim öğretim yılında Türkiye' nin Doğu Anadolu Bölgesinde bulunan bir ildeki devlet okullarında görev yapan 27 sınıf öğretmeni ve 31 ilkokul öğrencisinin ebeveynlerinden oluşmaktadır. Araştırmanın katılımcıları, amaçlı örnekleme teknikleri kapsamında olan uygun örnekleme tekniği ile belirlenmiştir. Amaçlı örnekleme, çalışmanın amaç ve hedefleri göz önüne alındığında, belirli insan topluluklarının söz konusu fikirler ve konular hakkında farklı ve önemli görüşlere sahip olabileceği ve bu

nedenle örnekleme dahil edilmesi gerektiği varsayımına dayanmaktadır (Campbell vd., 2020). Amaçlı örnekleme, uygun ve yararlı bilgi verme olasılığı en yüksek olan yanıtlayanları seçmek için kullanılır (Kelly, 2010) ve sınırlı araştırma kaynaklarını etkili bir şekilde kullanacak vakaları belirlemenin ve seçmenin bir yoludur (Palinkas vd., 2015). Öğretmenler ve ebeveynler çalışmaya gönüllü olarak katılmış olup, katılımcıların her birinden gönüllü olur formu alınmıştır. Çalışmada katılımcıların gerçek isimleri yerine onları tanımlayan (Ö1,Ö2,Ö3… ve E1, E2, E3…) kod adları kullanılmıştır. Katılımcı öz nitelikleri Tablo1' de sunulmuştur.

Tablo1. Katılımcıları Öz Nitelikleri

Katılımcı	Cinsiyet	Kadın	17
		Erkek	10
	Mesleki Kıdem	1-5 Yıl	5
		6- 10 Yıl	3
Öğretmen		11-15 Yıl	4
		16-20 Yıl	7
		21 Yıl ve üzeri	8
	Görev Yaptığı Bölge	İl Merkezi	15
		İlçe	7
		Köy	5
Ebeveyn	Cinsiyet	Kadın	25
		Erkek	6
	Mezuniyet	Lisans Üstü	6
		Lisans	15
		Ortaöğretim	10

Tablo1 incelendiğinde, araştırmaya 27 sınıf öğretmeninin (17 kadın ve 10 erkek) ve 31 ebeveynin (25 kadın ve 6 erkek) katıldığı görülmektedir. Öğretmenlerin mesleki kıdemleri incelendiğinde, 5 öğretmenin 1-5 yıl, 3 öğretmenin 6-10 yıl, 4 öğretmenin 11-15 yıl, 7 öğretmenin 16-20 yıl ve 8 öğretmenin ise 21 yıl ve üzeri kıdeme sahip olduğu belirlenmiştir. Ayrıca, bu öğretmenlerin 15'i il merkezinde, 7'si ilçede ve 5'i köyde görev yapmaktadır. Araştırmaya katılan ebeveynlerin 6'sının lisansüstü, 15'inin lisans ve 10'unun ortaöğretim kurumundan mezun olduğu tespit edilmiştir.

Veri Toplama

Araştırma kapsamında veriler, yarı yapılandırılmış görüşme formu kullanılarak toplanmıştır. Araştırmacı görüşmeye başlamadan önce, katılımcılardan toplanan bilgilerin gizli kalacağı ve araştırma dışında kullanılmayacağı ile ilgili etik hususlar hakkında bilgi vermiştir. Görüşmeye, katılımcıların demografik bilgileri alınarak başlanmıştır. Sonra görüşme formundaki sorular sorulmuştur. Bu görüşme formundaki sorulara ek olarak, katılımcılara "... hakkında daha ayrıntılı bilgi verebilir misiniz?" ve "... durumunu bir örnekle açıklayabilir misiniz?" gibi takip soruları yöneltilmiştir ve katılımcıların ilkokul kademesinde ev ödevlerine ilişkin öğretmen ve ebeveyn görüşleri detaylı bir şekilde incelenmiştir. Yüz yüze yapılan görüşmeler yaklaşık 40-45 dakika sürmüştür. Görüşmeler ses kayıt cihazı ile kaydedilmiştir. Görüşme kayıtları katılımcılara dinletilerek onayları alınmıştır. Daha sonra görüşmeler bire bir kâğıda aktarılmıştır.

Veri Toplama Aracı

Katılımcıların, ilkokul kademesinde ev ödevlerine ilişkin sınıf öğretmenleri ve ebeveynlerin görüşlerini belirlemek amacıyla araştırmacı tarafından yarı yapılandırılmış görüşme formu hazırlanmıştır. Görüşme formu için öncelikle taslak sorular hazırlanmıştır. Hazırlanan bu sorular; sınıf eğitimi ve eğitim bilimleri alanlarında uzman iki kişi tarafından incelenmiştir. Bu uzmanlar, formun uygunluğunu değerlendirerek iç geçerliliğini değerlendirmiş ve gerekli dönütler vermiştir. Uzmanlardan alınan geri dönütlere göre görüşme formuna son şekli verilmiştir. Bu süreç, formun güvenilirliğini artırmak için uygulanmıştır. Araştırmada kullanılan görüşme soruları Ek1' de sunulmuştur.

Veri Analizi

İlkokul kademesinde ev ödevlerine ilişkin sınıf öğretmenleri ve ebeveynlerin görüşlerinin tespit edilmesi amacıyla, sınıf öğretmenleri ve ebeveynler ile görüşmeler yapılarak veriler toplanmıştır. Bu kapsamda öğretmenler ve ebeveynlerin görüşmelerdeki yanıtlarını betimlemek için içerik analizi yöntemi kullanılmıştır. İçerik analizi, olguların, anlamların ve nüansların anahtar kelime olarak yer aldığı durumlar ile ilgilenmektedir (Merriam & Tisdell, 2015). Transkripsiyon süreci, nitel veri analizi süreçlerine, dilbilgisi ve konuşma işaretlerine hâkimiyeti olan yazar ve araştırma asistanı tarafından gerçekleştirilmiştir. Bunlar daha sonra MAXQDA' ya yüklenmiştir. Elde edilen veriler MAXQDA programına işlendikten sonra frekans değerleriyle birlikte kapsamlı bir kodlama çerçevesi oluşturulmuştur. İlk veri kodlamaları yazar ve bir araştırma asistanı tarafından gerçekleştirilmiştir. Bu süreçte güvenilirliği sağlamak amacıyla, yazar ve araştırma asistanı tarafından açık kodlama yöntemi kullanarak görüşmelerin tamamının bağımsız olarak ilk temaları belirlenmiştir. İlk temalar belirlendikten sonra karşılaştırılmış, tartışılmış ve işbirliği içinde düzenlenmiştir. Araştırmanın güvenilirliğini artırmak için verilerin yaklaşık %40'ı kaydedilmiş ve değerlendiriciler arası uyum oranı Cohen's Kappa istatistiği kullanılarak değerlendirilmiş ve bu oranın yüksek kabul edilebilecek bir düzeyde olduğu belirlenmiştir (%0.92). Bu veriler üzerinde belirli temaları ve kategorileri tanımlamak için kodlar oluşturulmuştur. Bu kodlar MAXQDA içinde yapılandırılmış ve ilgili veri parçalarına atanmıştır. Kodlanmış verilerin analizleri gerçekleştirilerek benzer kodlar gruplandırılmıştır. Ardından, temalar ve kategoriler oluşturulmuştur. Araştırmada kullanılan kodlama çerçevesi, araştırma sorularına uygun olarak belirlenmiş temalar ve kategorilerden oluşmaktadır. Bu çerçeve, veri analizi sürecinde kullanılan kodların yönlendirilmesine ve organize edilmesine yardımcı olacak şekilde tasarlanmıştır.

Etik Kurul Beyanı

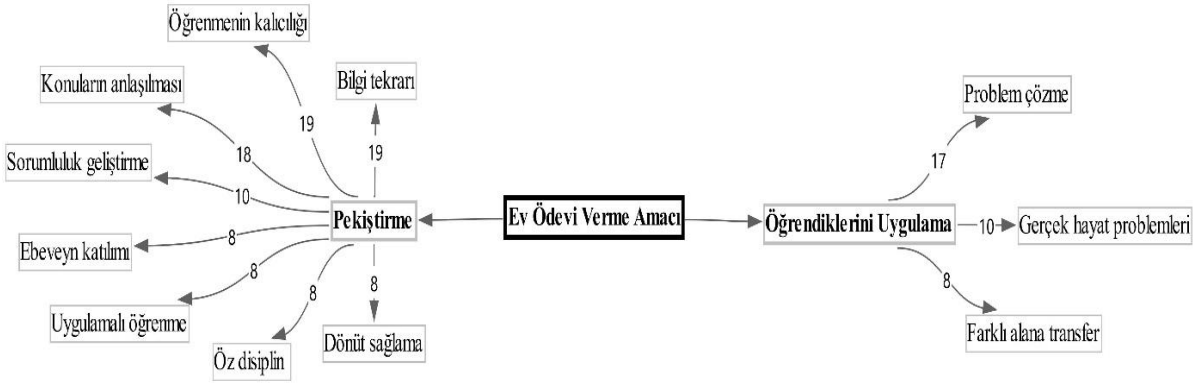
Bu makalede dergi yazım kuralları, yayın ilkeleri, araştırma ve yayın etiği kuralları, dergi etik kurallarına uyulmuştur. Araştırma ile ilgili oluşabilecek her türlü ihlalin sorumluluğu yazara aittir. Araştırma Fırat Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu'nun 12.07.2024 tarih ve 25738 sayılı onayı ile gerçekleştirilmiştir.

Bulgular

Araştırmaya katılan sınıf öğretmenleri ve ebeveynlerin ev ödevleri ile ilgili görüşlerinden elde edilen bulgular aşağıdaki tablolarda sunulmuştur.

Sınıf Öğretmenlerinin Ev Ödevi Verilmesindeki Ana Amaçlarına İlişkin Görüşleri

Sınıf öğretmenlerinin ev ödevi vermelerindeki ana amaçlarına ilişkin görüşlerinden elde edilen tema ve kodlar Şekil 1' de sunulmuştur.



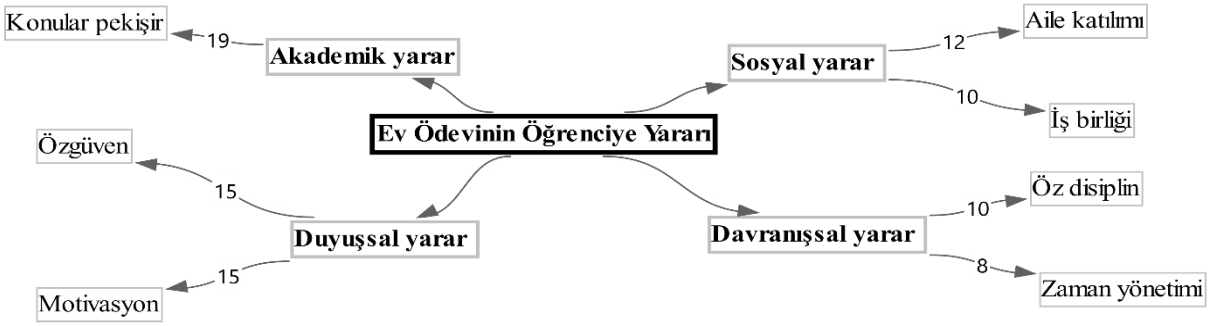
Şekil 1. Sınıf öğretmenlerinin ev ödevi verme amaçlarına yönelik görüşleri

Çalışmaya katılan öğretmenler, ev ödevlerinin öğrencilerin konuları pekiştirmeleri ve öğrendiklerini uygulamaları için verildiğini belirtmiştir. Özellikle bilgi tekrarı, öğrenme kalıcılığı ve konuların pekiştirilmesi amacıyla ev ödevlerinin verildiği tespit edilmiştir. Ayrıca, ev ödevlerinin problem çözme becerilerini geliştirme, gerçek hayatla ilişkili kurabilme ve öğrendikleri bilgileri farklı alanlarda kullanmalarını sağlama amaçlarıyla verilmesi, öğretmenler tarafından tercih edilmektedir. Araştırmaya katılan SÖ7 "ev ödevlerini genellikle konu tekrarı olması açısından veriyorum. Bununla birlikte konuların pekişmesi ve sorumluluk duygusu gelişmesi noktasında katkı sağlayacağını düşünüyorum" şeklinde belirtmiştir. Ayrıca benzer şekilde SÖ9 ve SÖ10 ' da "… ders süresinin yeterli olmaması ve sınıf mevcudunun fazla olması nedeniyle, konuların tekrarı ve pekişmesi açısından ödev veriyorum…" şeklinde ödev verme sebebini açıklamıştır. Öğretmenlerden SÖ18, "Özellikle sayısal derslerde farklı problemleri çözmek için yeterli zaman olmuyor. Bu nedenle ödev verip daha fazla

problem çözmelerini ve pratik yapmalarını sağlıyorum...” demiştir. SÖ12, öğrenmenin kalıcılığını artırmak için verdiği ödevlerle ilgili görüşünü aşağıdaki ifadeyle dile getirmiştir: “Öğrenciler tekrar yapmadıkları zaman öğrettiğimiz ders içeriğini unutuyorlar. Tekrar yapmak için işlediğimiz konuyla ilgili ödev veriyorum ev ödevi olarak. Böylece daha kalıcı oluyor...” dedi.

Sınıf Öğretmenlerinin Ev Ödevinin Öğrenciler Açısından Önemine İlişkin Görüşleri

Sınıf öğretmenlerinin ev ödevinin öğrenciler açısından önemine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 2’ de sunulmuştur.



Şekil 2. Sınıf öğretmenlerinin ev ödevinin öğrenciler açısından önemine ilişkin görüşleri

Çalışmaya katılan öğretmenlerin ev ödevlerinin öğrencilere akademik, duyuşsal, sosyal ve davranışsal açıdan yararlı olabileceğine yönelik görüşleri tespit edilmiştir. Öğretmenler, ev ödevlerinin konuların pekiştirilmesi yoluyla akademik yarar sağlayacağını, öz güven ve motivasyon geliştirerek duyuşsal yarar sağlayacağını belirtmiştir. Ayrıca, ev ödevleri ile aile katılımının artacağı ve iş birliği yapılarak sosyal yarar sağlanacağı, öz disiplin ve zaman yönetimi becerilerini geliştirerek davranışsal yarar sağlanacağı görüşleri de belirlenmiştir. Araştırmaya katılan SÖ21 “… mevcut şartlarda çocuklara sınıf ortamında her şeyi aktaramıyoruz. Bu nedenle ev ödevleri vererek ailelerinde desteğini almayı amaçlıyorum. Ev ödevleri ile konuları pekiştireceğini ve özellikle sorumluluk duygusunun artacağını düşünüyorum…” şeklinde ifade etmiştir. SÖ22 ise “… aileleri sürecin içine çektiği, öz disiplin ve motivasyon arttıracağını düşünüyorum…” şeklinde öğrencilere sağlayabileceği yarara dikkat çekmiştir.

Sınıf Öğretmenlerinin Ev Ödevlerini Nasıl Hazırladıklarına İlişkin Görüşleri

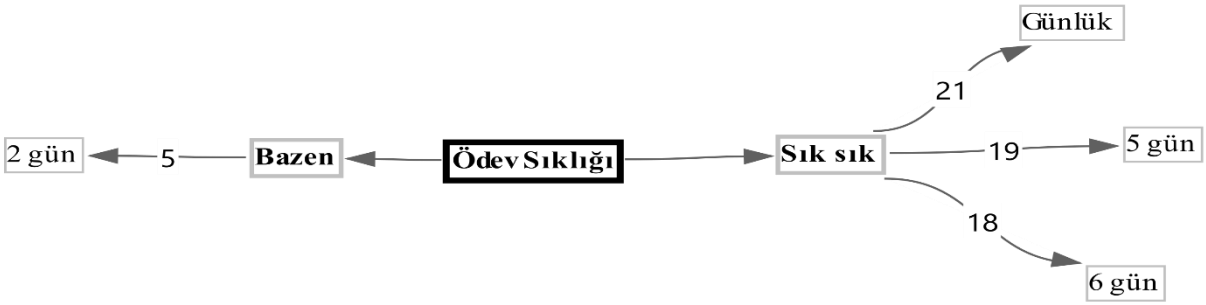
Sınıf öğretmenlerinin ev ödevlerini nasıl hazırladıklarına ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 3’te sunulmuştur.

Şekil 3. Sınıf öğretmenlerinin ev ödevi nasıl hazırladıklarına ilişkin görüşleri

Çalışmaya katılan öğretmenlerin, ev ödevlerini hazırlarken kaynak kitaplar, ders kitapları ve internet gibi hazır kaynaklardan yararlandıklarına ilişkin görüşleri tespit edilmiştir. Araştırmaya katılan sınıf öğretmenlerinden SÖ5 “… zaman yetersizliğinden dolayı, hazır kaynak kitaplardan ödevlendirme yapıyorum. Ayrıca internet üzerinden de ulaştığım soruları da ödev olarak veriyorum…” şeklinde belirtmiştir. SÖ14 ise “… kaynak kitap alınmasına izin verilmiyor. Aileler tepki gösteriyor. O nedenle internet sayfalarından hazır dokümanları alıp ödev olarak veriyorum…” ifade etmiştir. Araştırmaya katılan sınıf öğretmenlerinin büyük çoğunluğunun SÖ5 ve SÖ14 gibi düşündükleri belirlenmiştir.

Sınıf Öğretmenlerinin Ev Ödevlerini Hangi Sıklıkla Verdiklerine İlişkin Görüşleri

Sınıf öğretmenlerinin ev ödevlerini hangi sıklıkla verdiklerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 4’ te sunulmuştur.

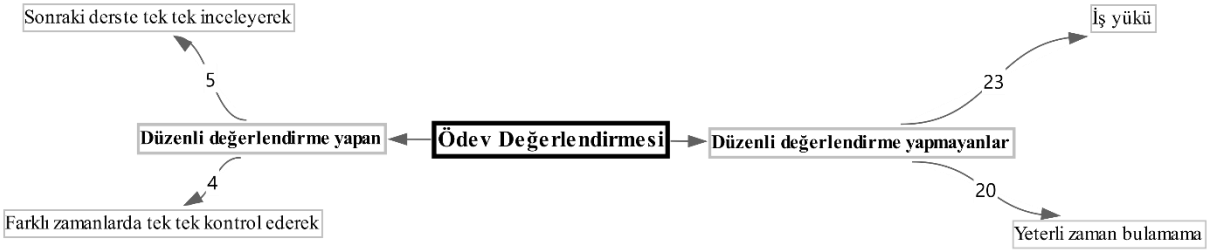


Şekil 4. Sınıf öğretmenlerinin ev ödevini hangi sıklıkla verdiklerine ilişkin görüşleri

Çalışmaya katılan öğretmenlerin, ev ödevlerini beş gün, altı gün ve günlük olarak sık sık verdiklerine, bazen de iki gün gibi daha kısa süreli ödevler verdiklerine ilişkin görüşleri tespit edilmiştir. Araştırmaya katılan SÖ8 "… aslında çok ödev vermek istemiyorum ancak veliler bu konuda beni çok sıkıştırıyorlar. O nedenle hemen hemen her güne bir ödev vermeye çalışıyorum…" şeklinde sık ödev verdiğini ve sebebini açıklamıştır. SÖ9 ise "… derste işlediğimiz konuların pekişmesi için günlük ödev vermeye çalışıyorum. Sadece hafta sonları bir gün ödev vermeden öğrencilerimin dinlenmesine izin veriyorum…" şeklinde ifade etmiştir. SÖ20 ise "… genel de ödev vermiyorum. Ödevin ilkokul çocuklarına çok katkısı olduğunu düşünmüyorum. Bunun için bazen ödev veriyorum. Genelde pazartesi ve Cuma günleri ödevlendirme yapıyorum…" şeklinde belirtmiştir.

Sınıf Öğretmenlerinin Ev Ödevlerini Nasıl Değerlendirdiklerine İlişkin Görüşleri

Sınıf öğretmenlerinin ev ödevlerini nasıl değerlendirdiklerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 5'te sunulmuştur.

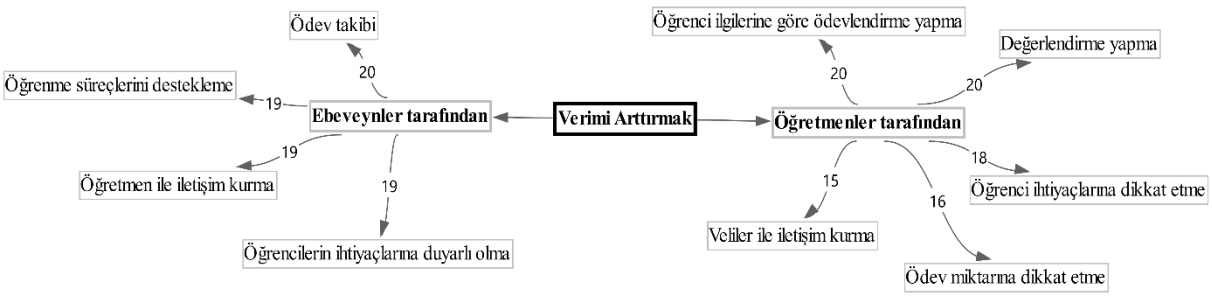


Şekil 5. Sınıf öğretmenlerinin ev ödevlerini nasıl değerlendirdiklerine ilişkin görüşleri

Çalışmaya katılan öğretmenlerin, ev ödevlerini sonraki derslerde tek tek inceledikleri ve farklı zamanlarda bireysel olarak değerlendirdiklerine ilişkin görüşleri tespit edilmiştir. Bununla birlikte, iş yüklerinin fazlalığı ve yeterli zaman bulamama nedeniyle düzenli değerlendirme yapamadıklarına dair görüşler de belirlenmiştir. Araştırmaya katılan SÖ12 "… ödev kontrollerini sınıf mevcudunun fazlalığından dolayı pek yapamıyorum…" şeklinde belirtmiştir. Benzer şekilde SÖ17 ise "… ödevleri ben genelde kontrol edemiyorum. Ders süresi ve öğrenci mevcudu bunu yapmamı engelliyor. Bu konuda velilerden destek istiyorum…" şeklinde belirtmiştir. SÖ13 ise "… köy okulunda öğretmenlik yaptığım için, sınıf mevcudum az ve takip eden ders başında verdiğim ödevleri tek tek inceleyip, geri dönütler veriyorum…" şeklinde ifade etmiştir.

Sınıf Öğretmenlerinin Ev Ödevlerinin Verimini Arttırmaya İlişkin Görüşleri

Sınıf öğretmenlerinin ev ödevlerinin verimini nasıl arttırılabileceğine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 6' da sunulmuştur.

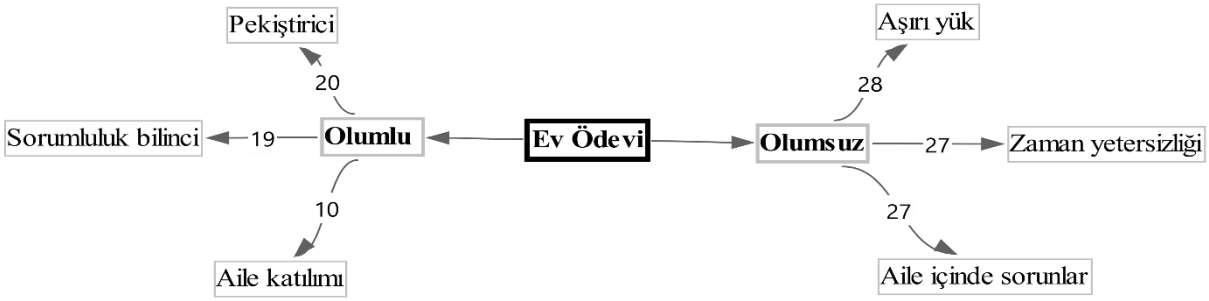


Şekil 6. Sınıf öğretmenlerinin ev ödevlerinin verimini arttırmaya ilişkin görüşleri

Çalışmaya katılan öğretmenler, ev ödevinin etkililiğini artırmak için ebeveynlerin desteğinin önemine dikkat çekmiştir. Öğretmenlerin, ev ödevlerinin veriminin ebeveynler tarafından ödev takibi yaparak, öğrenme süreçlerini destekleyerek, öğretmenlerle iletişim kurarak ve öğrencilerin ihtiyaçlarına duyarlılık göstererek artırılabileceğine ilişkin görüşleri tespit edilmiştir. Ayrıca, öğretmenlerin de öğrencilerin ihtiyaçlarına göre ödevlendirme yapmaları, değerlendirmelerle öğrenci ihtiyaçlarına dikkat etmeleri, ödev miktarına özen göstermeleri ve ebeveynlerle iletişim kurmaları halinde ödev veriminin artırılabileceğine dair görüşleri belirlenmiştir. Araştırmaya katılan SÖ16 "… bunun en gerçekçi çözümü veli desteği almak. Ben kontrolleri yetiştiremiyorum. O nedenle velilerin ödev kontrollerini, ödev yaparken destek verme ve takıldıkları noktada öğretmenlere ulaşmaları gerektiğini düşünüyorum…" görüşüyle ebeveyn desteğinin önemi üzerinde durmuştur. SÖ14 ise "… öğretmenlerin öğrencilerin eksik oldukları konulara göre ödev vermeleri ve aynı zamanda çocukların ilgilerine uygun ödevlendirme şekli uygulamalarının önemli olduğunu düşünüyorum. Ve bence en önemlilerinden bir tanesi de çok fazla ödev verilmemesidir. Veliler ise öğretmenleri ile iletişim halinde olarak, uygun ödev yapma şartlarını sağlamalı ve öğrencileri her anlamda desteklemeleri gerekmektedir…" şeklinde öğrencilerin ilgi ve ihtiyaçlarına uygun ödev verilmesi gerektiğini belirtmiştir. SÖ17 ise "… ödev yapmaktan ziyade değerlendirme mutlaka yapılmalıdır. Ödevler çocukları sıkmayacak kadar olmalıdır. Öğrencilerin motivasyonlarını arttıracak kadar ve türde olmasına dikkat etmek lazım. Velilerde ödevlere destek vermeliler ve uygun şartları sağlamalılar…" ifadeleriyle ödevlerin etkililiği ve miktarı ile ilgili görüşlerini ifade etmiştir.

Ebeveynleri Çocuklarının Ev Ödevleri Hakkındaki Görüşleri

Ebeveynlerin çocuklarının ev ödevlerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 7'de sunulmuştur.

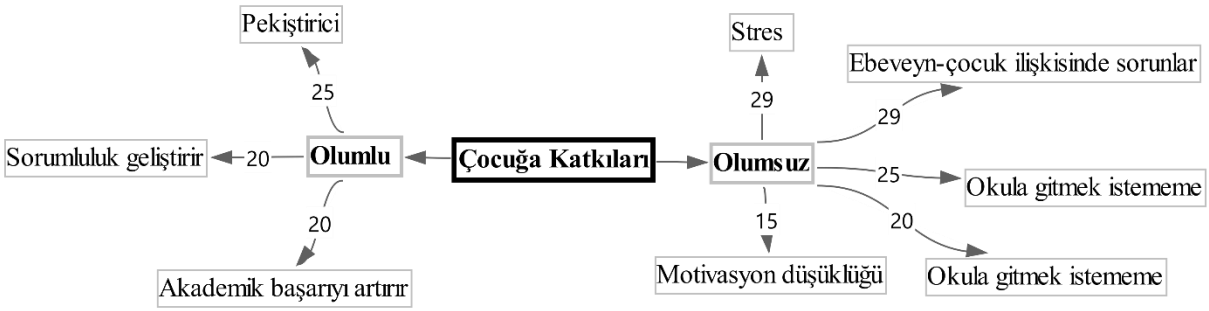


Şekil 7. Ebeveynlerin Çocuklarının Ev Ödevlerine İlişkin Görüşleri

Çalışmaya katılan ebeveynlerin, çocuklarının ev ödevlerinin pekiştirici olduğu, sorumluluk bilincinin gelişmesine katkı sağladığı ve aile katılımını teşvik ettiği yönünde olumlu görüşleri tespit edilmiştir. Bununla birlikte, ev ödevlerinin aşırı yük oluşturması, zaman yetersizliği ve aile içinde sorunlar yaratması nedeniyle ev ödevlerine yönelik olumsuz düşünceleri de belirlenmiştir. Araştırmaya katılan ebeveynlerden E10 "… ev ödevleri derslerin anlaşılması konusunda fayda sağlayacağını düşünüyorum. Ayrıca bende dâhil olarak derslerinden ve durumundan haberdar oluyorum. Ancak çok fazla ödev veriliyor ve kızım çok zorlanıyor. Yetiştiremediği zamanlarda uykusuz kalıyor veya ağlıyor…." şeklinde ev ödevlerine ilişkin bakış açısını belirtmiştir. E15 ise "… ev ödevli konuların anlaşılması ve kalıcı olması açısından önemli ancak benim evde sorunlar yaşama nedenim. Ev ödevleri çok fazla. Kızım ev ödevi yaparken çok zaman kaybediyor ve bundan dolayı sürekli sorunlar yaşıyoruz…" şeklinde belirtmiştir. ebeveynlerin çoğunluğu E10 ve E15 gibi cevap vermiştir.

Ebeveynlerin Ev Ödevlerinin Çocuklara Etkilerine İlişkin Görüşleri

Ebeveynlerin çocuklarının ev ödevlerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 8'de sunulmuştur.

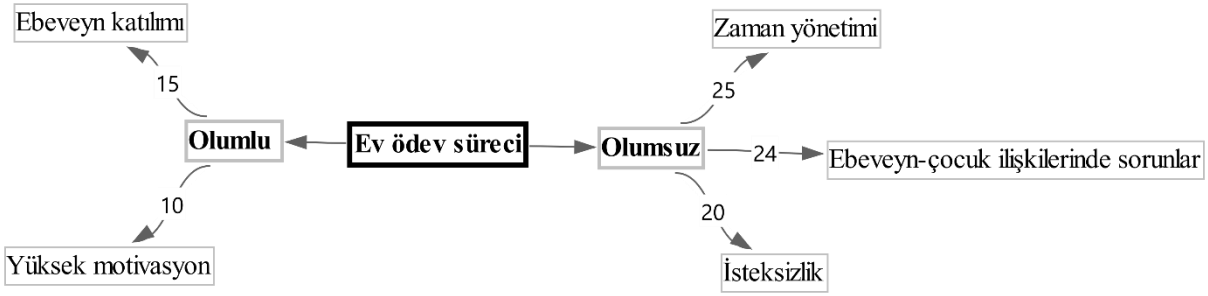


Şekil 8. Ebeveynlerin Ev Ödevlerinin Çocuklara Etkilerine İlişkin Görüşleri

Çalışmaya katılan ebeveynlerin, ev ödevlerinin çocuklar üzerinde pekiştirici, sorumluluk geliştirici ve akademik başarıyı artırıcı olumlu etkileri olduğuna yönelik görüşleri bulunmaktadır. Ancak, bu olumlu etkilerin yanı sıra ev ödevlerinin stres yaratma, ebeveyn-çocuk ilişkilerinde sorunlara yol açma, okula gitme isteksizliği, ders dışı aktivitelere zaman kalmaması ve motivasyon düşüklüğü gibi çocuklar üzerinde olumsuz etkileri olabileceğine dair görüşleri de tespit edilmiştir. Araştırmaya katılan ebeveynlerden E4 "… ödevler konuların anlaşılmasını sağlıyor. Ayrıca kızım ödevlerini yapmadan uyumuyor. Sorumluluk bilinci konusunda onu bu şekilde görmek beni mutlu ediyor…" ifadesiyle ev ödevinin öğrenci üzerindeki olumlu etkisinden bahsetmiştir. E16 ise "… ev ödevlerinden dolayı kızımın konuları daha iyi anlayacağını ve buna bağlı olarak da akademik anlamda başarılı olacağını düşünüyorum. Ancak bu çocuk, ödevlerinin yoğunluğundan dolayı arkadaşları ve bizler ile pek zaman geçiremiyorum…" belirtmiştir. E20 ise "… ödevleri benim kızımda ciddi anlamda stres yapıyor. Çok fazla olduğu için yetiştiremiyor. Yetiştiremediği zaman okula gitmek istemiyor. Ayrıca bu süreçte kızımla ilişkilerimizde bozuluyor. Ödev muhakkak yararlıdır ancak zararları da göz ardı edilmemelidir…" şeklinde ev ödevlerinin olumsuz etkilerini ifade etmiştir.

Ebeveynlerin Çocukların Ev Ödevlerini Yapma Süreçlerine İlişkin Görüşleri

Ebeveynlerin çocukların ev ödevlerini yapma süreçlerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 9'da sunulmuştur.



Şekil 9. Ebeveynlerin Çocukların Ev Ödevlerini Yapma Süreçlerine İlişkin Görüşleri

Çalışmaya katılan ebeveynlerin, çocukların ev ödevlerini yapma süreçlerinde ebeveyn katılımının bulunmasının ve çocuklarının yüksek motivasyonla ödev yapmalarının olumlu etkileri olduğu yönündeki görüşleri tespit edilmiştir. Ancak, bu olumlu düşüncelerin yanı sıra zaman yönetiminin oluşmaması, ebeveyn-çocuk ilişkilerinde sorunlar yaşanması ve isteksizlik gibi olumsuz etkiler de belirtilmiştir. Araştırmaya katılan ebeveynlerden E13 "… kızımın sorumluluk bilinci çok fazladır. O nedenle ödevler ile birlikte bu daha fazla artıyor ve o süreçte motivasyonunun çok fazla olduğunu gözlemliyorum…" ifade etmiştir. E18 ise "… oğlumda zaman yönetimi yok. Gecenin bir vaktine kadar ödevleri bitmiyor. Çok isteksiz davranıyor ve sürekli kavgalar ediyoruz…" şeklinde ifade etmiştir. E21 ise "… ödevlerini yaparken bende sürece dahil oluyorum. Bazen birlikte de yapıyoruz. Bu süreçler bizim adımıza keyifli geçiyor…" belirtmiştir.

Ebeveynlerin Çocukların Ev Ödevlerini Yapma Süreçlerindeki Rollerine İlişkin Görüşleri

Ebeveynlerin çocukların ev ödevlerini yapma süreçlerindeki rollerine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 10'da sunulmuştur.

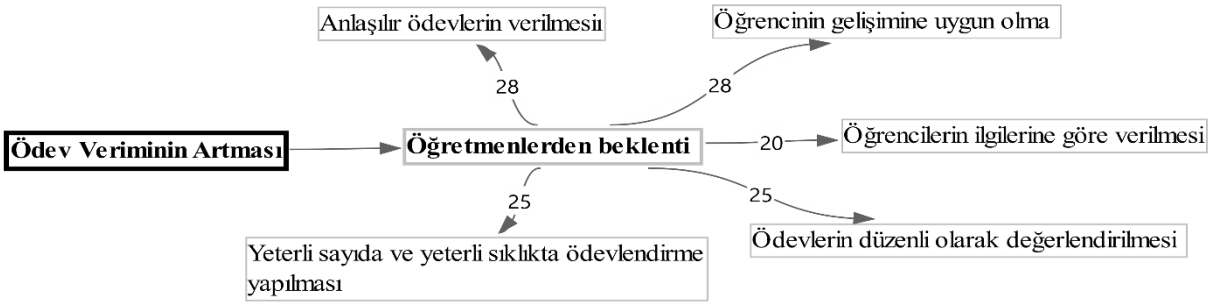
Şekil 10. Ebeveynlerin Çocukların Ev Ödevlerini Yapma Süreçlerindeki Rollerine İlişkin Görüşleri

Çalışmaya katılan ebeveynlerin, çocukların ev ödevlerini yapma süreçlerindeki rollerine ilişkin olarak, destekleyici ve rahat bir ortam sağlayarak motive edici bir role sahip olduklarına yönelik düşünceleri tespit edilmiştir. Ayrıca, çocuklarına planlama yapmalarında yardımcı olma ve ek açıklamalar yapma gibi rehberlik edici roller üstlendiklerine dair görüşler de belirlenmiştir. Bunun yanı sıra, ödevleri kontrol ederek denetleyici bir rol üstlendiklerine yönelik düşünceler de tespit edilmiştir. Araştırmaya katılan ebeveynlerden E2 "… ben

mümkün olduğunca destek vermeye çalışıyorum. Zaman planlamasını kontrol ediyorum. Ödevlerini en sonunda kontrol ediyorum…" şeklinde belirtmiştir. Ebeveynlerin çoğunluğu E2 benzer cevap vermiştir. E8 ise, "… ödevlerini yapması için dikkatini dağılmayacağı uygun bir oda hazırlıyorum. Ödevleri ile ilgili anlamadığı durumlarda ek açıklamalarda yapıyorum…" şeklinde çocuğuna olan destek ve rehberliğini belirtmiştir. E5 "… oğlumun başında durup, ödev yapana kadar yanından ayrılamıyorum. Sürekli onu kontrol etmem gerekiyor…" şeklinde çocuğunun ev ödevi yaparken üstlendiği rolü ifade etmiştir.

Ebeveynlerin Ev Ödevlerinin Veriminin Nasıl Arttırılabileceğine İlişkin Görüşleri

Ebeveynlerin ev ödevlerinin veriminin nasıl arttırılabileceğine ilişkin görüşlerinden elde edilen tema, kategori ve kodlar Şekil 11' de sunulmuştur.



Şekil 11. Ebeveynlerin Ev Ödevlerinin Veriminin Nasıl Arttırılabileceğine İlişkin Görüşleri

Çalışmaya katılan ebeveynlerin, öğrencilerin gelişimine ve ilgi alanlarına uygun, anlaşılabilir bir şekilde verilen yeterli miktarda ve sıklıkta ev ödevleri ile ilgili öğretmenlerden beklentileri olduğuna dair görüşleri tespit edilmiştir. Ayrıca, ev ödevlerinin düzenli olarak değerlendirilmesi gerekliliği konusunda da beklentileri bulunmaktadır. Araştırmaya katılan ebeveynlerden E4 "… ödevlerin çocukların ihtiyaçlarına uygun ve az verilmelidir. Ayrıca öğrencinin yaptığı ödevlerin kontrol edilmesi de mutlaka yapılmalıdır…" şeklinde belirtmiştir. E8 "… harflerin nasıl öğretileceğini bilmiyorum. Okuma yaptırırken nelere dikkat etmem gerektiğini bilmiyorum. Ben eski tarz öğrenim aldım. Şimdi bambaşka o nedenle ödevlendirme yapılırken bunlara da dikkat edilmeli. Ayrıca soruları bazen ben bile anlamıyorum. Öğrencilerin seviyelerine göre ödevlendirme yapılmalıdır. Ayrıca her gün bir sürü ödev vermek çocukları okuldan soğutmakta ve çocuklar ile sorunlar yaşamaktayız…" şeklinde ev ödevlerinin nasıl olması gerektiği ile ilgili beklentilerinden bahsetmiştir. E1 ise "… benim kızım soru çözmekten çok sıkılıyor. Onun yerine başka tarz ödevler verilmesi gerektiğini düşünüyorum. Ayrıca ödev kontrolleri mutlaka yapılmalı ve bunların çocuk oldukları unutulmadan çok fazla ödev verilmemelidir…" şeklinde görüşlerini ifade etmiştir.

Sonuç ve Tartışma

Araştırmanın amacı, ilkokul kademesinde ev ödevlerine ilişkin sınıf öğretmenleri ve ebeveynlerin görüşlerini incelemektir. Bu kapsamda sınıf öğretmenleri ve ebeveynler ile görüşmeler yapılmıştır. Yapılan görüşmelerden elde edilen sonuçlar aşağıda yer almaktadır. Çalışmaya katılan öğretmenlerin, ev ödevlerini bilgi tekrarı, öğrenme kalıcılığı ve konuların anlaşılmasını pekiştirme, öğrencilerin problem çözme becerilerini geliştirme, gerçek hayatla ilişki kurabilme ve öğrendikleri bilgileri farklı alanlarda kullanmalarını sağlayabilmek için verdikleri tespit edilmiştir. Öğretmen görüşlerine benzer şekilde ebeveynlerde ev ödevlerinin pekiştirici olduğu, çocukların sorumluluk bilincinin gelişmesine katkı sağladığı ve aile katılımını teşvik ettiği yönünde olumlu görüşleri belirlenmiştir. Fakat bu olumlu görüşler ile birlikte ebeveynlerin ev ödevlerinin aşırı yük oluşturması, zaman yetersizliği ve aile içinde sorunlar yaratması nedeniyle ev ödevlerine yönelik olumsuz düşünceleri de bulunmaktadır. Araştırma sonuçları, öğretmenler ve ebeveynlerin ev ödevlerine yönelik görüşlerinin büyük ölçüde benzer olduğunu, ancak ebeveynlerin ev ödevleriyle ilgili olumsuz düşüncelere de sahip olduklarını ortaya koymaktadır. Literatürde, ev ödevleri, hem entelektüel çalışma tekniklerinin ve temel becerilerin pekiştirilmesine hem de öz saygı, öz yeterlilik ve özgüvenin gelişmesine katkıda bulunarak çocukların öğrenme ve gelişimini artırma potansiyeline sahip olduğu, öğrencilerin öz disiplinini geliştirdiği, öğrendikleri konuları pekiştirdiği ve akademik başarıyı arttırdığı belirtilmiştir (Centeio vd., 2018; Cooper vd., 2006; Dilekçi, 2023; Dolean & Lervag, 2022; Hampden-Thompson vd., 2013; Norhayati & Rahya, 2023; Syla, 2023). Bununla birlikte, ebeveynlerin ve öğretmenlerin önemli bir kısmı, ev ödevlerinin öğrencilere aşırı iş yükü riski taşıdığı ve öğrenci refahı üzerinde olumsuz etkiler yarattığı konusunda endişelerini dile getirmiştir. (Cooper vd., 2006; Duru ve Çöğmen, 2017; Skaggs, 2007). Bu nedenle, ev ödevi genel olarak faydalı görülse de, bu problemlerden kaçınmak için uygulanması ve tasarımı dikkatli bir şekilde ele alınmalıdır.

Çalışmaya katılan öğretmenler, ev ödevlerinin öğrencilere akademik, duyuşsal, sosyal ve davranışsal açıdan yarar sağlayabileceğine yönelik görüşler bildirmişlerdir. Öğretmenlere göre ev ödevleri, konuları

pekiştirerek akademik fayda sağlamanın yanı sıra özgüven ve motivasyonu artırarak duyuşsal fayda da sağlayacaktır (Duru ve Çöğmen, 2017; Ok, 2018). Öğretmenler ev ödevlerinin, konuların pekiştirilmesi yoluyla akademik yarar; öz güven ve motivasyonlarını geliştirerek duyuşsal yarar sağlayacağına yönelik görüşleri belirlenmiştir. Ev ödevlerinin, ebeveyn-öğrenci iletişimini geliştireceği, iş birliği yoluyla sosyal becerilerinin gelişimini olumlu etkileyeceği ve davranışsal olarak öz disiplin ve zaman yönetimi becerilerinin geliştirilebileceğine yönelik görüşleri bulunmaktadır. Ebeveynler ise, ev ödevlerinin çocuklar üzerindeki pekiştirici, sorumluluk geliştirici ve akademik başarıyı artırıcı olumlu etkileri olduğuna yönelik görüşleri belirlenmiştir. Fakat, bu olumlu etkilerin yanı sıra ev ödevlerinin çocuklar üzerinde stres yaratma, ebeveyn-çocuk ilişkilerinde sorunlara yol açma, okula gitme isteksizliği, ders dışı aktivitelere zaman kalmaması ve motivasyon düşüklüğü gibi olumsuz etkileri olabileceğine dair görüşleri de yer almaktadır. Bu sonuçlar, ev ödevlerinin hem öğretmenler hem de ebeveynler tarafından öğrencilere çeşitli açılardan yarar sağladığının düşünüldüğünü ortaya koymaktadır. Ancak, ebeveynlerin vurguladığı olumsuz etkiler, ev ödevlerinin uygulanmasında dikkat edilmesi gereken önemli noktalar olduğuna işaret etmektedir. Ebeveynler ve öğretmenler tarafından vurgulanan, özellikle ev ödevlerinin zaman alıcı doğası ve ders dışı etkinliklere zamanın kalmaması ile ilgili endişeler, ev ödevlerinin etkinliğini değerlendirmek için kritik bir projeksiyon sunmaktadır. Bu endişeler, aşırı ev ödevinin olumsuz etkilerine karşı uyarıda bulunan ve dengeli bir yaklaşımın gerekliliğini vurgulayan çalışmaların bulgularını yansıtmaktadır (Eshun, 2021; Mbogo, 2021; Pollard, 2023). Bu nedenle öğretmenlerin, öğrencilerin bireysel farklılıklarını dikkate alarak, ev ödevlerinin miktarını ve niteliğini ayarlaması durumunda hem akademik başarıya katkıda bulunup hem de öğrencilerin duyuşsal ve sosyal gelişimlerini destekleyebilecekleri görülmektedir (Feraco vd., 2023; Reeve vd., 2020). Bu denge, öğrenci motivasyonunu ve ilgisini korumak için çok önemlidir (Dolean & Lervag, 2022). Dolean ve Lervag (2022) ev ödevlerinin pratik yapmak için ek fırsatlar sunduğunu ve bunun da ilkokul öğrencilerinin öğrenme başarısı üzerinde kısa ve orta vadede farklı etkileri olabileceğini belirtmiştir. Araştırma sonuçları, ilkokulda ödev yapmanın öğrencilere daha fazla öz disiplin kazandırdığını ve zaman yönetimi becerilerini geliştirdiğini göstermektedir (Cooper vd., 2006). Ayrıca bireylerin belirli bir alanda uzman performansına ulaşmasının uzun süreli, planlı bir pratik yaparak gerçekleştirebildikleri görülmektedir (Anderson & Graham, 2016; Burns vd., 2015; Ericsson vd., 2018; Nelson vd., 2013). İlkokul öğretmenlerinin sınıfta kapsamlı uygulama ve tekrar yapabilecek yeterli zamanları bulunmamaktadır (Ballet & Kelchtermans, 2009; Skinner vd., 2021; Van Droogenbroeck vd., 2014). Bu nedenle, öğrencilere kazandırılacak becerilerle ilgili sınırlı okul saatleri dışında da uygulama ve tekrar yapmalarını sağladığı için ev ödevleri, öğrencilerin akademik performanslarını artırmalarına yardımcı olabilir. Fakat, ilkokul öğrencilerine ödev vermenin önemli derecede eleştirildiğini de göz ardı etmemek gerekir (Bennett & Kalish, 2007; Kohn, 2006). Bunun için, öğretmenlerin sınıf içi uygulamalarda, ev ödevlerinin öğrencilerin akademik gelişimini desteklerken, olumsuz etkilerini minimize edecek stratejiler geliştirilmesi gerekmektedir. Bununla birlikte, öğretmenler ve ebeveynler arasında etkin bir iletişim ve iş birliği kurularak ev ödevlerinin amacına uygun olarak hazırlanıp uygulanmasını sağlamak kritik bir öneme sahiptir. Öğrencilerin bireysel farklılıkları dikkate alınarak, ev ödevlerinin miktarı ve niteliği ayarlanmalı, böylece hem akademik başarıya katkıda bulunulmalı hem de öğrencilerin duyuşsal ve sosyal gelişimleri desteklenmelidir.

Çalışmaya katılan öğretmenlerin, ev ödevlerini hazırlarken kaynak kitaplar, ders kitapları ve internet siteleri gibi hazır kaynaklardan yararlandıklarına ilişkin görüşleri tespit edilmiştir. Demir ve Yaman (2020) tarafından yapılan çalışmada da öğretmenlerin bu tür kaynaklardan sıklıkla yararlandıkları görülmektedir (Demir & Yaman, 2020). Ancak, bu tür kaynakların kullanımı bazı potansiyel sorunları da beraberinde getirebilir. Örneğin, internet sitelerindeki çalışmaların uygunluğu ve doğruluğu her zaman bilinememekte ve denetlenmemektedir (Demir & Yaman, 2020). Bu durum, öğrencilerin yanlış veya yanıltıcı bilgilerle karşılaşma riskini artırabilir. Bu sebeple öğretmenlerin, öğrencilerin bireysel farklılıklarını dikkate alarak ev ödevleri vermesi önem taşımaktadır. Böylece ev ödevleri, öğrencilerin akademik, duyuşsal ve sosyal alanlarda gelişimlerini desteklenmesinde faydalı olabilecektir (Dolean & Lervag, 2022). Ayrıca öğrencilerin becerilerindeki gelişimleri, genel olarak akademik motivasyonunu ve ilgisini de olumlu yönde etkileyecektir (Dolean & Lervag, 2022). Sonuç olarak, öğretmenlerin çeşitli kaynaklardan yararlanarak, ev ödevlerini zenginleştirmeleri önemlidir. Ancak, bu kaynakların uygunluğu konusunda dikkatli olunması gerekmektedir. Ayrıca, öğrencilerin bireysel farklılıklarına uygun olarak hazırlanmış ev ödevleri ile onların gelişimlerini arttırmak mümkün olacaktır. Öğretmenlerin bu bakış açıları, ev ödevlerinin etkinliğini artıracak ve öğrenci her alanda gelişimine olumlu katkılar sağlayacaktır.

Çalışmaya katılan öğretmenlerin, ev ödevlerini beş gün, altı gün ve günlük olarak sık sık verdiklerine, bazen de iki gün gibi daha kısa süreli ödevler verdiklerine ilişkin görüşleri tespit edilmiştir. Literatürde, öğrencilerin bağımsız olarak yapamayacağı, tekrarlayan, monoton veya uzun süreli ödevlerin verilmemesi gerektiği ve bu tür ödevleri öğrencilerin yapmaktan hoşlanmadıklarını tespit eden çalışmalar bulunmaktadır (McCrory Calarco vd., 2022; Medwell & Wray, 2019; Wilder, 2023). Bunlarla birlikte çocuklar, ev ödevlerinin miktarı ve doğasıyla ilişkili olarak aşırı stres ve uyku düzensizlikleri yaşayabilmektedir (Holland vd., 2021).

Çocukların ders çalışmak için geç saatlere kadar uyanık kalması şiddetli yorgunluk ve depresyona yol açabilmektedir (Holland vd., 2021; Zhou vd., 2015). Ev ödevlerinin tamamlanmasında öğrencilerin duyguları göz ardı edilemeyecek kadar önemlidir (Katz vd., 2012; Kennewell vd., 2022). Öğrenciler ödevlerini sıkıcı bulduklarında dikkatlerinin dağılma olasılığı artmakta ve bu durum da olumsuz duygusal tepkilere yol açabilmektedir (Xu, 2013). Yaşadıkları kaygı, konsantrasyon eksikliği, korku ve erteleme gibi olumsuz duygular öğrencilerin akademik başarısını ve refahını olumsuz etkilerken, olumlu duygular ise farkındalığı, dikkati, başa çıkmayı, öz yeterliliği, özgüveni ve yeterlilik duygusunu desteklemektedir (Katz vd., 2012; Kennewell vd., 2022). Bu bulgular, ev ödevlerinin etkinliğinin sadece akademik başarı ile değil, aynı zamanda öğrencilerin duygusal durumlarıyla da yakından ilişkili olduğunu göstermektedir. Bu nedenle öğretmenler, ev ödevlerinin miktarını, bitirme süresini ve içeriğini planlarken öğrencilerin duygusal ihtiyaçlarını da göz önünde bulundurmalı, ödevlerin ilgi çekici, motive edici ve öğrencilerin ulaşabileceği düzeyde olmasına dikkat etmelidir. Bu şekilde ev ödevlerinin etkililiği artırılabilir.

Çalışmaya katılan öğretmenlerin, ev ödevlerini tek tek inceledikleri ve farklı zamanlarda bireysel olarak değerlendirdiklerine ilişkin görüşleri tespit edilmiştir. Ayrıca bazı öğretmenler, fazla iş yükü ve zaman yetersizliğinin düzenli değerlendirme yapmalarını engellediği görüşünü dile getirmiştir. Literatür, öğretmenlerin ilkokul öğrencilerinin ödevlerini kontrol edip geri bildirimde bulunmasının öğrencilerin bilgilerini pekiştirdiğini, özgüvenlerini artırdığını ve onları yeni beceriler öğrenmeye teşvik ettiğini ileri sürmektedir. Öğretmenler ödevleri kontrol etmediğinde ise, öğrenciler ödev yapmaktan kaçınma eğilimindedir (Anderson & Graham, 2016). Bu bulgular, öğretmenlerin ödevleri düzenli olarak kontrol etmesinin ve geri bildirim sağlamasının önemini vurgulamaktadır. Öğretmenlerin zaman yönetimi becerilerini geliştirmeleri ve iş yüklerini azaltacak stratejiler belirlemeleri, öğrencilerin ödevlere daha olumlu yaklaşmalarını ve bu süreçten daha fazla fayda sağlamalarını sağlayabilir.

Çalışmaya katılan öğretmenler ev ödevlerinin veriminin, ebeveynlerin de ödev takibi yapması, öğrenme süreçlerini desteklemesi, öğretmenlerle iletişim kurması ve öğrencilerin ihtiyaçlarına duyarlı olması ile artırılabileceğine ilişkin görüşlere sahip oldukları tespit edilmiştir. Ayrıca, öğretmenlerin de öğrencilerin ilgilerine, ihtiyaçlarına göre ödevlendirme yapmaları, ödevlerle ilgili değerlendirmeler yaparak ödev miktarına özen göstermeleri ve ebeveynlerle iletişim kurmalarının, ödev veriminin artırılması için gerekli olduğuna dair görüşleri belirlenmiştir. Ebeveynlerin ise, öğretmenlerin öğrencilerin gelişimine ve ilgi alanlarına uygun, anlaşılabilir, yeterli miktarda ve sıklıkta verilen ödevler vermelerini ve öğretmenlerin düzenli olarak bu ödevleri değerlendirmeleri beklentisi içerisinde olduğu görülmektedir. Literatürde, ilkokul öğrencileri için ödevlerin, öğrencilerin kendi ilgi ve ihtiyaçlarına uygun şekilde çeşitlendirilmesinin, ödev yapmaya karşı istek ve sempatilerini artırdığı vurgulanmaktadır (Medwell & Wray, 2019; Negru & Sava, 2022). Ayrıca, çocuklarının psikolojik ihtiyaçlarını destekleyen ebeveyn davranışlarının, sadece çocuklarının ruh sağlığına fayda sağlamakla kalmayıp, aynı zamanda ev ödevleriyle ilgili motivasyonlarını (Katz vd., 2012) ve çabalarını (Feng vd., 2019) olumlu yönde etkilediği belirtilmektedir. Dahası, ebeveynler, çocuklarının ev ödevlerinde başarılı olduğunu gördüklerinde, destekleri bu başarıyı pekiştiren özerk bir odağı benimser (Dumont vd., 2014). Ebeveynlerin ev ödevlerine katılım kalitesi, öğrencilere destekleyici bir öğrenme ortamının sağlanması açısından önemli yere sahiptir (Feng vd., 2019; Katz vd., 2011). Destekleyici bir ortamda yapılan ev ödevlerinin öğrencilere katkısının daha yüksek olduğu, öğrencilerin okula karşı tutumlarını olumlu yönde arttırdığı literatürde sıkça vurgulanmaktadır (De Róiste vd., 2012; Pomerantz vd., 2007). Bu katılım, öğrencilerin akademik performansı ve refahı ile olumlu yönde ilişkilendirilmiştir (Magalhães vd., 2020; McCrory Calarco vd., 2022).

Bu çalışma, ebeveyn katılımının, özellikle motivasyonu yüksek olan çocukların ödev tamamlama süreçlerini olumlu yönde etkilediğini ortaya koymuştur. Ancak bu olumlu etkilerin yanı sıra, ebeveynlerin ev ödevi sürecine katılımının zaman yönetimi eksikliği, ebeveyn-çocuk ilişkilerinde sorunlar ve isteksizlik gibi olumsuz etkileri de bulunmaktadır (Czerniawski ve Kidd, 2013; Xu ve Yuan, 2003). Literatür, ebeveynler ödev sürecine katıldığında, geri bildirim sağladığında ve çabalarını takdir ettiğinde çocukların çalışmaya devam etme motivasyonunun arttığını bildirmektedir (Dettmers vd., 2019; Dolean & Lervag, 2022). Literatürde, ebeveynlerin ev ödevlerine katılımının kalitesinin, öğrencilerin akademik performansı ve refahı ile pozitif ilişkilendirildiği belirtilmektedir (Dumont vd., 2014; Feng vd., 2019; I. Katz vd., 2011; Magalhães vd., 2020; Pomerantz vd., 2007). Bunlarla birlikte, ödev yapmanın aile içinde çatışmalara ve stres artışına neden olabileceği, aynı zamanda ebeveynlerin ve çocukların birlikte geçirecekleri aile zamanının kısıtlanabileceğide literatürde vurgulanmıştır (Hampden-Thompson vd., 2013; Holland vd., 2021; Pressman vd., 2015; Rønning, 2011; Valle vd., 2019). Ebeveynler, ev ödevlerinin öğrencilerin akademik performansı üzerinde olumlu bir etkisi olduğunu düşünmektedir (Medwell ve Wray, 2019; Moorhouse, 2021; Tam ve Chan, 2011; Vatterott, 2018; Xu, 2009) ve bu da ev ödevlerine olumlu bakışlarını etkilemiş olabilir. Bu sonuçlar, ebeveynlerin ev ödevlerine katılımının öneminin ve bu katılımda bir denge kurulması gerektiğinin altını çizmektedir. Bu bulgular, ebeveynlerin ev ödevlerine katılımının önemini ve bu katılımın nasıl dengeli bir şekilde sağlanabileceğini vurgulamaktadır. Ebeveynlerin, çocuklarının ödevlerine destek olurken onların özgüvenlerini ve motivasyonlarını artırıcı bir yaklaşım benimsemeleri, aynı zamanda ev ödevi sürecinin aile içi ilişkilere

olumsuz etkilerini en aza indirmeleri önemlidir. Öğretmenlerin ve ailelerin iş birliği içinde çalışması, ev ödevlerinin öğrencilerin gelişimine en uygun şekilde katkıda bulunmasını sağlayabilir. Sonuç olarak, ev ödevlerinin çocuklar açısından verimini artırmak için hem öğretmenlerin hem de ebeveynlerin iletişim halinde çalışmalarının önemli olacağı düşünülmektedir. Öğretmenlerin, ödevleri oluştururken bireysel farklılıklara dikkat etmeleri ve ebeveynler ile iletişim kurmaları, ödevlerin çocuklar için etkili olmasını sağlayacaktır. Benzer şekilde, ebeveynlerin de çocuklarının ödevlerine destek olmaları, onları motive etmeleri ve öğrenme süreçlerini yakından takip etmeleri, çocukların akademik başarısını ve genel refahını olumlu yönde etkileyeceği düşünülmektedir. Bu bağlamda, öğretmenler ve aileler arasında kurulan iş birliği, ev ödevlerinin öğrencilerin her alandan gelişimine uygun şekilde katkıda bulunmasını sağlayabileceği düşünülmektedir.

Çalışmaya katılan ebeveynlerin, çocukların ev ödevlerini yapma süreçlerindeki rollerine ilişkin olarak, destekleyici ve rahat bir ortam sağlayarak motive edici bir role sahip olduklarına yönelik görüşleri tespit edilmiştir. Ayrıca, çocuklarına planlama yapmalarında yardımcı olma ve ek açıklamalar yapma gibi rehberlik edici roller üstlendiklerine dair görüşler de belirlenmiştir. Bunun yanı sıra, ödevlerini kontrol ederek denetleyici bir rol üstlendiklerine yönelik düşünceleri de bulunmaktadır. Çalışmaya katılan ebeveynler, ev ödevlerine katılımının çocuklarının yüksek motivasyonla ödev yapmalarının olumlu etkileri olduğunu belirtmişlerdir. Ancak, zaman yönetimi eksikliği, ebeveyn-çocuk ilişkilerinde yaşanan sorunlar ve isteksizlik gibi olumsuz etkiler de dile getirilmiştir. Literatürde, ebeveynlerin ev ödevlerine katılım kalitesinin, öğrencilerin akademik performansı ve refahı ile pozitif ilişkilendirildiği belirtilmektedir (Dumont vd., 2014; Feng vd., 2019; I. Katz vd., 2011; Magalhães vd., 2020; McCrory Calarco vd., 2022; Pomerantz vd., 2007). Hoover-Dempsey ve diğerlerinin (1995) vurguladığı gibi, ebeveynlerin ev ödevlerine katılımı, sadece anında yardım sağlamada değil, okul başarısı için gerekli olan olumlu tutumları ve çalışma becerilerini modellemede de çok önemli bir rol oynamaktadır (Hoover-Dempsey vd., 1995). Çocukları tarafından yetkin ve ilişki kurulabilir figürler olarak görülen ebeveynler, etkili modeller olarak hizmet ederler. Morrison ve diğerleri (2000), ebeveynlerin okulla ilgili faaliyetlere katılımının, öğrencilerin okula bağlılıkları ve ebeveynlerin kendi gözetimlerine dahil olma algıları ile olumlu yönde ilişkili olduğunu belirterek bunu desteklemektedir. Ebeveyn katılımının bu yönü, ev ödevlerinin etkinliğini anlamaya ek bir katman sağlar (Negru & Sava, 2023). Bu bulgular, ebeveynlerin ev ödevlerine katılımının önemini ve bu katılımın nasıl etkili bir şekilde sağlanabileceğini vurgulamaktadır. Ebeveynlerin, çocuklarının ödevlerine destek olurken onların özgüvenlerini ve motivasyonlarını artırıcı bir yaklaşım benimsemeleri, aynı zamanda ev ödevi sürecinin aile içi ilişkilere olumsuz etkilerini en aza indirmeleri açısından önemlidir. Eğitimcilerin ve ailelerin iş birliği içinde çalışması, ev ödevlerinin öğrencilerin gelişimine en uygun şekilde katkıda bulunmasını sağlayabilir.

Araştırmanın bulguları, ev ödevlerinin öğrencilere akademik, duyuşsal, sosyal ve davranışsal faydalar sağladığını, ancak bu faydanın sağlanabilmesi için ebeveyn desteğinin önemli olduğunu gösteriyor. Ayrıca ebeveynlerin ev ödevlerine ilişkin olumlu ve olumsuz yargılara sahip oldukları, ev ödevleri sırasında motive edici, yönlendirici ve denetleyici roller üstlendikleri ve bu rollerin öğrencilerin ev ödevlerine ilişkin bakış açılarını olumlu yönde etkilediği tespit edilmiştir (Farrell ve Danby, 2015; Tam ve Chan, 2011).

Bu çalışma, öğretmenler ve ebeveynler de dahil olmak üzere eğitim süreciyle yakından ilgilenenler arasında önemli tartışmalara konu olan ev ödevlerinin eğitimdeki rolüne ilişkin bir perspektif sunması açısından önemlidir. Bu çalışma, ilkokulda ebeveynlerin ve öğretmenlerin bakış açılarını araştıran sınırlı sayıdaki çalışmaya ışık tutabilir.

Ödevlerin etkililiğini artırmak için öğretmen-ebeveyn işbirliği önemlidir. Okulda öğretmenlerin, evde öğretmenlerin ev ödevlerini kontrol edip, öğrencileri desteklemesi, öğrencilerin ödev yapma motivasyonunu artıracaktır. Öğretmenler, ev ödevlerini öğrencilerin ilgi, ihtiyaç ve bireysel farklılıklarını dikkate alarak hazırlamalıdır. Ödevler, öğrencilerin tüm gelişim alanlarını destekleyecek nitelikte olmalıdır. Ödevler, çeşitli kaynaklardan ve öğrencilerin ilgilerini çekecek içerikleri kapsayacak şekilde hazırlanmalıdır. Öğretmenler, ev ödevlerinin miktarını, bitirme süresini ve içeriğini planlarken öğrencilerin duygusal ihtiyaçlarını da göz önünde bulundurmalı, ödevlerin ilgi çekici, motive edici ve öğrencilerin ulaşabileceği düzeyde olmasına dikkat etmelidir. Öğretmenler ev ödevlerini düzenli olarak kontrol edip geri dönütler vermelidir.

Ebeveynler, öğrencilerin ev ödevlerine destek olmalı, motive etmeli ve öğretmenler ile işbirliği içerisinde çocukları takip etmelidir. Ayrıca ilkokul kademesindeki öğrencilerin de görüşlerinin alınıp, onların bakış açılarının öğrenilmesi, öğretmenlerin etkili ev ödevi stratejileri belirleyebilmeleri için yol gösterici olabilir.

Ekler

Öğretmen Yarı Yapılandırılmış Görüşme Formu

Ev ödevlerinin verilmesinde ana amacınız nedir?
Ev ödevlerinin öğrenciler açısından önemi nedir?
Ev ödevlerini nasıl hazırlıyorsunuz?

Ev ödevlerini hangi sıklıkla veriyorsunuz?
Ev ödevlerini nasıl değerlendiriyorsunuz
Ev ödevlerinin verimi nasıl arttırılabilir?

Veli Yarı Yapılandırılmış Görüşme Formu

Çocuklarınızın ev ödevlerine ilişkin görüşleriniz nelerdir?
Ev ödevlerinin çocuğunuza etkisine ilişkin görüşleriniz nelerdir?
Çocuklarınızın ev ödevlerini yapma süreçleri nasıldır?
Çocuklarınızın ev ödevlerini yapma sürecindeki rolünüz nedir?
Ev ödevlerinin veriminin arttırılmasına ilişkin görüşleriniz nelerdir?

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Development of the Repair Attempts Scale: A Validity and Reliability Study

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Abstract

This study aimed to develop and test a Repair Attempts Scale to measure repair attempts as a conflict management skill in romantic relationships and test the psychometric properties. The sample consisted of 508 participants, 359 of whom were female (70.7%) and 149 of whom were male (29.3%). First, semi-structured interviews were conducted with eight people in romantic relationships, and a large item pool was formed. Those items were evaluated by six field experts and finalized afterward. The study was conducted in two stages. In the first stage, data were collected from 249 people and exploratory factor analysis was performed to reveal the scale's construct validity. Exploratory factor analysis results showed that the Repair Attempts Scale had a two-dimensional structure consisting of eight items. The factors were Cognitive Repair Attempts and Affective Repair Attempts. In the second stage, data were collected from 259 participants, and confirmatory factor analysis was performed based on the structure that emerged from EFA. Cronbach's alpha internal consistency coefficient and test-retest reliability were examined for the scale's reliability. Item analyses were evaluated by item-total score correlation coefficients, item average scores of the lower 27% and upper 27% groups were compared. Criterion-related validity was tested by examining the Pearson product-moment correlation coefficient of the relationship between the developed scale with the Responses to Dissatisfaction in Close Relationships – Accommodation Instrument and the Conflict Resolution Styles Scale in Romantic Relationships. The results showed that the Repair Attempts Scale is a valid and reliable measurement tool.

Key words: Conflict resolution, Repair attempts, Scale development, Validity and reliability.

Introduction

Interpersonal conflict refers to a dynamic process consisting of perceived disagreements between interdependent parties and their responses to negative emotions and thoughts of interference in achieving their goals. The basic elements in this process are disagreement, negative emotion, and interference (Barki & Hartwick, 2004). Conflict is inevitable in the relationship resulting from perceived differences, inconsistencies, incompatible values, interests, beliefs, and decisions between partners (McNulty & Russell, 2010). The couples' responses during the conflict, the quality of their communication, the emotions reflected, and how conflicts are handled and managed are all parts of the conflict process (Saibo, 2016). Couples use constructive and destructive strategies to resolve conflict. These strategies are behaviors displayed in response to a specific problem or theme that causes conflict between couples. Constructive strategies include attempts at humor, self-control, flexibility, sensitivity, tolerance, empathy, and compromise. Destructive strategies include behaviors such as assault, threat, coercion, retaliation, complaint, excessive rationalization, rigidity, withdrawal, dominance, or submission (Batista da Costa & Mossman, 2021).

In the literature, various approaches classify conflict resolution styles among individuals. The first styles are avoiding, accommodating, competing, collaborating, and compromising, which are classified to see the different dimensions of interpersonal conflict behaviors (Kilmann & Thomas, 1977). Avoiding is not talking about the conflict exhibited by physical disappearance, avoiding talking, and remaining silent. The purpose of accommodating is to maintain the relationship. Since the individuals cares about the other individuals, they suppress the conflict issue and take care to stay in harmony. Competing involves the individual's attempt to impose their own decisions and thoughts on the other party through dominant behaviors and attitudes. In the collaborating style, problems are solved to achieve the optimal outcome for everyone. Both parties get what they want, and negative emotions are minimized. Finally, in the compromising style, both parties compromise their wishes. In this approach, where there are no total winners, there are no total losers either. According to another classification, couples resort to four approaches to end the conflict: submission, compromise, stand-off, and

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withdrawal (Vuchinich, 1990, cited in Arcidiacono & Pontecorvo, 2009; Canel, 2007; Okurcan, 2018). With individuals who use the submission approach, there is acceptance and giving up their wishes. The individual usually evaluates the situation from the other individual's point of view and resolves the conflict by submitting it to them. In the compromise style, couples find a common compromise regarding the problem they are in conflict with, and in order for this compromise to occur, both parties must make some sacrifices. In the stand-off approach, partners relinquish the conflict without eliminating the problem. The problem is not talked about, not solved, and there is no winner or loser. Finally, in the withdrawal approach, one of the partners displays withdrawal behavior and refuses to communicate. In another study, couples' interactions were observed, and their positive and negative interactions were classified. While constructive problem-solving and accommodating behaviors were classified as positive interaction types, defensiveness, stubbornness, criticism, and withdrawal from interaction (avoidance) were evaluated as negative interactions (Gottman & Krokoff, 1989). In a study based on Gottman and Krokoff's classification, the responses of spouses during conflict were classified under four categories: positive problem-solving (finding a satisfactory solution for both parties), compliance (reluctance to defend one's wishes), withdrawal (reluctance to talk about the conflicting issue), and conflict engagement (physical or verbal assault) (Kurdek, 1994).

Gottman, on the other hand, attaches importance to conflict management rather than conflict resolution. According to Gottman, since conflict is inevitable and natural, it is not possible to eliminate it. However, it can be managed (Gottman & Gottman, 2017). Relationships grow in the process of resolving conflicts and contribute to the relationship when the conflict is managed functionally (Gottman, 1995). Conflict helps couples better understand each other's emotional worlds and cope with change. Gottman (1995) argued that couples approach conflict in different ways. However, individuals in successful marriages use three types of problem-solving models in their conflicts: validating, conflict-avoidant and volatile approaches. According to the validating approach, couples generally resolve conflicts by meeting on common ground. Thanks to mutual respect and empathy, both parties remain calm. In the conflict-avoidant approach, couples are aware that they are different from each other and accept this. Therefore, they prefer to resolve conflicts over time with their avoidant and distant attitudes. In the volatile approach, couples express their positive and negative emotions to each other very clearly. They try to resolve conflicts with positive interactions such as touching, smiling, complimenting, etc.

Gottman first used the concept of *repair attempts* in conflict resolution in the Gottman Sound Relationship House theory and evaluated it as a factor affecting the relationship. According to Gottman's sound relationship house theory, a happy relationship has several components. The first of these components is to build “love maps”. Love maps are road maps that partners draw about each other's inner worlds. Building love maps reveals the feeling of interest between partners and makes them feel that they are known and will continue to be recognized by their partner. After the love maps component comes the “fondness and admiration” component. It is possible for partners to include this component in their relationship by communicating their love and respect for each other and appreciating each other. The third component is “turn towards instead of away”. Rather than turning away or turning against each other, partners turn towards each other. It is ensured by expressing wishes and needs verbally and non-verbally. To secure turn towards instead of away, couples display behaviors such as humor, showing love and attention, sexual contact and warmth, empathy, help or asking for help (Gottman et al., 1998; Gottman & Gottman, 2008). Gottman argues that when these first three components are ensured, the foundation for the friendship relationship in marriage is laid, and how the first three components are used forms the basis of the repair attempts that couples will use. Because an effective repair attempt is not only about how one of the partners does it, but also about what they have in terms of emotional context as a couple (Gottman & Gottman, 2017). A repair attempt is any action taken by one partner to reduce conflict or negative affect and repair the interaction. Anything that interrupts and reduces the negativity associated with conflict is considered as a successful repair attempt (Gottman, 1999). Gottman defined the couples' repair mechanism as the glue that helps the marriage survive in tense times and stated that happy couples intensively use repair attempts to manage conflict (Gottman, 1995).

Gottman et al. (1998) conducted an experimental study between 1989 and 1992 with 130 participants who had been married for at least six months and had no children. The researchers observed that the emotional closeness established by couples through repair attempts transformed destructive conflict management styles into constructive conflict management styles. As a result of this study, repair attempts were coded by Tabares and Driver. These codes are agreement, affection, compromise, defining the conflict, guarding, humor, monitoring discussion, repair questions, softening, request for direction, taking responsibility, self-disclosure, topic change, understanding, and giving the we are okay message. Some of these repair attempts are called affective repair since they involve partners understanding and accepting each other's emotions and revealing their own emotions, whereas some are called cognitive repair since they involve conflict management within a logical framework (Gottman & Silver, 2013; Gottman et al., 2015). According to this study, the affective closeness that couples establish through repair mechanisms keeps them away from using destructive conflict

style and encourages them to use constructive conflict style. It also helps couples move from attack-defense mode to compromise and collaboration mode. Two different qualitative studies indicate that one of the components of a happy relationship is not to be cross with the partner. The researchers observed that in the face of the partner who is cross, the other partner engaging in intimacy and repair efforts such as trying to communicate, showing compensatory behaviors for hurtful behavior, apologizing for his/her part, talking, making the other laugh, inviting the other to dinner and solving the problem positively affects the relationship (Durmuş & Demir, 2015; Özdemir-Kemahlı, 2019). In her study on happy couples, Özdemir-Kemahlı (2019) made many references to repair attempts as one of their strengths. In the study, some participants said, "She invites me to dinner, tries to talk, tries to make me laugh, tries to get on with me (Male Turquois, 31-33)." and "She hugs, kisses, we make up and it just goes away (Male Red, 47-48)." Özdemir-Kemahlı (2019) explained that statements such as these are important indicators of repair attempts.

The examination of the related literature showed that the scales developed for conflict in romantic relationships have been scales only about conflict resolution approaches and there have not been any scales measuring repair attempts (Can et al., 2022; Özen et al., 2016; Parsons et al., 2020; Taluy et al., 2018; Zacchilli, 2009). For this reason, it is believed that the scale to be developed on this subject will contribute to the literature.

Method

Participants

The study group consisted of a total of 508 participants, 359 of whom were female (70.7%) and 149 of whom were male (29.3%). Out of the 508 participants, 238 (46.8%) of them were dating, 27 (5.3%) were engaged, and 243 (47.9%) were married. Hundred and twenty-four (24.4%) participants were in a relationship for less than one year, 206 (40.6%) between 1-5 years, 73 (14.4%) between 6-10 years, 42 (8.3%) between 11-15 years, and 63 (12.3%) were in a relationship for 6 years or more. Fourteen (2.8%) of the participants were elementary school graduates, 15 (3%) were middle school graduates, and 148 (29.1%) were high school graduates. Twenty-eight 28 (5.5%) participants had associate degrees, 262 (51%) had bachelor's degrees, and 41 (8.1%) had master's degrees.

Data Collection Tools

Demographic Information Form. Developed by the researchers, the Demographic Information Form includes questions about participants' demographic characteristics such as age, sex, education level, as well as the status of their romantic relationships and the duration of their romantic relationship.

Repair Attempts Scale. The scale developed by researchers to measure partners' repair attempts after conflicts that occur in romantic relationships. In the present study, findings regarding the validity and reliability results of the scale are presented. The 5-point Likert scale has eight items and two factors. The psychometric properties of the scale show that 1st, 2nd, 3rd, and 4th items are grouped under the *Cognitive Repairs* sub-factor and 5th, 6th, 7th ,and 8th items are under the *Affective Repairs* sub-factor. The scale is scored by calculating the total score, not by calculating both sub-dimensions separately. An increase in the scale score indicates repair attempts being used. The results regarding the construct validity, reliability, criterion validity, and item analysis of the scale are presented in the Findings section.

Conflict Resolution Styles Scale in Romantic Relationships (CRSSRR). Developed by Özen et al. (2016), the CRSSRR is a measurement tool that measures couples' conflict resolution styles. According to the results of the exploratory factor analysis, the 25-item scale has a four-factor structure, namely Negative Conflict Resolution Styles, Positive Conflict Resolution Styles, Retreat, and Subordination. Cronbach's alpha coefficients for the sub-dimensions were .80 for the Positive Conflict Resolution Styles, .82 for the Negative Conflict Resolution Styles, .74 for the Retreat, and .73 for the Subordination. Item-total correlations ranged from .47 to .67 for Positive Conflict Resolution Styles, .37 to .68 for Negative Conflict Resolution Styles, .39 to .59 for Retreat, and .38 and .57 for Subordination sub-dimensions. In the development study of the Repair Attempts Scale, the *Positive Conflict Resolution Styles* subscale of the CRSSRR was used to determine criterion validity. In this study, the Cronbach's alpha internal consistency coefficient of this subscale was found as .70.

Responses to Dissatisfaction in Close Relationships- Accommodation Instrument (RDCR). Examining the mutual effects of the responses of couples experiencing problems against the difficulties they experienced, the RDCR was developed by Rusbult et al. (1991). The RDCR was adapted into Turkish for the first time by Çırakoğlu (2006) using only the "individual" dimension and was named My Reactions to Relationship Problems. In the test study of the My Reactions to Relationship Problems, Cronbach's alpha internal consistency coefficients were .73 for the Voice, .59 for the Loyalty, .69 for the Exit., and .57 for the Neglect sub-dimensions. Factor analysis was carried out by Taluy (2018) to test the construct validity of the RDCR, and as a

result of this analysis, a four-factor structure was obtained that was suitable for the original scale in terms of both the individual's reactions and the perceived reactions of the partner. The factors of this 16-item scale were grouped under Exit, Voice, Loyalty, and Neglect. Cronbach's alpha internal consistency coefficients of the factors varied between .53 and .80 for the individual's response, and between .54 and .85 for the individual's perceived response in their partner. In the development study of the Repair Attempts Scale, the *Voice* subscale of this scale was used to determine criterion validity. In this study, the Cronbach's alpha internal consistency coefficient of this subscale was found as .77.

Scale Development Process

In the first stage of the scale development study, a literature review was conducted on the concept of repair attempts and previous studies on the subject were reviewed. Then, semi-structured interviews were conducted with eight randomly selected individuals in romantic relationships. Each individual was asked how they managed the conflict with their partner and how they approached each other. An item pool of 22 items was formed in line with the literature and answers received from the semi-structured interviews. The items developed were shared with six experts in the field and evaluated in terms of content validity. One of the six experts was an expert both in the field of psychological counselling and in the field of measurement and evaluation. Following expert opinions, the items were reviewed and suggested changes and corrections were made. The CVI value calculated on the remaining items was found to be above the minimum criterion value of .99 (Veneziano & Hooper, 1997) for 6 experts. It was decided to proceed to the next stages with a total of 16 items. Interviews were held with individuals to test whether the items that were reviewed after the changes would be correctly understood by those who read and answered the scale. Respondents to the scale were asked "What did you understand from this item?" and “What did you think when answering this item?” By asking questions like these, the face validity of the items was determined and the scale was finalized.

Data Collection Process

Permission to use the measurement tools used in the research was requested from the researchers. Then, permission was obtained from Düzce University Scientific Research and Publication Ethics Committee for the ethical compliance of the research (2023/262, dated 31.08.2023). The data were collected via a link in an online platform. The scales prepared on the online platform were delivered to married, engaged and dating individuals via e-mail and online messaging. Before the participants started answering the questionnaire, the purpose, importance, and scope of the research were explained. In addition, the participants were asked a yes/no question whether they volunteered to participate in the research, and confidentiality was emphasized.

Data Analysis

After the scale was first administered online to a total of 260 people, the data was analyzed using the SPSS package program. Before analyzing the collected data, kurtosis and skewness values were tested to examine the normality of the data distribution. After the outliers were removed from the data set, the kurtosis values of the 249 data varied between -.78 and .15, and the skewness values varied between .51 and .30. Additionally, the Z value was examined for normality and the value was between +3 and -3. In normality assumptions, kurtosis and skewness values can be between -2 and +2, and Z value can be between +3 and -3 (Tabachnick & Fidell, 2019). Therefore, according to the analysis results, the data was accepted as normally distributed. According to Tabachnick and Fidell (2019), the sample size is sufficient if the number is five times the total number of items. Thus, the sample size is sufficient to perform the analysis.

Exploratory factor analysis (EFA) was performed on this data set to determine the factor structure of the scale. Kaiser-Meyer-Olkin (KMO) sampling suitability criterion was used to evaluate the suitability of 249 data for EFA. As a result of the analysis, the KMO coefficient was found to be .80. Since the KMO value was above 0.6, the data set was deemed suitable for EFA (Büyüköztürk, 2021). Bartlett’s Test of Sphericity was performed and the value was found to be 399.169 ($p<.01$). After EFA, the scale took its final form with eight items.

In the second stage, the finalized 8- item scale was administered online to 270 people in order to conduct a confirmatory factor analysis (CFA). CFA assumptions were examined for the collected data. Eleven outliers were removed from the study at this stage and CFA was performed on the remaining 259 data. It was observed that the kurtosis and skewness values of the data were .82 and -.50. It was known that kurtosis and skewness values could be between -2 and +2 in normality assumptions (Tabachnick & Fidell, 2019). Therefore, according to the results of the analysis, it was accepted that the data were normally distributed and provided the CFA assumptions (Harrigton, 2009).

The sample size of 259 was sufficient for the analyses. In the reliability analysis of the scale, Cronbach's alpha internal consistency coefficient was examined. In item analysis, item mean scores of the lower

27% and upper 27% groups were compared using item-total score correlation coefficients and independent groups t-test. For criterion validity, the Repair Attempts Scale, whose validity and reliability were tested in the present study, criterion-related validity was tested by calculating the Pearson's product-moment correlation coefficient of the relationships between the RDCR and the CRSSRR.

Ethics Approval

In this article, journal writing rules, publication principles, research and publication ethics rules, journal ethics rules were followed. The author is responsible for any violations that may arise in relation to the article." Ethical approval was obtained from the Duzce University Scientific Research and Publication Ethics Committee with the decision number 2023/262, dated 31.08.2023.

Result

Findings Regarding EFA

Before performing EFA, whether the necessary prerequisites were met was examined. In this direction, inter-item correlation values were examined to determine whether the data is suitable for factor analysis. There were significant relationships between the items. Another prerequisite examined was KMO and Bartlett's Test of Sphericity results. Büyüköztürk (2021) states that in order to perform EFA, KMO must be higher than .60 and Bartlett's Test of Sphericity must be significant. In the present study, the KMO sample size coefficient was found to be .80 and the Bartlett's Test of Sphericity value was 399,169 ($p<.01$). In addition, missing values, outliers, normality of distribution and multicollinearity were examined. The data met the multiple normality assumptions and there was no multicollinearity problem. The direct oblimin rotation technique and maximum likelihood method were used to examine the factor structure of the scale. Oblimin rotation is used when a theoretical correlation between factors is assumed (Costello & Osborne, 2005). The most common estimation method in SEM was the maximum likelihood (ML) method, as it was selected by default in many software packages. This method can make consistent and unbiased predictions on well-defined models, large sample sizes, normally distributed independent, continuous and multivariate data sets (Kline, 2023).

First, the eigenvalues were examined to determine the number of factors, and two factors with eigenvalues greater than one were identified. At the same time, the examination of the scree plot in Figure 1 showed that the cut-off point for the number of factors was two. In terms of the eigenvalues of the factors, the eigenvalue of the first factor was 2.9 and the eigenvalue of the second factor was 1.2. In terms of the contribution of the factors to the variance, the contribution of the first factor was 37.44%, the second factor was 15.9%, and the factors together explained 53.34% of the variance. In multi-factor measurement tools, it is sufficient for the variance explained to be between 40% and 60% (Tavşancıl, 2019). It can be said that the factors of the scale developed in the present study explained the variance at a sufficient level. The literature state that the item is acceptable to the scale if the factor load values are .32 and above. In addition, the value of an item on the factor it loads must be at least .10 more than the values it loads on other factors. Otherwise, since the relevant item loads on more than one factor, it is considered an overlapping item and recommended to be removed (Büyüköztürk, 2021; Tabachnick & Fidell, 2019). In this regard, care was taken to ensure that the items in the sub-factors had a loading value of .32 and above and that there were no overlapping items. For this reason, the number of 22 items was reduced to 16 depending on the lawshe analysis and 8 depending on the factor analysis. The factors and load values of the scale are presented in Table 1.

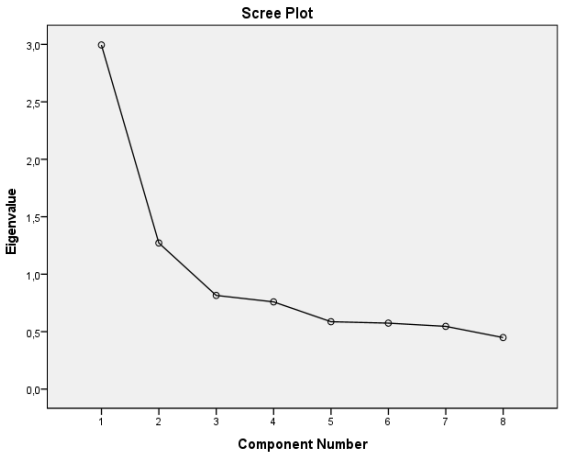

Figure 1. Scree plot graph for the Repair Attempts Scale

As seen in Figure 1, the cut-off point for the number of factors is two. In terms of the eigenvalues of the factors, the eigenvalue of the first factor is 2.9 and the eigenvalue of the second factor is 1.2.

Table 1. EFA results of the Repair Attempts Scale

Item No	Factor 1	Factor 2
I1		.69
I2		.53
I3		.59
I4		.54
I5	.60	
I6	.63	
I7	.72	
I8	.51	

As seen in Table 1, the EFA results revealed a scale consisting of eight items and two sub-dimensions. Factor 1 shows the Affective Repairs (four items) dimension, and factor 2 shows the Cognitive Repairs (four items) dimension.

Table 2. Findings of the Pearson's product-moment correlation analysis performed to determine the relationships between factors

	Affective Repairs	Cognitive Repairs
Affective Repairs	1	.53
Cognitive Repairs	.53	1

As seen in Table 2, there is a moderate positive relationship (r=.36) between the factors. A value above .30 indicate a significant relationship (Köklü et al., 2023). This finding shows that the relationship between the factors is moderate. In this scale, the two sub-dimensions will not be evaluated separately and the total score of the scale will be calculated.

Findings Regarding the CFA

In order to test the factor structure of the structure obtained as a result of the EFA, CFA was performed using the MPLUS program. In order to evaluate the validity of the model in CFA, model fit indices must meet the necessary criteria (Çokluk et al., 2021; Hu & Bentler, 1999). The findings regarding the fit indices of the model examined for the CFA conducted in this study are presented in Table 3.

Table 3. Excellent and acceptable values for the examined fit indices

Examined Fit Indices	Excellent Fit	Acceptable	Obtained Fit	Result
x^2/sd	$0 \leq x^2/sd \leq 2$	$x^2/sd \leq$ 4-5	1.89	Excellent Fit
CFI	*CFI* ≥ .95	*CFI* ≥ .90	.95	Excellent Fit
TLI	*TLI* ≥ .95	*TLI* ≥ .90	.93	Acceptable Fit
SRMR	SRMR ≤ .06	SRMR ≤ .09	.04	Acceptable Fit
RMSEA	.00≤ RMSEA ≤.05	.00≤ RMSEA ≤.08	.06	Acceptable Fit

The examination of the fit values of the model shown in Table 3 showed that the ratio of the chi-square value to the degrees of freedom (*Chi-square* = 36.956/*sd*=19) was 1.89. Achi-square/degrees of freedom ratio between 0 and 2 indicates excellent fit (Meydan & Şeşen, 2015). When other fit indices are examined, while CFI=.95, SRMR=.04 indicates excellent fit, TLI=.93, RMSEA=.06 indicates acceptable fit (Hooper et al., 2008; Kline, 2023). CFA results revealed that the model fits well and has high construct validity. As a result of these findings, it can be said that the 2-factor structure of the 8- item Repair Attempts Scale is confirmed.

Figure 2 presents the standardized parameter estimates for the factors and items of the scale. The CFA results in Figure 2 shows that the item factor loadings for the Affective Repairs sub-factor are between .45 and .69, and between .56 and .81 for the Cognitive Repairs sub-factor. In terms of the t values for item factor loadings, all t values were significant.

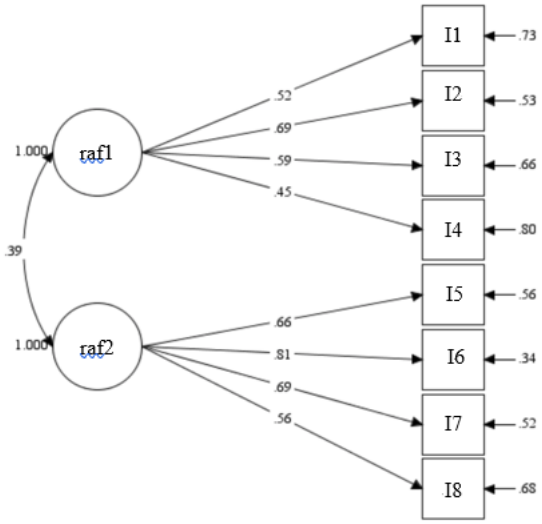

Figure 2. Path diagram and factor loadings for the Repair Attempts Scale

Similar Scale Validity

In order to determine the criterion-related validity of the Repair Attempts Scale, the relationship between the Voice sub-dimension of the RDCR and the Positive Conflict Resolution sub-dimension of the CRSSRR was examined. The values were between .52 and .60. This finding can be considered as evidence for the criterion-related validity of the Repair Attempts Scale. The correlation values for the relationship between the scales is presented in Table 4.

Table 4. Correlation results between the Repair Attempts Scale and the Voice subscale of the RDCR and the Positive Conflict Resolution subscale of the CRSSRR

	Voice	Positive Conflict Resolution
Repair Attempts	.52**	.60**

**p< .01

In terms of the relationships between the Repair Attempts Scale and the relevant sub-dimensions of the other scales presented in Table 4, there is a moderately positive significant relationship with the Voice sub-dimension (r=.52, *p*<.01) and a moderately positive significant relationship with the Positive Conflict Resolution sub-dimension (r=.60, *p*<.01).

Findings Regarding the Reliability of the Repair Attempts Scale

Cronbach's alpha coefficient findings were examined to determine the reliability of measurement tools, which is expressed as the ability to provide reliable and consistent results. In order for the measurement tool to be considered reliable, the Cronbach's alpha coefficient is expected to be .70 and above (Creswell, 2005).

Table 5. Cronbach's alpha internal consistency coefficients of the scale

	Cronbach's Alfa	Item Number
Repair Attempts	.75	8

As seen in Table 5, the internal consistency coefficient for the Repair Attempts Scale, which was evaluated on a single total score, was determined to be .75. Therefore, the scale reliability was met. In addition, since the test-retest reliability coefficient obtained as a result of administering the scale to the same individuals twice with an interval of four weeks was found to be .76. In order to test the split-half reliability, the scale was divided into two forms as odd-numbered items and even-numbered items, and the relationship between these two forms was analysed. The Spearman Brown coefficient between the two forms was .78, the analyzes regarding the reliability of the scale were accepted sufficient and the fact that the scale meets the reliability conditions was accepted.

Examination of Item-Total Correlations

In order to test the suitability of the items for the purpose, Pearson's product-moment correlation coefficients of the relationships between the score from each item and the total score from the scale were examined. Based on Tavşancıl (2019) as a reference, according to the item-total correlation values, those less than .20 were regarded

as items that should be removed from the scale, those between .20 and .30 were regarded as items that need to be corrected, those between .30 and .40 were regarded as good, and those above .40 were regarded as very good. are considered to be very good substances. The findings of this study are presented in Table 6.

Table 6. Item-total correlation results

Item No	Item-Total Correlation Coefficients
I1	.60**
I2	.65**
I3	.56**
I4	.60**
I5	.65**
I6	.60**
I7	.65**
I8	.52**

**p< .001

As seen in Table 6, the item-total correlation of the items was between .52 and .65. Item-total correlations show that the items in the scale measure similar behaviors. Büyüköztürk (2021) stated that item-total correlation coefficients being .30 and above is a proof of the scale items exemplifying similar behaviors and scale's internal consistency being high.

Examination of the t Values Regarding the 27% Lower-Upper Group Difference

In order to determine the discrimination power of the items, the 27% upper group with the highest score from the item total scores and the 27% lower group with the lowest score were compared using independent sample t-test. According to Büyüköztürk (2021), a significant difference in the results shows the distinctiveness of the items. By including the 62 people with the highest scores (27%) in the upper group, and the 62 people with the lowest scores (27%) in the lower group, t values regarding the item total scores of the lower and upper groups were determined. The findings are presented in Table 7.

Table 7. t Values regarding the 27% lower-upper group difference

F1 (Affective Repairs)			**F2 (Cognitive Repairs)**		
Item No	***t***	***p***	**Item No**	***t***	***p***
5	6.97	.00	1	8.6	.00
6	8.94	.00	2	8.48	.00
7	8.65	.00	3	10.3	.00
8	6.84	.00	4	7.77	.00

As seen in Table 7, the t test values for the differences between the item scores of the 27% upper and lower groups varied between 6.84 and 10.3. The difference between the lower and upper group means of the items was statistically significant (p <.01).

Conclusion and Discussion

In the literature, there are many different conflict resolution approaches (Kilmann & Thomas, 1977; Gottman & Krokoff, 1989; Vuchinich, 1990; Kurdek, 1994;). Gottman (1995) emphasizes that managing conflict rather than resolving it is a more accurate term because conflict cannot be eliminated due to its natural and inevitable nature. According to Gottman (1999) and Gottman and Silver (2013), individuals in a romantic relationship take an action against their partner in order to reduce the tension that occurs during and after the conflict. This action is called a repair attempt. While the purpose of this action is sometimes an effort of intimacy and an emotional step just to break the ice, sometimes it is an effort to find a solution and a cognitive step to solve the problem. Gottman et al. (2015) coded repair attempts as affective and cognitive repair attempts.

In the present study, the literature on repair attempts was taken into consideration during the formation of the item pool and statements expressing attitudes and behaviors such as affection, compromise, defining the conflict, guarding, humor, monitoring discussion, repair question, softening, request for direction, taking responsibility, self-disclosure, topic change, understanding, giving the message of we're okay were added. In

addition, in the interviews conducted with the couples for the question pool, their expressions along with these qualities were gathered around two main features.

Two features stood out in the participants' statements: building intimacy and trying to move towards a solution. As a result of EFA and CFA, these two features presented themselves statistically and were grouped around two factors. Researchers first named the factors as building intimacy and seeking solution. However, since the research revealed that the concepts of *Cognitive Repairs* and *Affective Repairs* in the literature cover a similar content, it was decided that it would be more appropriate to name the sub-dimensions of the scale in parallel with the literature. Accordingly, the scale consists of two subscales, Cognitive Repair and Affective, which are evaluated over the total score. The researchers considered that repair attempt consists of a combination of *attempts at emotional closeness* and *turning to solution*, when these two together, they decided that they completely covered the repair attempt. For this reason, it was suggested that the repair attempt scale should be evaluated over the total score.

The KMO value calculated in this study, which aimed to examine and develop the psychometric properties of the Repair Attempts Scale, the chi-square value of the Bartlett's test and the result that the correlation or covariance matrix is different from the identity matrix, showed that the data set was suitable for factor analysis (Büyüköztürk, 2021; Çokluk et al., 2021). The findings revealed that the data set had a sufficient sample size to perform factor analysis and had an appropriate data distribution. In order to test the construct validity, first, EFA was performed and then CFA was employed according to the findings. According to the analyzed findings, the scale showed a two-factor structure. This two-factor structure explained 53.34% of the variance. This rate indicates a sufficient variance explanation rate in social sciences (Kline, 2023).

In the CFA performed to test the two-dimensional structure obtained as a result of the EFA, different fit indices were evaluated to test the fit adequacy. The examination of the fit values of the model showed that the ratio of the chi-square value to the degrees of freedom (Chi-square = 36.956/*sd*=19) was 1.89. A $\chi 2$/sd value between 0 and 2 means there is perfect fit (Meydan & Şeşen, 2015). When other fit indices are examined, while CFI=.95, SRMR=.04 indicates perfect fit, TLI=.93, RMSEA=.06 appears to indicate acceptable fit (Hooper et al., 2008; Kline, 2023). CFA results show that the model has good fit and high construct validity. Based on these findings, the 2-factor structure of the 8- item Repair Attempts Scale was confirmed.

The fact that the Cronbach's alpha coefficients were above .70, which indicates the ability of the measurement tools to provide reliable and consistent results, showed that the Repair Attempts Scale was highly reliable. In the findings, item-total correlation coefficients of .30 and above showed that the internal consistency of the scale was high. Since the difference between the means of the 27% lower and 27% upper groups of the score distribution of the scale was statistically significant ($p<.01$), it was accepted that the items were distinctive. The correlation values indicating the criterion-related validity of the scale were found to be between .52 and .60. Test-retest method result was .76. This finding can be considered as evidence for the criterion-related validity of the Repair Attempts Scale (Büyüköztürk, 2021; Creswell, 2005).

The findings put forth that the Repair Attempts Scale was sufficient to be used in determining the repair attempts made by partners after conflicts in romantic relationships. When the psychometric properties of the scale are examined, it can be accepted that the Repair Attempts Scale is a valid and reliable measurement tool.

Recommendations

The fact that 70.7% of the study group consists of female participants is regarded as a limitation of this study. For this reason, in different studies to be conducted with the scale, it may be recommended to include more male participants. It is believed that researchers' study of variables such as psychological resilience of partners, attachment styles, personality traits, which may be related to repair attempts, and with sample groups with different demographic characteristics may be useful in revealing the multidimensional effect of repair attempts on romantic relationships. Researchers can contribute to the related literature by conducting different studies on repair attempts.

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Analysing the 4th Grade Social Studies Book in Terms of Including Literary Genres

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Analysing the 4th Grade Social Studies Book in Terms of Including Literary Genres

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Abstract

Textbooks are a decisive and guiding tool in teaching lessons for reasons such as being prepared according to learning outcomes and being accepted by the Ministry of National Education Board of Education and Instruction. The Social Studies Curriculum mentions that the course should be supported with literary products "by using genres such as legends, epics, tales, proverbs, true stories, folk songs and poems". In this framework, literary genres should be utilised in the content of textbooks to set an example. This study examines the social studies textbooks taught in the 4th grade regarding the number of literary genres and their contexts. The document analysis method, a qualitative research method, was used in this study. The collected data were analysed via content analysis. As a result, it was determined that the most common genres in the textbook were interviews, anecdotes, and biographies. The interview, the most common literary genre found in all units, was analysed in terms of the contexts it addressed. The program's acquisitions, basic skills, values, and explanations were considered.

Key words: Social studies, Textbook, Literary Product, Interview

Introduction

The social studies course utilises different disciplines. These disciplines comprise the social sciences, integrated under the name "social studies" under a course title (Değirmenci Toraman, 2018). It is one of the most essential courses that addresses concepts such as society, citizenship, interpersonal relations, and national and global values (Aykaç, 2007).

Curricula are prepared based on the "General Objectives of Turkish National Education" and the "Basic Principles of Turkish National Education" stated in Article 2 of the Basic Law on National Education No. 1739. In the Social Studies Curriculum (2018), the primary purpose of education system is to raise individuals with knowledge, skills, and behaviours integrated with our values and competencies, as well as the importance of cultural awareness within the Turkish Qualifications Framework. In addition, regarding the measurement and evaluation approach in curricula, education should include not only knowing (thinking) but also feeling (emotion) and doing (action). Adolescence is a critical period for identity acquisition, and the importance of taking individual development into account is emphasised by the statement that education increases and manages social interactions that support identity acquisition in this period. Among the specific objectives of the Social Studies Curriculum is to align with the identity acquisition processes of adolescents by enabling them to "comprehend the fundamental elements and processes that shape Turkish culture and history, recognize the importance of preserving and developing cultural heritage for fostering national consciousness", and "understand the significance of becoming virtuous individuals by embracing national, spiritual, and universal values". One of the issues expected to be considered in the implementation of the programme is stated as follows:

> "Social studies lessons should be supported with literary products using genres such as legends, epics, tales, proverbs, folk tales, folk songs and poems. Students should be encouraged to read literary products such as novels, historical novels, stories, memoirs, travelogues, and anecdotes. In addition, gains deemed appropriate should be supported with traditional or modern art products such as painting, music, miniature, engraving, calligraphy, sculpture, architecture, theatre, and cinema." (MEB, 2018).

Human life is the primary source of literary products. As a result of being so intertwined with life and being used for educational purposes throughout history, it has also found its place in formal education. When social studies are considered a preliminary presentation of life in the classroom, the importance of using literary

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products can be understood more clearly. Both oral and written products allow the disciplines that make up social studies to be transferred to the individual and the course to be taught in a way linked to life (Şimşek, 2015).

Education is an endeavour and even the art of gaining a perspective. When it is desired to create sensitivity in the child and to raise cultural awareness, communication with literary texts provides an opportunity to educate the children about their feelings and thoughts. Literature is a process that can help children acquire democratic behaviour through intuition. Through literature that offers examples of different experiences and ways of thinking, students can gain respect, tolerance, empathy, and identification skills for other personalities. In this process, new experiences are acquired, and the children realise they can improve their personality or make changes (Sever, 1998). In addition, Social Studies educators acknowledge that literary studies help teach the course (Öztürk et al., 2014).

According to Oğuzkan (2006), children need literature because it provides numerous benefits. Literature not only fosters a love of reading but also helps children become good citizens, discover life, and develop their language skills. Additionally, it serves as a guide for behavioral change, encourages creative activities in other areas, and enables readers to reflect on meaningful experiences.

The use of literary genres not only enables students to increase their knowledge of the subject but also serves as a practical task in concretising abstract subjects, attracts students' attention to the lesson, increases their motivation and thus their success in the course, and helps them gain various skills, such as critical thinking (Kaymakçı, 2013).

This research aimed to examine the use of literary genres in the Social Studies textbook and sought to answer the following questions:

1. How are literary genres used in the 4th-grade Social Studies textbook?
2. In which contexts are literary genres used in the Grade 4 Social Studies textbook?

Method

Research Model

Research model is a plan developed by the researcher in order to answer the questions or test the hypotheses of the research. Research model is the organisation of the necessary conditions for collecting and analysing the data in accordance with the purpose of the research and economic opportunity (Büyüköztürk et al., 2013). In this study, the survey model was used as the research model. Survey model is a research approach that aims to describe a past or present situation as it exists. The individual or object that is the subject of the research is tried to be defined within its own conditions and as it is. No effort is made to change or influence the variables in any way (Karasar, 2012).

Data Collection

The research data were collected through document analysis, a qualitative research method. Document analysis involves the analysis of written materials containing information about the phenomenon or phenomena targeted for investigation (Yıldırım & Şimşek, 2018). In this study, the Social Studies Textbook taught in the 4th grade was analysed regarding the use and context of literary genres.

Data Source

The study's data source consists of one 4th-grade Social Studies textbook of Tuna publications distributed free of charge in primary schools by the Ministry of National Education. The texts constituting the content of the seven learning areas in the textbook were analysed in terms of their literary genres, quantity, and context. Table 1 below shows the distribution of these seven learning areas and subject headings.

Table 1. Seven Learning Areas and Subject Headings

Sequence No	Learning Area	Subject Headings
1	Individual and Society	Everyone Has an Identity Everyone Has a Story What Do I Like? What Can I Do? If I were him I am Aware That I Respect Differences
2	Culture and Heritage	My Family History National Culture Elements Children's Games from Past to Present An Epic of Heroism: National Struggle

3	People, Places and Environments	Our Directions Let us Make a Location Recipe What is Around Us? Weather forecast Where I Live Let Us Be Ready for Natural Disasters
4	Science, Technology and Society	Technological Products Technology from Past to Present Technology in Time Let us Invent Let Us Use It Without Harming It
5	Production, Distribution and Consumption	Our Wants, Needs Economic Activities in My Family and Neighbourhood Let us Be Conscious Consumers Let us Get Our Certificate Let Us Put Our Feet According to Our Duvet Yes to Consumption, No to Waste
6	Active Citizenship	I am a Child; I Exist with My Rights Taking Responsibility I Participate in Educational and Social Activities Freedom and Independence
7	Global Connections	Recognise Countries Our Neighbours Turkic Republics Different Cultures The World is Beautiful with Differences

Analysing The Data

The collected data were analysed via content analysis. Content analysis is the qualitative and quantitative analysis of the meanings hidden in texts or transcripts or the messages intended to be given there by following a specific systematic approach in the form of concepts, and categories and analysing these concepts and categories qualitatively and quantitatively. In qualitative content analysis, the researcher tries to understand the phenomenon under study instead of generalising from the sample to the universe based on statistical inferences (Güler et al., 2015). The literary genres analysed are mentioned in the introduction of this study. The contexts in which they were used were identified during the readings and are given in the findings section.

In the textbook analyzed in this study, the use and contexts of the literary products listed in the table below were examined:

Table 2. Oral and written literary products that can be used in social studies teaching (Ata, 2017; Kaymakçı, 2013; MEB, 2005; Öztürk et al, 2014; Tokcan, 2016; Topkaya & Şimşek, 2017; Ulu Kalın, 2017; Değirmenci Toraman, 2018)

• Lamentations	• Criticisms	• *Letters*
• Clapping, Clapping, Proverbs	• Melodies	• Menakıpnamas
• Almanacs	• Fables	• Humour
• *Anecdotes*	• Jokes	• Monographs
• Encyclopaedias	• Receipt catalogues	• Lullabies
• Treaty texts	• Newspaper clippings	• Autobiographies
• Atlases	• Gazavatnamas	• Were Dead
• Documentaries	• *Types of Traditional Turkish Theatre*	• Guides
• Bibliographies	• Travel articles	• Roma
• Riddles	• Diaries	• *Interviews*
• *Biographies*	• Folk tales Memoirs	• Siyasetnamas
• Biographical novels	• *Stories*	• Conversations
• Cenknamas	• Cartoons	• *Discourses*
		• Dictionaries

• Children's songs	• Catalogues	• Songs
• Analysed stories	• Discoveries	• *Poems*
• *Essays*	• *Chronologies*	• Definitions
• Magazine articles	• Compositions	• Historical novels
• Textbooks	• Articles	• Nursery Rhymes
• Epics	• Manis	• Theatre texts
• Indexes	• Anthems	• *Folk Songs*
• *Legends*	• Tales	
• Educational comics		

Twelve of the sixty-five literary text types in Table 2, namely interviews, anecdotes, poems, chronologies, biographies, essays, discourses, letters, Karagöz plays (a traditional Turkish theatre genre), folk songs, legends, and stories were included in the textbook. The genres included are italicised in Table 2.

To ensure validity and reliability within the research, the texts were read repeatedly and in detail, and the results were compared with each other and with the data obtained from a different researcher's examination of the book. In addition, the data obtained as a result of the analysis were presented to another person who is an expert on literary genres, and necessary corrections were made.

Findings

The Table containing the number of genres and texts in the learning areas in the book analysed within the scope of the research is given below.

Species and Densities

Table 3. Number of genres and texts in the learning areas

Learning Area	Literary Genre	Number
1. Individual and Society (3 Types/15 Texts)	Interview	12
	Chronology	1
	Poetry	2
2. Culture and Heritage (5 Genre/21 Text)	Interview	3
	Chronology	1
	Biography	7
	Anecdote	9
	Letter	1
	Karagöz Game	1
3. People, Places and Environments (6 Genre/13 Text)	Anecdote	2
	Interview	7
	Folk Song	1
	Poetry	1
	Legend	1
4. Science, Technology and Society (2 Types/7 Texts)	Anecdote	1
	Interview	6
5. Production, Distribution and Consumption (3 Genres/8 Texts)	Interview	4
	Anecdote	3
	Poetry	1
	Discourse	2
6. Active Citizenship (4 Genres/16 Texts)	Interview	12
	Story	1
	Essay	2
7. Global Connections (1 Genre/1 Text)	Interview	1

According to Table 3, there are twelve literary genres in the 4th-grade Social Studies textbook. Interviews were the most preferred genre regarding their number and inclusion in different learning areas. The interviews were conducted in all seven learning areas, with fifty-five interviews. Anecdotes were included in a

total of fifteen texts across three different learning areas, while poems appeared in four texts within three learning areas. Chronologies were featured in two texts across two learning areas. Biographies were included in one learning area but represented by seven different texts. Essays and discourses were presented as two texts in a single learning area. Other genres, such as letters, Karagöz plays, folk songs, legends, and stories, were each included as one text in one learning area. The frequency table below provides a summary of these genres based on the number of texts.

Table 4. Frequency and Percentage Table According to the Number of Texts

Literary Genre	Frequency	Per cent
Interview	55	%60.4
Anecdote	15	% 16.4
Biography	7	%7.6
Poetry	4	%4.3
Chronology	2	%2.2
Essay	2	%2.2
Discourse	2	%2.2
Letter	1	%1
Karagöz Game	1	%1
Folk Song	1	%1
Legend	1	%1
Story	1	%1

According to Table 4, interviews are the most common genre in the 4th-grade Social Studies textbook.

Context

The 4th-grade social studies textbook has seven learning areas (units). These are presented in the methods section of the research with their subject headings. Below, the interview genre, which is the most common literary genre among the literary genres identified by scanning the texts in the learning areas, is given with its context. Analysing this single genre in all areas would provide a broad perspective.

Fromm (2017) states that words have no meaning on their own except in the context in which they are used, except in the character and intention of the person who uses them. If read one-dimensionally without a deep perspective, they conceal rather than convey ideas. In the dictionary, context is defined as a bundle, a pattern or connection of events, situations, or relationships in any phenomenon; context is a unit or a set of units that surrounds a language unit, which comes before or after it, affects the unit in question in many cases, determines its meaning and value; bent (TDK, 2019). When the Social Studies textbook is examined, the interview type is prepared within contexts such as fourth-grade achievements and explanations, basic skills, values education, and the programme's structure.

There were 12 interviews in the Individual and Society unit of the Social Studies book. On pages 16 and 17 of the unit, there is a fictional interview under “Everyone Has a Story”. Büşra provided information about her life from birth until she reached fourth grade. In the interviews, the acquisition of the unit “puts the major events of her life in chronological order”; explanations were made on topics such as the date of birth, when she started walking, talking, eating her food, kindergarten and primary school, the birth of her sibling, and getting on a plane for the first time. In connection with the learning outcome “Recognises individual interests, needs and abilities”, it was stated that he participated in theatre activities and wanted to be a dentist. What do I like about this outcome? What Can I Do? topic, there are six fictional and two actual interviews. The first natural person was April Deniz, a 13-year-old painter. The questions asked to April Deniz in an online magazine, and her answers are found on pages 21 and 22 of the textbook. Initially, the reader's attention was drawn to the necessity of discovering and using talent. In his responses, he described how he began painting, how his family supported and understood him, and how he struggled to restore his work when his teacher interfered with his choice of colors or directly intervened in the painting. He also shared how he won second place with that painting, discussed his favorite painters, and mentioned his other areas of interest. On pages 23 and 24, the interview with Spanish designer Carlos Tiscar is described as a success story by the character Bilge at the very beginning. In this interview, the person mentioned his family's contribution by saying, “I think my mother and father influenced my design choice”. Apart from this, he describes the designs he made in his childhood.

Again, from the gains of individuals and society, “They put themselves in the place of other individuals with different characteristics.” It is addressed in a fictional interview titled “If I were in his place”. This character, whose name was introduced as Bilge in the first topic of the Social Studies book, explains different subjects throughout the book, sometimes through interviews and sometimes through didactic speeches. On

pages 25, 26 and 27, it is first emphasised that people differ from each other in terms of their physical or personality characteristics, such as face shape, fingerprints, talent, and tastes. Then, in the context of the learning outcome "Recognises individual interests, needs and abilities", listening to music, playing chess, and liking cherries and tomatoes were mentioned. Bilge mentioned that her classmate Yağmur shared a common interest in chess, painting, and creating beautiful artwork. However, Bilge criticized Yağmur, pointing out that despite her interest in painting, she did not make sufficient effort to improve or address her strengths and weaknesses. In the continuation of the text, Bilge describes how she met children who had fled their war-torn countries and found refuge in their homeland due to civil unrest. She provides examples of the challenges they faced in developing empathy and offers advice to children who have lost a parent, urging them to avoid actions that may remind them of their grief. Additionally, Bilge shares examples related to children with physical disabilities, emphasizing their struggles and the importance of understanding and supporting them. In addition, examples of real and fictional campaigns related to these situations were presented. In the real campaign example, the students helped an orphan student under the leadership of their teacher. The fictional example is about starting a campaign to collect plastic caps for wheelchairs. The concept of empathy was introduced as one of the 27 essential skills in the Social Studies Programme. The Turkish Qualification Framework selected these skills.

There were three interviews in the culture and heritage unit. Bilge's oral history study with her grandmother is detailed on pages 35, 36 and 37 in the context of the learning outcome: "Conducts a family history study by making use of oral, written, visual sources and objects". Bilge describes the stages of her study in her language as itemised in the information box on page 35. For example, the item "The interview records are organised and written down." The information box is expressed in Bilge's interview with the sentence "At the last stage of my oral history study, I sat down at my computer and started writing my family history, which you will read below." The photo album was viewed as a visual source, the grandmother showed the primary school diploma of Bilge's grandfather, and it was stated in the diploma that her grandfather was most successful in mathematics.

The interview on page 40 was prepared as fiction for the learning outcome: "Gives examples by researching the elements reflecting the national culture in their families and environment". The character Merve, created by selecting a photograph of a child of the same age as fourth-grade students, describes the characteristics of Isparta, the city where she lives. She talks about the artefacts exhibited in the ethnography museum in the town and the scenes where customs are animated. She talks about items such as carpets from different regions or henna nights, earthen houses belonging to Yoruks, Yoruk women rolling dough on dough boards, young girls weaving carpets, Yoruk men spinning rope on spinning wheels, censers, and clothes. On pages 41 and 42, there is an interview with a child named Mehmet about the city of Mardin and its architecture. Information is given about the fact that the historical Mardin houses do not block each other's views or respect for the rights of the neighbourhood and that the classroom doors of the Kasımiye Madrasah, which are slightly more than a metre high, are intended to ensure that the student bows his head when entering the presence of his teacher.

In the People, Places, and Environments unit, an interview with a character named Rüzgâr on page 74 addresses the objective of "Observing weather events occurring around him and transferring his findings into pictorial graphics", as outlined under the section on Weather. The photograph used for the fictional character belongs to the child singer Alper Erözer. This photograph was taken from the publishing house's archive in the visual bibliography. Rüzgâr talks about how he observes weather events and shows them in tables and graphs. In addition, it is stated in the visual bibliography of the textbook that the character Bilge and most of the photographs used in the fictional interviews were taken from shutterstock.com by paying the copyright. On pages 78 and 79, an interview with a character named Kübra about how she uses the information about the physical map, which has been previously covered while working with her friends, is given under the acquisition of "Makes inferences about the landforms and population characteristics of the place where she lives and its surroundings" within the subject of "The Place I Live" in the same unit. In the text, Kübra states that the dark green colours on the map she examined express heights up to 200 metres and where these are. She then provides comments on other color indicators.

In the same unit, five different fictional interviews were given on pages 83, 84, 85 and 86 about the learning outcome "Makes necessary preparations for natural disasters" under the topic of "Let us Be Ready for Natural Disasters". Eda, fictionalised as a child living in Trabzon, made speeches containing information about natural disasters: landslide; Özcan, living in Bingöl, avalanche; Büşra, living in Rize, flood; Arda, living in Antalya, storm; and Esma, living in Van, earthquake. This information includes an explanation of the disaster, the events, and the protection methods used.

In the Science, Technology and Society unit, there are four interviews on pages 111 and 112 under the subject heading "Develops ideas for designing unique products based on the needs of the environment". Three

girls and one boy developed inventions by making additions to the objects they use based on daily life needs. These inventions, all of which are fictional, are in the form of shoes with heating, a new brush design to facilitate hairbrush cleaning, a talking medicine box that warns and explains to patients, and a lifeguard balloon worn on the wrist that can be easily operated in the case of drowning in the sea. The texts explain why this invention is needed and the device's working principle. Although it is stated in the learning outcome description that "Exemplary entrepreneurs and their success stories are emphasised", there is no example from real life.

In the same unit, there are two interviews on pages 115, 116, and 117 under "Let us Use Without Harm" under the acquisition of "Uses technological products without harming himself, others and nature". With the character Hakan, it aims to draw attention to the misuse of computers, mobile phones and televisions. The text provides suggestions on the appropriate use of mobile phones, such as utilizing them only when necessary and for short periods. Emre talked with the character Emre about not calling 112 emergency services unnecessarily.

On pages 127, 128, 129 and 130, under the acquisition of "Recognises the main economic activities in their families and their immediate surroundings" in the subject of "Economic Activities in My Family and Environment" within the unit of Production, Distribution and Consumption, Adam, who lives in Zonguldak, explained the importance of coal mining; Coşkun, who lives in Ordu, explained the significance of hazelnuts; Selin, who lives in Antalya, explained the importance of tourism and greenhouse cultivation; and Nihat, who lives in İzmit, explained the importance of industrial facilities for the city and the country. It was mentioned why the business lines formed within the economic activity framework were developed in these cities. "My father works as a mining engineer in a hard coal quarry within the borders of our province.", "My father does not spend all of our income but saves some of it to use when there is a product shortage". "There are many hazelnut experts in our neighbourhood, including my uncle". "My sister works as a food engineer in one of these facilities." and "My father is a tourist guide working in and around Antalya". The families of the fictional characters are shown working in a business sector in the mentioned economic activity. The examples given mainly were about men.

In the Active Citizenship Unit, six fictional child interviews were included on pages 154, 155 and 156 under the title "I am a Child, I Exist with My Rights" under the acquisition of "Gives examples of the rights he/she has as a child". The character Şevval talked about the right to life; Fatih spoke about freedom of thought and the right to have a say in decisions; Eda talked about children not being employed and the right to education; Duru talked about her request for children's rights lesson and the rights to shelter, nutrition and health care; Yusuf spoke about the rights to name, identity, citizenship, and living with family; Batuhan talked about the protection of the dignity of children with disabilities, the development of children's personalities, mental and physical abilities, equality, freedom of expression and the right to live their culture. Fatih talked about his own life, and Eda talked about a child she witnessed: "My father is a teacher. He has been a very successful student. However, he has difficulty attending school because he works as a mechanic." In other narratives, the character Fatih mentioned, "The state observes the right of children to develop their personalities, mental and physical abilities. For this purpose, states have built parks and gardens for children to utilise their free time, play games, and have fun. They open children's clubs, libraries and sports facilities." A mainly didactic style is adopted.

In the same unit, there are three interviews on pages 159, 160, and 161 under the title "I Take Responsibility" and the learning outcome "Takes responsibility for their words and actions in family and school life". After describing his responsibility, the character Mutlu talks about his dream of keeping animals and how he started to look after budgies by proving to his family that he has a sense of responsibility. He explains in detail the additional responsibilities of caring for an animal. The character Özgür talks about how he first ran for class president and then was elected by receiving the highest number of votes and how he fulfilled the duties that came with it. On the other hand, the character Melih explains how he acted responsibly after joining the school's table tennis team and says that one of his friends who did not attend the training twice without an excuse and did not bring his tracksuit was removed from the team by his teachers. All examples are given to male students, and these students are people who never neglect their duties and never make mistakes.

In the continuation of the same unit, there are three interviews on pages 163, 164 and 165 under the acquisition "Suggests educational and social activities that are deemed necessary in school life" on the pages under the heading of Participation in Educational and Social Activities. The character Ezgi talks about the community they established with their friends and the aims of the community, the concept of Maker Child, which means a child who does not consume and produce and explains the concept in detail. Sevgi character provides an interview on a bazaar organised for the benefit of a sister village school. Sevgi talks about her volunteer work on the bazaar organising committee. The structure of the Social Studies Programme focuses on learning ways of participating in social services under the unit of Active Citizenship. Solidarity is one of the values in the sentence, "We left our sister school feeling that our feelings of friendship and solidarity had

become stronger.” At the end of Ezgi's interview, one of the 18 values was selected for value education in the Social Studies Curriculum.

An interview on pages 174, 175, and 176 addresses the acquisition of ‘Introducing various countries around the world’ under the “Let Us Know Countries” topic in the Global Connections unit. The last interview of the textbook was conducted with the character Bilge, who has been making occasional speeches since the beginning of the book. Bilge provides information about Finland and Jordan that she has learned from her research. Finland's capital, population, neighbours, meaning of the country's name, the similarity of its language with Turkish, geographical, and climatic characteristics, culinary and social relationship cultures, and exciting practices in Finnish education, such as reading books to cows and dogs, are mentioned. Information about Jordan includes its capital, population, language, geographical location, food, customs, similar cultural characteristics, lakes, and tourist places.

Conclusion

In Article 8 of the Social Studies Curriculum, under the heading “Considerations in the Implementation of the Social Studies Curriculum”, it is stated that the course should be supported with literary products “by making use of genres such as legends, epics, fairy tales, proverbs, folk tales, folk songs and poems”. Öztürk and Otluoğlu (2002) state that if written literature is used as a teaching tool in social studies teaching, the acquisition of affective behavioural characteristics increases significantly, but this can only be possible using different, qualified, and imaginative works. Only 12 of the 65 literary genres in Table 2 are in the fourth-grade Social Studies book. Among the genres in the eighth item, only legends, folk songs and poems are included in small amounts, and genres such as epic, fairy tales, proverbs, and folk tales are not even included. In this case, the ability of literary products to gain affective behavioural characteristics cannot be used sufficiently.

According to the type of interview analysed, the information about the outcomes was addressed relatively more intensively. Yiğittir and Kaymakçı (2012), in their study examining the distribution of value education approaches according to grade level, found that, especially in activities in the 4th and 5th grades, the focus was on programme achievements rather than value education; therefore, value education was not included.

The Social Studies course has no selection of works or genres to ensure fun learning. Beldağ and Aktaş (2016) concluded that teachers prefer to use literary works that contribute to a better understanding of the subject and make the lesson more fun. Accordingly, it would be the preference of the teachers that the textbooks should be introduced to the selected works without interrupting their contact with their cultural heritage by taking into account the entertainment understanding of the children of the age.

In the book, there is a negative example of a teacher-student relationship in the April Deniz interview. The teacher is shown not as a person who guides but as someone who does not give importance to differences and dictates their taste. Demirtaş (2010) stated that a positive school culture causes students to be more committed to the school's aims, increasing academic achievement. It is, of course, more critical, and vital for students to encounter positive real-life examples. However, it is expected that providing this in the selected literary genre will support school culture, provided that it is not too perfect and disconnected from life.

In the oral history interview, it was preferred to show the grandfather's diploma instead of the grandmother's to build a future with gender equality. When discussing the ethnography museum, examples of women's work were given, except for the man spinning rope on the spinning wheel, and the examples were distributed in different ways. Similarly, the male figure was emphasised when discussing the subject of economic activities. The fields of work in which mothers participated were not mentioned. The budget was created only with the father in a family budget study given through anecdotal literary genres on pages 138, 139 and 140. The Social Studies Programme examination revealed that gender discrimination is mentioned only in the Effective Citizenship Unit of the 6th Grade. The programme's learning outcome related to this subject is “Recognise the value given to women in social life based on Turkish history and current examples.” “Positive issues such as positive discrimination, economic, political and social representation and negative issues such as violence against women and gender discrimination are emphasised”. In addition, the National Action Plan for Gender Equality (2008-2013) includes the target “Educators, education programmes and materials will be made sensitive to “Gender Equality” among the Education Action Goals and Strategies. Reviewing and revising the book's content may be appropriate in this direction.

The Social Studies Programme structure states: “Textbook writers should arrange the units' framework according to these learning areas”. Similarly, in the explanation of the culture and heritage learning area, it is stated that this unit aims to “create a national consciousness that will ensure the protection and development of a culture based on the basic elements that make up Turkish culture”. The implications of respect for the neighbourhood and respect for the teacher mentioned in the interviews about Mardin architecture are included.

It was observed that real invention examples should have been included under the subject heading Let us Invent. Laçin Şimşek and Şimşek (2010) stated that different fields of science should be taught by referring to their past and the processes/histories that led to the accumulation of knowledge. The fact that students see real-life examples invented by our country or our people in the past will increase their motivation more than the work of fiction.

Didactic discourses were emphasized, despite the inclusion of an interview on children's rights. Maden (2015) argues that event-based learning will assist children in developing strategies to cope with the challenges they may face in their daily lives through experimentation. If we want children to learn and defend their rights, it may be more appropriate to prefer a narrative based on events and conflicts rather than a narrative based on shoulds and oughts.

In line with the findings and results obtained from the research, the following suggestions were developed: In the fourth-grade Social Studies book;

1. Interviewing real people rather than fictionalised people may be preferable.
2. Images taken with permission from real people living in our geography can be used.
3. Throughout the book, texts can be created by paying attention to gender equality.
4. Students can be encouraged by including scientific developments from our history in related subjects.
5. Positive teacher-student relationships can be given more space.
6. Tales, epics, folk tales, and proverbs of our culture can also be included.
7. The number and quality of literary genres can be increased.
8. The contexts in which literary genres are included can vary.

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Investigation of Examination Anxiety of Senior High School Students

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Investigation of Examination Anxiety of Senior High School Students*

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Abstract

The main purpose of this study is to investigate the test anxiety status of high school seniors in terms of different variables. The sample group of this research is a total of 366 high school students, 169 females (46.2%) and 197 (53.8%) male students, who studied in high schools in Mersin province in the 2021-2022 academic year. The mean age of all participants in the research is 17.28, their age range is 16-21, and the standard deviation (SD) of the group is .49. Data for the study was collected using the Test Anxiety Inventory for Children and Adolescents and the Personal Information Form. Descriptive statistics, Pearson correlation analysis, t-test for independent groups and one-way analysis of variance (ANOVA) were also used in the data analysis of the results. According to the obtained results of the research, it was concluded that the test anxiety levels of high school seniors differed depending on these variables, such as gender, having their own rooms, making time for daily work, eating habits, receiving help from a psychological counsellor, following a regular study schedule, sleeping patterns and their own perception of success. On the other hand, taking private lessons was found to have no significant effect on test anxiety among group participants.

Key words: Test anxiety, Adolescents, High School Students

Introduction

When an individual is faced with uncertainty and an existential threat, this situation creates a danger to the individual's self-esteem (Zeidner, 1998). When a person perceives himself/herself in a potentially dangerous situation, a sense of anxiety arises (Smith & Lazarus, 1990). Anxiety arises from changes in the perception of oneself or changes in one's position in life (Salecl, 2004). According to Barlow (2002), anxiety is the state of uncertainty about potentially disturbing events or one's own emotional response to these events, characterized by a sense of uncontrollability and a sense of the future. Freud (1936) defined anxiety as "the fear of a real threat or a danger believed to be such" (p. 13). Anxiety has long been recognized as one of the basic human emotions. Physiological indicators such as heart palpitations, sweating and trembling, which occur in relation to anxiety, are shown by Freud as the basic components of anxiety (Spielberger, 1972). The development of anxiety is influenced by biological and genetic predisposition, past learning and the thoughts of the person (Cloninger, 1988). In other words, anxiety is subjective and future-oriented (Clark & Beck, 2010).

One of the periods of intense anxiety is adolescence. Since the beginning of written history, problems related to adolescence have concerned parents, educators, social scientists and philosophers (Dinçel, 2006). Adolescence is defined as "the time of sexual maturation" (Webster's New Pocket Dictionary, 2000). It is a process of physical maturation in which growth in middle and late childhood accelerates dramatically and secondary sex characteristics emerge (Susman & Rogol, 2004). At the same time, adolescence is seen as a risky period in terms of the onset and intensification of anxiety problems (Reardon et al., 2009). Adolescents with anxiety problems generally experience problems in their family life, social life and academic life (Albano et al., 2003). In the literature, various studies have been conducted on trait anxiety (Çivitçi, 2006; Kaya & Karaca, 2018), social anxiety (Mercan & Yavuzer, 2017; Tagay et al., 2018), career anxiety (Nalbantoğlu Yılmaz & Çetin Gündüz, 2016; 2018) and exam anxiety (Güler & Çakır, 2013; Kapıkıran, 2020). One of the areas where anxiety is experienced intensely is exams. According to Mulvenon (2005), exams create increased anxiety in students and negatively affect student achievement. According to Pagaria (2020), test anxiety is a psychological state in which individuals experience extreme distress and anxiety under test conditions and is a form of performance anxiety. Test anxiety affects students' academic performance on exams. Anxiety is an irrational distress that can also lead to avoidance of the feared situation. McDonald (2001) stated that an individual has

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test anxiety if he/she does not feel ready before and during the exam, does not trust his/her knowledge, thinks that he/she will not be successful, feels anxious, distressed, nervous and uneasy. Test anxiety consists of two subcomponents called “affective” and “delusional” (Köse et al., 2018; Liebert & Morris, 1967). The delusional part consists of thoughts about one's performance during the exam. The affective part consists of physiological symptoms such as nausea, flushing, sweating, nervousness, rapid heartbeat, dizziness, and dry mouth (Köse et al., 2018). Individuals with high levels of anxiety may also experience emotions such as fear, frustration, helplessness and shame. In addition, anxiety can cause cognitive problems such as distraction, inability to focus, memory problems, and excessive preoccupation with anxious thoughts. In addition, test anxiety may cause cognitive and behavioral avoidance reactions related to the test and the moment of the test.

The studies on test anxiety reveals that test anxiety occurs due to various factors. Trifoni and Shahini (2021) found that some of the factors that cause test anxiety are inadequate preparation for exams and/or inappropriate test preparation, fear of negative evaluation, bad experiences in previous exams, time constraints and pressure, increases in the number of questions in exams, and the difficulty of exam content and course material. Culler and Holahan (1980) attributed the anxiety of students with high test anxiety to their inadequate learning, lack of study skills, and lack of familiarity with test materials. In addition, parental attitudes (Besharet, 2003), past experiences and beliefs (McDonald, 2001), excessive course loads and time management (Sansgiry & Sail, 2006) are also effective on test anxiety. Another reason for test anxiety is students' self-doubt and anxiety in test situations. Here, students' negative thoughts can be seen as the cause of test anxiety (Sarason, 1984). Stoeber (2004) found that students with high levels of test anxiety are more anxious and lack self-confidence. As a matter of fact, negative thoughts in this direction cause students to focus on their past failures and fears. This focus creates learned helplessness (Dweck, 1975). As a sign of learned helplessness, students with high test anxiety begin to direct negative self-talk inward, often telling themselves, 'I am not smart enough' or 'I can never do this' (Ganz & Ganz, 1988). Indeed, Bagana, Raciub, and Lupu (2011) found that high school students with high levels of test anxiety had lower levels of self-esteem and optimism. In addition, many of the students who experience test anxiety use phrases such as “I am unable to sleep”, “If I do not win, I am done”, “I cannot enjoy life” (Baltaş, 1995). While experiencing anxiety at a moderate level affects success positively, a high level of anxiety affects one's success negatively (Aslan, 2005). The causes of test anxiety may include low motivation level, high expectations of others, lack of preparation, increased competition, inability to manage emotions, fear of poor performance and low self-confidence (Pagaria, 2020). According to a study, the anxiety levels of students preparing for the university entrance exam were higher than the anxiety levels of general surgery patients waiting to be operated on (Baltaş, 1995). In the study conducted by İşgör (2016), it was observed that high school adolescents with high levels of test anxiety had lower levels of psychological well-being and academic achievement. On the other hand, there is a growing body of research showing that the presence of test anxiety supports the presence of more common anxiety disorders (Beidel & Turner, 1988).

The most common method used to measure student achievement is the exam. Exams, which are an inevitable evaluation tool in education, can cause a problem such as anxiety for some students (Cüceloğlu, 2006). In our country, millions of people, mostly adolescents, take university entrance exams every year in order to get a university education (Güler & Çakır, 2013). According to the data of the Measurement, Selection and Placement Center (ÖSYM), 3,008,287 people took the university entrance exam in 2022 and 838,892 of them were placed in university quotas (ÖSYM, 2022). These conditions may cause most candidates to experience difficulties in the process of preparing for the exam and may cause various problems (Güler & Çakır, 2013). In their study, Trifoni and Shahini (2021) found that test anxiety causes physical and psychological problems, negatively affects motivation, attention and success, increases errors during the exam, creates problems in remembering what was previously learned and prevents efficient studying. In this context, the importance of investigating the test anxiety experienced by adolescents during the university preparation process becomes evident. When we look at the existing studies on test anxiety in our country, it is understood that the relationships between test anxiety and the following variables were examined: exam anxiety and gender, irrational beliefs and perceived parental attitudes (Güler & Çakır, 2013), gender, satisfaction with school and class, number and order of siblings (Arslan & Aksekioğlu, 2017), parental academic achievement pressure and support, and academic resilience (Kapıkıran, 2020), psychological resilience and decision-making skills (Acar, 2018), gender, perceived parental attitude, time allocated for studying, anxiety while taking the exam, type of high school attended (Demirci & Bütün Ayhan, 2016), sleep quality (Köse et al., 2018), academic achievement, loneliness and perceived social support (Yıldırım, 2000). In the current study, test anxiety was examined in terms of variables that may be closely related to test anxiety and reflect the daily functionality of the individual, such as gender, whether the individual has a room of his/her own, whether he/she receives tutoring support, whether he/she makes a regular study schedule, allocating time for daily tasks, nutrition, sleep status, perception of success, and whether he/she receives psychological counseling help. It is thought that this study will be important for future studies to understand the exam anxiety of adolescents. In fact, Kavakcı et al. (2011) found significant relationships between test anxiety and psychiatric symptoms such as depression, social anxiety and

trait anxiety. In Yıldırım's (2004) study, test anxiety was found to be a significant predictor of depression. Accordingly, it can be concluded that test anxiety can be a threat to an individual's mental health in addition to test performance. In this respect, the importance of understanding the conditions associated with test anxiety becomes evident. In the literature, no similar study was found in terms of variables related to test anxiety. It is thought that this study will make an important contribution to the literature in understanding the situations related to test anxiety in adolescents. It is thought that understanding the variables related to test anxiety will shed light on the work of school counselors and other mental health professionals working with these groups at the point of planning protective, preventive and intervention studies to be offered to students preparing for exams.

In this study, since the majority of the examinees are adolescents and Reardon et al. (2009) state that adolescence is a risky period in terms of the onset and intensification of anxiety problems, senior high school students were selected as the sample. The aim of this study is to examine the exam anxiety of senior high school students in terms of various variables.

Method

In this study, a cross-sectional research design based on the descriptive method was used. Cross-sectional research design is a model in which people with different characteristics are examined in terms of the characteristics determined at the same time (Fraenkel & Wallen, 2003).

Participants

The study group was formed from Mersin Private İz Science and Anatolian High School, Mahmut Arslan Anatolian High School, and İçel Anatolian High School, as these schools are considered more representative of the population in Mersin province in terms of achievement and socioeconomic levels. The study group consisted of a total of 366 senior high school students, 169 girls (46.2%) and 197 boys (53.8%), who voluntarily participated in the study in the 2021-2022 academic year. According to the demographic information of the study group, the adolescents participating in the study were between the ages of 16-21, with a mean age of 17.28, SD= .49. 9.3% of the students were only children; 50% had 1 sibling, 19.4% had 2 siblings, 12.3% had 3 siblings, and 9% had 4 or more siblings. While 83.1% of the students' parents were together as married couples, 13.4% were separated. In addition, 2.7% had a deceased mother and 0.8% had a deceased father. Regarding the students' mother's education level, 2.7% had no education, 15.6% were primary school graduates, 15% were middle school graduates, 31.1% were high school graduates and 35.5% were university graduates. As for the father's education level, 0.5% had no education, 11.2% were primary school graduates, 15.3% were middle school graduates, 29.2% were high school graduates and 43.7% were university graduates. Considering the family income status of the students, 7.9% had an income of 2500 TL and below, 18.3% had an income of 2500-4000 TL, 18.6% had an income of 4000-6000 TL, 24.3% had an income of 6000-10000 TL, and 30.9% had an income of 10000 TL and above. The convenience sampling method was used to determine the research group. This method involves selecting samples from units where easy access is possible, due to constraints such as time, workforce, and budget (Büyüköztürk et al., 2018). In convenience sampling, the sample is chosen from an easily accessible environment (Aziz, 2014), allowing the research process to be more practical and efficient (Yıldırım & Şimşek, 2021).

Data Collection Tools

Personal Information Form and Examination Anxiety Scale for Children and Adolescents (EESAS) were used as data collection tools in the study titled Investigation of Examination Anxiety of Senior High School Students.

Personal Information Form

It was created by the researchers in order to determine the following variables: age, gender, number of siblings, parental relationship, parental education, household income, having a room of their own, having difficulty in starting to study, having difficulty in applying a regular study program, taking private lessons, daily study time, daily sleep, having time for daily tasks, dietary patterns, seeing their own achievements, number of attempts per week, average practice exam scores, and receiving help from a school psychological counselor.

Test Anxiety Scale for Children and Adolescents

Test Anxiety Scale for Children and Adolescents was developed by Tan (2020). Test Anxiety Scale for Children and Adolescents consists of 30 items in total. The scale has 3 sub-dimensions: biological, psychological and social. The scale is a 3-point Likert-type scale. The lowest score obtained from the Test Anxiety Scale for Children and Adolescents is 30 and the highest score is 90. The lowest score that can be obtained from the sub-dimensions is 10 and the highest score is 30. According to the results of the Exploratory Factor Analysis conducted for the construct validity of the scale, the total variance explained by the sub-dimensions of the scale

was found to be 42.99%. The eigenvalues were 8, 63 for the 10-item biological sub-dimension, 2, 44 for the 10-item psychological sub-dimension, and 1, 82 for the 10-item social sub-dimension. "Westside Test Anxiety Scale" and 'Revised Test Anxiety Scale' were used for the criterion validity of the Test Anxiety Scale for Children and Adolescents and a significant relationship was found between the scales. The Cronbach Alpha internal consistency coefficient value of the scale is .90. The Cronbach's Alpha internal consistency coefficient value calculated on the data of this study was found to be .93 for the whole scale.

Procedure

For this study, data were collected after obtaining the necessary permissions from Mersin Provincial Directorate of National Education. The measurement tool and personal information form were applied by the researchers to volunteer senior high school students. The response time of the volunteers participating in the study was approximately 10-15 minutes.

Data Analysis

Descriptive statistics, Pearson Correlation Analysis, One-Way ANOVA and t-test for independent groups were used in data analysis. Tukey test, one of the post hoc tests, was used to determine the difference between the groups. Before the data analysis of the study, the normality of the data was checked for the assumptions of One-Way ANOVA and t-test for independent groups. For normality assumptions, the kurtosis and skewness values of the variables were examined first. Then, Levene's statistic was checked for homogeneity of variances. IBM SPSS 23 program was used in the analysis of the data. The significance level was set at .05.

Ethics Approval

Adıyaman University Social and Humanities Ethics Committee granted the ethics committee approval of this study with the decision dated 12.01.2022 and numbered 189.

Findings

Demographic characteristics and descriptive statistics of the study group are presented in Table 1.

Table 1. Characteristics of the study group

Variables		**f**	**%**
Do you have your own room?	Yes	311	85
	No	55	15
Difficulty Getting Started Studying	I don't have any difficulty	19	5,2
	Sometimes I have difficulty	165	45,1
	I find it difficult most of the time	110	30,1
	I'm always struggling	72	19,7
Difficulty Implementing a Regular Work Schedule	I don't have any difficulty	24	6,6
	Sometimes I have difficulty	144	39,3
	I find it difficult most of the time	118	32,2
	I'm always struggling	80	21,9
The Situation of Taking Private Lessons	Yes	152	41,5
	No	214	58,5
Daily Study Duration	Less than 1 hour	51	13,9
	1-2 hours	59	16,1
	2-3 hours	97	26,5
	3-4 hours	77	21
	4-5 hours	52	14,2
	Over 5 hours	30	8,2
Daily Sleep Duration	Less than 2 hour	6	1,6
	2-4 hours	21	5,7
	4-6 hours	122	33,3
	6-8 hours	192	52,5
	8 hours or more	25	6,8
Daily Sleep Status	Difficulty falling asleep	50	13,7
	Intermittent	38	10,4
	Difficulty waking up	91	24,9
	Regular	187	51,1

Allocating Time for Daily Tasks	Yes	241	65,8
	No	125	34,2
Nutrition	Regular	172	47
	Irregular	194	53
How you see your own success	Low	79	21,6
	Middle	248	67,8
	High	39	10,7
Number of Weekly Practice Tests	0	34	9,3
	1	163	44,5
	2	133	36,3
	3	30	8,2
	4	1	0,3
	5	1	0,3
	6	4	1,1
	7 and over	0	0
Average Scores from the Mock Test	I am not entering	31	8,5
	0-100	3	0,8
	100-200	23	6,3
	200-300	184	50,3
	300-400	105	28,7
	400-500	20	5,5
Seeking Help from the School Psychological Counselor	Yes	78	21,3
	No	288	78,7

An examination of Table 1 reveals that 85% of the students participating in the research had their own room, while 15% do not. 5.2% of the students had no difficulty in starting to study, 45.1% sometimes had difficulty, 30.1% had difficulty most of the time, and 19.7% always had difficulty. 6.6% of the students had no difficulty in applying a regular study program, 39.3% sometimes had difficulty, 32.2% most of the time and 21.9% always had difficulty. 41.5% of the students took private lessons, while 58.5% did not. Considering the daily study time of the students, 13.9% of them study for less than 1 hour, 16.1% for 1-2 hours, 26.5% for 2-3 hours, 21% for 3-4 hours, 14.2% for 4-5 hours, and 8.2% for more than 5 hours. In addition, 1.6% of the students slept less than 2 hours, 5.7% 2-4 hours, 33.3% 4-6 hours, 52.5% 6-8 hours, and 6.8% 8 hours or more. While 13.7% of the students had difficulty falling asleep, 10.4% had interrupted sleep, 24.9% had difficulty waking up, and 51.1% had normal sleep. While 65.8% of the students could spare time for daily tasks, 34.2% couldn't spare time for daily tasks. 47% of the students had regular eating habits and 53% had irregular eating habits. 21.6% of the students saw their own achievement at a low level, 67.8% at a medium level, and 10.7% at a high level. 9.3% of the students took 0 practice/mock exams weekly, 44.5% took 1 practice exam weekly, 36.3% took 2 practice exams weekly, 8.2% took 3 practice exams weekly, 0.3% took 4 practice exams weekly, 0.3% took 5 practice exams weekly, and 1.1% took 6 practice exams weekly. While 8.5% of the students did not take the mock exam, 0.8% scored between 0-100 points, 6.3% between 100-200 points, 50.3% between 200-300 points, 28.7% between 300-400 points, and 5.5% between 400-500 points. 21.3% of the students sought help from a psychological counselor, while 78.7% did not.

The correlation results between the sub-dimensions of test anxiety and total scores are presented in Table 2.

Table 2. Pearson correlation analysis values related to test anxiety scores.

Variables		SD	Kurtosis	Skewness	1.	2.	3.	4.
1. Biological	14.57	4.31	.75	1.05	---			
2. Psychological	19.48	4.91	-.63	-.01	.73**	---		
3. Social	19.42	5.0	-.84	.05	.64**	.77**	---	
4. Test Anxiety Total	53.47	12.80	-.45	.30	.87**	.93**	.90**	---

N=366 ***p*<.01

When Table 2 is examined, there is a significant positive relationship between the biological sub-dimension of test anxiety and the psychological sub-dimension (r=.73, *p*<.01), social sub-dimension (r=.64, *p*<.01), and total test anxiety score (r=.87, *p*<.01). There is a significant positive relationship between the psychological sub-dimension of test anxiety and the social sub-dimension (r=.77, *p*<.01) and the total score of test anxiety (r=.93, *p*<.01). There is a significant positive relationship between the social sub-dimension of test

anxiety and the total score of test anxiety (r=.90, p<.01). The kurtosis and skewness values obtained from the data of the study are between -1.5 and +1.5, indicating normal distribution (Tabachnick & Fidell, 2013).

The results of the t-test conducted to determine whether the test anxiety scores differed between the groups according to gender, having a room of one's own, taking private lessons, allocating time for daily tasks, dietary habits and receiving psychological help are presented in Table 3.

Table 3. Independent samples t-test results of test anxiety scale scores according to various variables

Variables	Groups	N	$\overline{X}$	SD	t	df	p
Gender	Female	169	57,19	12,89	5,31	344,674	.001
	Male	197	50,27	11,85			
Your Own Room	Yes	311	52,64	12,17	-2,54	66,826	.013
	No	55	58,14	15,18			
Private Lesson	Yes	152	53,48	11,95	0,13	345,631	.989
	No	214	53,46	13,40			
Making Time for Daily Tasks	Yes	241	51,16	11,76	-4,72	222,100	.001
	No	125	57,92	13,57			
Nutrition	Regular	172	51,43	11,98	-2,91	363,848	.004
	Irregular	194	55,27	13,25			
Seeking Help from the School Psychological Counselor	Yes	78	56,88	12,31	2,73	125,747	.007
	No	288	52,54	12,79			

The results of Levene's test to test the assumption of homogeneity of variances (p>.05) show that homogeneity of variances is ensured. As can be understood from Table 3, there is a significant difference between the groups according to gender in terms of test anxiety scores of senior high school students ($t_{[344.67]}$ = 5.31; p<.001). The level of test anxiety for female students ($\overline{X}$ = 57.19, SD = 12.89) is higher than that of male students ($\overline{X}$ = 50.27, SD = 11.85). There is a significant difference in test anxiety levels among high school seniors based on whether they have their own room ($t_{[66.826]}$ = -2.54; p< .05). Students without their own room ($\overline{X}$ = 58.14, SD = 15.18) experienced more test anxiety than those with their own room ($\overline{X}$ = 52.64, SD = 12.17). There is no significant difference in test anxiety levels among high school seniors based on whether they took private lessons ($t_{[345.63]}$ = .13; p> .05). However, there is a significant difference in test anxiety levels based on students' ability to allocate time for daily tasks ($t_{[222.1]}$ = -4.72; p< .001). High school seniors who couldn't allocate time for daily tasks had higher anxiety levels ($\overline{X}$ = 57.92, SD = 13.57) compared to those who can ($\overline{X}$ = 51.16, SD = 11.76). There is a significant difference in test anxiety levels among high school seniors based on their eating habits ($t_{[363.84]}$ = -2.91; p<.01). Students with irregular eating habits had higher test anxiety levels ($\overline{X}$ = 55.27, SD = 13.25) than those with regular eating habits ($\overline{X}$ = 51.43, SD = 11.98). Lastly, high school seniors showed a significant difference in test anxiety levels based on whether they sought help from a psychological counselor ($t_{[125.747]}$ = 2.73; p<.01). The students who sought help from a psychological counselor had higher anxiety levels ($\overline{X}$ = 56.88, SD = 12.31) compared to those who did not ($\overline{X}$ = 52.54, SD = 12.79).

The results of the One-Way Analysis of Variance, conducted to assess differences in test anxiety levels based on the implementation of a regular study program, are presented in Table 4.

Table 4. One-way analysis of variance analysis results in terms of test anxiety levels according to the application of regular study programme

Regular Program Application	N	$\overline{X}$	SD	Source of Variance	Sum of Squares	df	Mean Square	F	p	Significance
No Difficulty (1)	24	45,375	13,292	Between Groups	2959,145	3	986,382	6,278	0,001	3-1; 4-1, 4-2
Sometimes I Have Difficulties (2)	144	51,944	11,679	Within Groups	56874,024	362	157,111			
Most of the Time I Have Difficulties (3)	118	54,762	11,852	Total	59833,169	365				
I'm Always										

Struggling (4)	80	56,737	14,612							
Total	366	53,469	12,803							

The examination of Table 4 indicates that there is a significant difference among high school seniors' test anxiety levels based on their ability to implement a regular study schedule ($F_{(3-362)}$ = 6.278; p< .001). The Levene test for homogeneity of variances (Levene statistic = 2.32, p=.07) indicates that the assumption of homogeneity of variances is met. According to the Tukey HSD test, which was used to identify the source of the differences between the groups, students who always struggled to follow a regular study schedule ($\overline{X}$ = 56.737, SD = 14.612) experienced higher levels of test anxiety than those who did not struggle at all ($\overline{X}$ = 45.375, SD = 13.292) and those who sometimes struggled ($\overline{X}$ = 51.944, SD = 11.679). However, no significant difference was found between students who mostly struggled and those who always struggled. Additionally, students who mostly struggled to follow a study schedule ($\overline{X}$ = 54.76, SD = 11.85) had higher test anxiety levels than those who always struggled ($\overline{X}$ = 56.74, SD = 14.61). No significant differences in test anxiety levels were found between students who did not struggle at all and those who sometimes struggled, nor between those who sometimes struggled and those who mostly struggled.

The results of the One-Way Analysis of Variance conducted to determine whether there is a difference between the groups in terms of test anxiety levels based on daily sleep duration are presented in Table 5.

Table 5. One-way analysis of variance results of test anxiety scale according to daily sleep status

Daily Sleep Status	N	$\overline{X}$	SD	Source of Variance	Sum of Squares	df	Mean Square	F	p	Significance
Difficulty Falling asleep (1)	50	57,82	15,232	Between Groups	5298,762	3	1766,254	11,724	0,001	1-4; 2-4; 3-4
Interrupted (2)	38	55,605	13,716	Within Groups	54534,407	362	150,648			
Difficulty Waking Up (3)	91	57,736	11,841	Total	59833,169	365				
Regular (4)	187	49,796	11,26							
Total	366	53,469	12,803							

As illustrated in Table 5, there a significant difference among high school seniors' test anxiety levels based on their daily sleep patterns ($F_{(3-362)}$ = 11.724; p<.001). The Levene test for homogeneity of variances (Levene statistic = 2.31, p= .08) indicates that the assumption of homogeneity of variances is satisfied. According to the Tukey HSD test, which was used to identify the source of the differences between the groups, students reporting difficulty falling asleep ($\overline{X}$ = 57.82, SD = 15.232), those reporting interrupted sleep ($\overline{X}$ = 55.605, SD = 13.716), and those reporting difficulty waking up ($\overline{X}$ = 57.736, SD = 11.841) had higher anxiety levels compared to students who reported normal sleep patterns ($\overline{X}$ = 49.796, SD = 11.26). No significant differences in test anxiety levels were found among the other groups.

Table 6 shows the results of the One-Way Analysis of Variance assessing differences in test anxiety levels among groups based on students' perceived achievement.

Table 6. One-way analysis of variance results of test anxiety scale according to self-perception of achievement

How Do You View Your Success	N	$\overline{X}$	SD	Source of Variance	Sum of Squares	df	Mean Square	F	p	Significance
Low (1)	79	59,493	14,404	Between Groups	5749,814	2	2874,907	19,296	0,001	1-2, 1-3; 2-3
Middle (2)	248	52,883	11,694	Within Groups	54083,356	363	148,990			

High (3)	39	45	10,412	Total	59833,169	365
Total	366	53,469	12,803			

When Table 6 is examined, it can be observed that there is a significant difference in the exam anxiety levels of high school seniors based on their perception of their own success among the groups ($F_{(2\text{-}363)}$=19.30; p<.001). The Levene test which was conducted to test the assumption of homogeneity of variances (Levene statistic= 3.24, p=.06) indicated that the homogeneity of variances was met. According to the Tukey HSD test used to identify the source of the difference among the groups, students who perceived their success as low ($\overline{X}$ =59.493, SD=14.404) had higher levels of exam anxiety than those who perceived their success as moderate ($\overline{X}$ =52.883, SD=11.69), and those who perceived their success as high ($\overline{X}$ =45, SD=10.412). Additionally, the exam anxiety levels of students who perceived their success as moderate ($\overline{X}$ =52.883, SD=11.694) were higher than those who perceived their success as high ($\overline{X}$ =45, SD=10.412).

Discussion, Conclusion and Recommendations

This study aimed to examine test anxiety among adolescents in their final year of high school. Analysis of participants' test anxiety scores across various variables revealed significant differences based on gender, having a private room, time allocated for daily chores, nutrition, receiving psychological counseling, ability to follow a regular study schedule, daily sleep habits, and self-perceived academic success. However, no significant difference was found in relation to the variable of receiving private lessons.

According to the results of the research, female high school seniors have higher levels of test anxiety compared to their male counterparts. This finding is supported by a study conducted by Softa et al. (2015), which examined the test anxiety of high school seniors and identified that girls are more anxious than boys. Additionally, various studies in the literature also support these findings (Acar, 2018; Arslan and Aksekioğlu, 2017; Cassady and Johnson, 2002; Demirci and Bütün Ayhan, 2016; Dursun, 2022; Güler and Çakır, 2013; Karakoç, 2023; Kısa, 1996; Núñez-Peña et al., 2016; Yıldız, 2007; Yıldız, 2019; Zeidner and Safir, 1989). Trifoni and Shahini (2021) also found higher levels of test anxiety among girls. Despite preparing more for exams, female students reported feeling more anxious and worried. Pagaria (2020) also found that female students had higher test anxiety scores. This situation has been attributed to the pressure placed on girls by educators to perform better academically compared to boys, as well as to gender-related roles. It is suggested that boys might underreport their anxiety levels to avoid undermining their masculinity or appearing weak. Hanımoğlu (2010) emphasized the importance of women's professions and economic independence in gaining or shaping their social identity, stating that achieving desired results in university entrance exams is crucial for women to secure employment. The belief that women will not be able to achieve full economic and social independence if they do not succeed in university admissions is also thought to influence their test anxiety levels (Erzen, 2013). However, some national studies have yielded different findings. In Baştürk's (2007) research, male students had higher test anxiety scores than female students. This difference was attributed to traditional family structures and societal expectations of males to secure good jobs and build a successful future. In Erözkan's (2004) study, male students had higher scores on the scale measuring irrational worry, which was linked to high societal expectations and fears of failure. Bozkurt (2012), on the other hand, found no significant gender differences in test anxiety levels.

According to the research findings, students without their own rooms experience higher levels of test anxiety compared to those who have their own rooms. A review of the national literature reveals studies that support this finding. Specifically, students with their own rooms have been found to have lower levels of test anxiety compared to those without (Acar, 2018; Aydın and Keskin, 2017; Dursun, 2022; Korhan et al., 2021). However, there are also studies in the national literature that report contrary findings, indicating no significant relationship between test anxiety and the presence of a personal room (Arslan and Aksekioğlu, 2017; Kurtaran et al., 2021). Tekbaş (2009) concluded in their study that whether they have a room of their own does not affect the anxiety levels of high school students, which does not align with the findings of the current study. Nonetheless, the same research found that elementary school students without their own rooms had higher levels of test anxiety. This was attributed to the inability of these students to feel comfortable and establish a regular study environment. Based on the results of the current study, it is possible that students without their own rooms experience increased anxiety because they are forced to study in crowded family settings or under constrained living conditions. This may lead them to believe that they are unable to prepare adequately for exams, resulting in fears of failure.

The findings of the study indicate that there is no significant difference in the levels of test anxiety among high school seniors based on whether they receive private tutoring. Additionally, some studies in the

literature support these findings (Arslan and Aksekioğlu, 2017; Başpınar Erten, 2020; Ekşi, 1998; Erzen and Odacı, 2014; Kutlu, 2001; Tekbaş, 2009). It is suggested that the increasing accessibility of private tutoring and the opportunities available to students may result in no significant difference in test anxiety levels. Moreover, while receiving private tutoring is an external factor in the exam preparation process, it may not impact internal emotional states, such as anxiety. However, there are also studies in the literature that have found significant differences in test anxiety related to the students' private tutoring situations (Ekici, 2005; Yolcu, 2015). In their study, Kurtaran et al. (2021) observed that high school students with high levels of test anxiety were more likely to receive private tutoring. They concluded that high expectations for exam performance could contribute to the students' anxiety levels.

Another finding from this study indicates that students who report irregular eating habits have higher levels of test anxiety compared to those who eat regularly. Negative emotions such as anxiety, depression, stress, and anger can affect eating habits (Macht, 2008). It is thought that the physical consequences of increased anxiety levels negatively impact the stomach and digestive systems, leading to disruptions in eating patterns. Macht et al. (2005) stated in their study that students preparing for exams experience more stress as the exam date approaches, which leads to a tendency to eat more. Supporting this finding, Gokcen and Seylam Kusumler (2021) found a positive relationship between test anxiety and emotional eating. In a study conducted by Bayındır Gümüş et al. (2018), the researchers did not establish a significant relationship between anxiety levels and eating habits among students preparing for university entrance examinations. However, the findings revealed an inverse correlation between meal frequency and state anxiety scores; specifically, as meal frequency increased, state anxiety scores decreased. Based on these results, it is advisable for students to maintain regular meal patterns and prioritize the consumption of nutritious foods to mitigate anxiety.

According to the findings of this study, high school seniors who seek help from psychological counselors exhibit higher levels of test anxiety compared to those who do not. This situation may be related to the higher motivation of students with elevated anxiety levels to seek help from psychological counselors. Additionally, it could be associated with the observation or identification of students with high test anxiety by counselors and teachers in the school environment, leading to increased referrals to school psychological counseling and guidance services. This can be likened to a patient-doctor relationship. Research has shown that individual psychological counseling processes for students with test anxiety (Akkaya and Demirtaş Zorbaz, 2023; Işıkay, 2019) and group counseling processes (Kaya and Bedir, 2019) have resulted in reduced test anxiety levels among students. Considering these results, it would be effective for psychological counselors to have more frequent interactions with students and to work more actively to help alleviate their test anxiety (Çakıcı, 2021).

According to the findings of this study, high school seniors who cannot allocate time for their daily tasks experience higher levels of test anxiety compared to those who can manage their daily activities. Students with low test anxiety are expected to plan their time better, be more organized, and complete their daily tasks more comfortably than those with higher anxiety levels. It is possible that students with high anxiety are so preoccupied with trying to eliminate their anxiety and with their anxious thoughts—i.e., their internal processes—that they struggle to find time for daily tasks. Regarding the ability to implement a regular study program, the study found that students who often struggle to follow a regular study schedule experience higher levels of test anxiety than those who do not struggle at all. Furthermore, students who always struggle with a regular study program also report higher levels of test anxiety compared to both those who do not struggle and those who sometimes struggle. Numan and Hasan (2017), in their study with undergraduate students in Pakistan, found that students who follow a regular study program have lower test anxiety scores. This result aligns with our study's findings. Tsegay et al. (2019) also found a significant relationship between the levels of test anxiety among medical students and the implementation of a regular study plan, noting that as students adhered more to a study plan, their anxiety levels decreased. This result is consistent with our findings as well. It may be that students experiencing high levels of anxiety struggle to implement a regular study program because they cannot effectively manage their anxiety-related emotions.

According to the findings, high school seniors who report difficulties falling asleep, experiencing interrupted sleep, and struggling to wake up have higher levels of test anxiety compared to those who report normal sleep patterns. It is believed that students with high levels of anxiety may experience physiological hyperarousal, possess a worried cognitive structure, and struggle to cope with anxiety symptoms, leading to difficulties in falling asleep. Several studies in the literature support the findings of this study. For instance, Köse et al. (2018) concluded that as test anxiety scores increase, sleep quality decreases. In a study by Moalla et al. (2016) focusing on medical students, it was noted that students experienced anxiety during exam periods, which negatively affected their sleep quality. Additionally, Lazaratou et al. (2013) found a negative relationship between sleep duration and anxiety scores in their study conducted in Greece. These findings underscore the interconnectedness of sleep quality and test anxiety among students.

According to the perceptions of the senior high school students about their own achievement, it is seen that those who perceive their own achievement as low have higher levels of test anxiety than those who perceive their own achievement as medium and high. Additionally, students who perceive their success as medium also have higher anxiety levels than those who perceive it as high. Students with low exam anxiety are believed to be more relaxed during exams, leading to better results, which in turn increases their self-efficacy and optimism. This situation contributes to their perception of themselves as more successful. On the other hand, students with high exam anxiety may lack confidence in their potential, resulting in a lower perception of their success. A study by Stoeber (2004) found that students with high levels of exam anxiety experience more anxiety and lack self-confidence. Khalaila (2015) indicated that academically self-sufficient students possess better intrinsic motivation, leading them to feel less anxious during exams and consequently be more successful. Steinmayr et al. (2016) also stated that high levels of anxiety are associated with lower success scores. These findings contribute to a better understanding of the relationship between exam anxiety and self-perception.

As a result of the study, it was concluded that gender, having a room of their own, allocating time for daily chores, dietary patterns, receiving help from a psychological counselor, applying a regular study program, sleep status and perception of their own success affected the test anxiety levels of senior high school students, while taking private lessons did not affect test anxiety.

Based on the findings from this research, the following recommendations can be made for researchers and practitioners in the field:

1. Special study areas can be provided for students preparing for the exam.

2. Diet and regular nutrition programs can be made for students preparing for the exam.

3. Students preparing for the exam can be provided with information on how to use time effectively and guidance on preparing a timetable.

4. Students can be informed about the importance and regularity of sleep and quality sleep, and sleep hygiene training can be provided.

5. Rewards and reinforcers can be used to improve the perception of success of students preparing for the exam.

6. In schools, students with intense test anxiety can be identified and individual counseling or group counseling services based on Cognitive and Behavioral Therapy can be provided for these students.

7. Student, family and school cooperation can be provided about students' test anxiety.

8. The results obtained from this study can be used by school counselors in school guidance services.

9. Since the study is limited to Mersin province, it can be conducted with a larger sample in different provinces.

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Lise Son Sınıf Öğrencilerinin Sınav Kaygılarının İncelenmesi*

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Öz

Bu çalışmanın amacı, lise son sınıf öğrencilerinin sınav kaygılarını çeşitli değişkenler açısından incelemektir. Araştırmanın çalışma grubunu, 2021-2022 eğitim-öğretim yılında Mersin ilindeki liselerde öğrenim gören 169'u kız (%46.2) ve 197'si erkek (%53.8) olmak üzere toplam 366 lise son sınıf öğrencisi oluşturmaktadır. Araştırmaya katılan öğrenciler 16-21 yaşları arasındadır ve yaş ortalamaları 17.28, Ss= .49'dur. Araştırmanın verileri, Çocuk ve Ergenler için Sınav Kaygısı Ölçeği ve Kişisel Bilgi Formu ile toplanmıştır. Araştırmanın verilerinin analizinde betimsel istatistikler, Pearson Korelasyon Analizi, Bağımsız Gruplar için T-testi ve Tek Yönlü Varyans Analizi (ANOVA) kullanılmıştır. Araştırmada elde edilen bulgulara göre lise son sınıf öğrencilerinin cinsiyet, kendine ait odalarının olması, günlük işlere vakit ayırma durumları, beslenme düzenleri, psikolojik danışmandan yardım alma durumları, düzenli çalışma programı uygulamaları, uyku durumları ve kendi başarılarını algılama durumlarına göre gruplar arasında sınav kaygısı düzeylerinin farklılaştığı sonucuna ulaşılırken özel ders almaya göre gruplar arasında sınav kaygısı düzeylerinin farklılaşmadığı sonucuna ulaşılmıştır.

Anahtar Kelimeler: Sınav kaygısı, Ergenler, Lise Öğrencileri

Giriş

Birey, belirsizlikle ve varoluşsal bir tehditle karşı kaşıya kaldığında bu durum bireyin benlik saygısı için bir tehlike oluşturur (Zeidner, 1998). Kişi, kendisini tehlikeli olabilecek bir durumda algıladığında ise kaygı duygusu ortaya çıkar (Smith ve Lazarus, 1990). Kaygı, kişinin kendisine yönelik algısının değişmesinden veya yaşamdaki konumunda meydana gelen değişikliklerden kaynaklanmaktadır (Salecl, 2004). Barlow'a (2002) göre kaygı; geleceğe yönelik bir duygu olarak ve kontrol edilemezlik algısı ile nitelendirilen, potansiyel olarak rahatsız edici olaylar üzerindeki belirsizlik durumu ya da bu olaylara karşı kişinin kendi duygusal tepkisidir. Freud (1936) ise kaygıyı "Gerçek bir tehdit veya böyle olduğuna inanılan bir tehlike korkusu" olarak tanımlamıştır (s. 13). Kaygı, uzun zamandan beri temel insani duygulardan biri olarak kabul edilmektedir. Kaygıyla ilgili olarak ortaya çıkan; kalp çarpıntısı, terleme, titreme gibi fizyolojik göstergeler Freud tarafından kaygının temel bileşenleri olarak gösterilir (Spielberger, 1972). Kaygının gelişimi; biyolojik ve genetik yatkınlıktan, geçmiş öğrenmelerden ve kişinin düşüncelerinden etkilenir (Cloninger, 1988). Yani kaygı, özneldir ve geleceğe yöneliktir (Clark ve Beck, 2010).

Kaygının yoğun yaşandığı dönemlerden biri ise ergenlik dönemidir. Yazılı tarihin başlangıcından itibaren ergenlikle ile ilgili sorunlar anne-babaları, eğitimcileri, sosyal bilimcileri ve felsefecileri ilgilendirmiştir (Dinçel, 2006). Ergenlik, "cinsel olgunlaşma zamanı" olarak tanımlanmaktadır (Webster's New Pocket Dictionary, 2000). Orta ve geç çocukluktaki büyümenin etkileyici bir şekilde hızlanması ve ikincil cinsiyet özelliklerinin ortaya çıktığı fiziksel olgunlaşma sürecidir (Susman ve Rogol, 2004). Aynı zamanda ergenlik dönemi, kaygı sorunlarının başlaması ve yoğunlaşması açısından riskli bir dönem olarak görülmektedir (Reardon ve diğ., 2009). Kaygı sorunu yaşayan ergenler genellikle aile hayatlarında, sosyal hayatlarında ve akademik hayatlarında sorunlar yaşamaktadırlar (Albano ve diğ., 2003). Alanyazında ergenlerin yaşadığı; sürekli kaygı (Çivitçi, 2006; Kaya ve Karaca, 2018), sosyal kaygı (Mercan ve Yavuzer, 2017; Tagay ve diğ., 2018), kariyer kaygısı (Nalbantoğlu Yılmaz ve Çetin Gündüz, 2016; 2018) ve sınav kaygısı (Güler ve Çakır, 2013; Kapıkıran, 2020) üzerine çeşitli araştırmalar yapılmıştır. Kaygının yoğun olarak yaşandığı alanlardan biri ise sınavlardır. Mulvenon'e (2005) göre; sınavlar, öğrenciler üzerinde artan bir kaygı yaratmakta ve öğrenci

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başarısını olumsuz etkilemektedir. Pagaria'ya göre (2020) sınav kaygısı, bireylerin sınav koşullarında aşırı sıkıntı ve kaygı yaşadıkları psikolojik bir durumdur ve performans kaygısının bir şeklidir. Sınav korkusu, öğrencilerin sınavdaki akademik performansını etkiler. Kaygı, korkulan durumdan kaçınmaya da yol açabilen irrasyonel bir sıkıntıdır. McDonald (2001) bireyin sınav öncesinde ve sınav esnasında kendini hazır hissetmiyorsa, bilgisine güvenmiyorsa, başarılı olamayacağını düşünüyorsa, kendisini endişeli, sıkıntılı, gergin ve huzursuz hissediyorsa bu kişinin sınav kaygısına sahip olduğunu ifade etmiştir. Sınav kaygısı, "duyuşsallık" ve "kuruntu" adıyla iki alt bileşenden oluşur (Köse ve diğ., 2018; Liebert ve Morris, 1967). Kuruntu kısmı, kişinin sınav anındaki performansına dair düşüncelerinden oluşur. Duyuşsal kısım ise mide bulantısı, kızarma, terleme, gerginlik, hızlı kalp atışı, baş dönmesi, ağız kuruluğu gibi fizyolojik belirtilerden oluşmaktadır (Köse ve diğ., 2018). Kaygı düzeyi yüksek bireyler ayrıca korku, hayal kırıklığı, çaresizlik ve utanç gibi duygular yaşayabilirler. Ayrıca kaygı; bilişsel açıdan ise dikkat dağınıklığı, odaklanamama, bellek sorunları, endişe dolu düşüncelerle aşırı meşguliyet gibi sorunlara neden olabilir. Bununla beraber sınav kaygısı, sınava ve sınav anına ilişkin bilişsel ve davranışsal kaçınma tepkilerine de neden olabilir.

Sınav kaygısıyla ilgili yapılan çalışmalara bakıldığında, sınav kaygısının çeşitli faktörlere bağlı olarak ortaya çıktığı görülmektedir. Trifoni ve Shahini (2021) sınav kaygısına neden olan faktörlerden bazılarının sınavlara yeterince hazırlanamama ve/veya uygun olmayan sınav hazırlığı, olumsuz değerlendirilme korkusu, önceki sınavlarda yaşanan kötü deneyimler, zaman kısıtlaması ve baskısı, sınavlarda soru sayılarının arttırılması ile sınavların ve derslerin içeriğinin zorluğu olduğunu belirlemişlerdir. Culler ve Holahan (1980) yaptıkları çalışmada; sınav kaygısı yüksek olan öğrencilerin bu kaygısına sebep olarak yetersiz öğrenme yaşamalarını, çalışma becerilerinden eksik olmalarını ve sınav materyallerine alışık olmamalarını bulmuştur. Ayrıca; anne-baba tutumları (Besharet, 2003), kişinin geçmiş deneyimleri ve inançları (McDonald, 2001), ders yüklerinin fazlalığı ve zaman yönetimleri (Sansgiry ve Sail, 2006) de sınav kaygısı üzerinde etkilidir. Sınav kaygısının bir diğer sebebi olarak öğrencilerin sınav durumlarında kendilerinden şüphe ve endişe duymaları görülmektedir. Burada sınav kaygısına sebep olarak öğrencilerin olumsuz düşünceleri görülebilir (Sarason, 1984). Stoeber (2004) çalışmasında, sınav kaygısı yüksek düzeyde olan öğrencilerin daha fazla endişeli olduklarını ve öz güven eksikliği yaşadıklarını belirlemiştir. Nitekim bu yöndeki olumsuz düşünceler öğrencilerin geçmişteki başarısızlıklarına ve korkularına odaklanmalarına sebep olur. Bu odaklanma, öğrenilmiş çaresizliği yaratır (Dweck, 1975). Öğrenilmiş çaresizliği gösteren bir durum olarak, sınav kaygısı yüksek olan öğrenciler kendilerine yönelik içsel tepkiler vermeye başlarlar. Kendilerine çoğu zaman "Yeterince zeki değilim" ve "Asla bunu yapamam" cümlelerini kurarlar (Ganz ve Ganz, 1988). Nitekim; Bagana, Raciub ve Lupu (2011) sınav kaygısı yüksek düzeyde olan liseli öğrencilerin benlik saygısı ve iyimserlik düzeylerinin daha düşük düzeyde olduğunu belirlemişlerdir. Ayrıca sınav kaygısı yaşayan öğrencilerin birçoğu, "Uyku uyuyamaz durumdayım", "Kazanamazsam biterim", "Hayattan keyif alamıyorum" gibi cümleleri de fazlaca kullanmaktadırlar (Baltaş, 1995). Kaygının orta seviyede yaşanması başarıyı olumlu yönde etkilerken yüksek düzeyde olması kişinin başarısını olumsuz yönde etkilemektedir (Aslan, 2005). Sınav kaygısının nedenleri arasında düşük motivasyon düzeyi, çevredekilerin yüksek beklentileri, hazırlık eksikliği, artan rekabet durumu, duyguları yönetememek, düşük performanstan korkmak ve düşük özgüven olabilir (Pagaria, 2020). Yapılan bir araştırmaya göre, üniversite giriş sınavına hazırlanan öğrencilerin kaygı düzeyleri ameliyat edilmeyi bekleyen genel cerrahi hastalarının kaygı düzeylerinden yüksek çıkmıştır (Baltaş, 1995). İşgör (2016) tarafından yapılan çalışmada, yüksek düzeyde sınav kaygısı olan liseli ergenlerin psikolojik iyi oluş düzeylerinin ve akademik başarılarının daha düşük olduğu görülmüştür. Öte yandan sınav kaygısının varlığının daha yaygın kaygı bozukluklarının varlığını desteklediğini gösteren araştırmalar günden güne artmaktadır (Beidel ve Turner, 1988).

Öğrenci başarısını ölçmek için kullanılan en yaygın yöntem sınavdır. Eğitimin kaçınılmaz bir değerlendirme aracı olan sınavlar bazı öğrenciler için kaygı gibi bir soruna sebep olabilmektedir (Cüceloğlu, 2006). Ülkemizde her yıl çoğunluğu ergenlerden oluşan milyonlarca kişi üniversite eğitimi alabilmek için üniversite giriş sınavlarına girmektedir (Güler ve Çakır, 2013). Ölçme, Seçme ve Yerleştirme Merkezi (ÖSYM) verilerine göre 2022 yılında 3.008.287 kişi üniversite sınavına girmiştir ve bunlardan 838.892 kişi üniversite kontenjanlarına yerleşmişlerdir (ÖSYM, 2022). Bu koşullar sınava girecek çoğu adayın sınava hazırlanma sürecinde sıkıntılar yaşamasına sebep olabilmekte ve çeşitli sorunlar ortaya çıkarabilmektedir (Güler ve Çakır, 2013). Trifoni ve Shahini (2021) çalışmalarında; sınav kaygısının fiziksel ve psikolojik sorunlara yol açtığını, motivasyonu, dikkati ve başarıyı olumsuz etkilediğini, sınav sırasında hataları artırdığını, daha önce öğrenilenlerin hatırlanmasında sorunlar yarattığını ve verimli çalışmayı engellediğini belirlemişlerdir. Bu bakımdan üniversiteye hazırlık sürecinde ergenlerin yaşadığı sınav kaygısının araştırılması konusunun önemi ortaya çıkmaktadır. Ülkemizde sınav kaygısı ile ilgili yapılan mevcut çalışmalara bakıldığında; sınav kaygısı ile cinsiyet, akılcı olmayan inançlar ve algılanan anne-baba tutumları (Güler ve Çakır, 2013), cinsiyet, okuldan ve sınıfından memnun olma, kardeş sayısı, kardeş sırası (Arslan ve Aksekioğlu, 2017), ebeveyn akademik başarı baskısı ve desteği ile akademik dayanıklılık (Kapıkıran, 2020), psikolojik dayanıklılık ve karar verme becerileri (Acar, 2018), cinsiyet, algılanan anne baba tutumu, ders çalışmak için ayrılan süre, sınava girerken kaygılanma durumu, öğrenim görülen lise türü (Demirci ve Bütün Ayhan, 2016), uyku kalitesi (Köse ve diğ., 2018),

akademik başarı, yalnızlık ve algılanan sosyal destek (Yıldırım, 2000) gibi değişkenlerle arasındaki ilişkilerin incelendiği görülmüştür. Mevcut çalışmada ise sınav kaygısı cinsiyet, kendine ait odanın bulunup bulunmaması, özel ders desteği alıp almama, düzenli ders program yapıp yapmama, günlük işlere zaman ayırma, beslenme, uyku durumu, başarıyı algılama biçimi ve psikolojik danışma yardımı alıp almama gibi bireyin sınav kaygısı ile yakından ilişkili olabilecek ve günlük işlevselliğini yansıtan değişkenler açısından incelenmiştir. Bu çalışmanın, ergenlerin sınav kaygısı durumlarının anlaşılmasında yapılacak çalışmalar için önemli olacağı düşünülmektedir. Nitekim, Kavakcı ve diğ. (2011) çalışmalarında; sınav kaygısı ile depresyon, sosyal anksiyete, sürekli anksiyete gibi psikiyatrik belirtiler arasında anlamlı ilişkiler bulmuşlardır. Yıldırım'ın (2004) çalışmasında ise sınav kaygısının, depresyonun anlamlı bir yordayıcısı olduğu belirlenmiştir. Buna göre sınav kaygısının bireyin sınav performansının dışında ruh sağlığı açısından da tehdit edici bir noktaya gidebileceği sonucuna varılabilir. Bu bakımdan sınav kaygısı ile ilişkili olan durumların anlaşılmasının önemi ortaya çıkmaktadır. Alanyazında, sınav kaygısı ile ilgili değişkenler açısından yapılmış benzer bir çalışmaya rastlanılmamıştır. Bu çalışmanın ergenlerdeki sınav kaygısı olgusu ile ilgili durumların anlaşılmasında alanyazına önemli bir katkı yapacağı düşünülmektedir. Sınav kaygısı ile ilişkili değişkenlerin anlaşılmasının, sınavlara hazırlanan öğrencilere sunulacak koruyucu, önleyici ve müdahale çalışmalarının planlanması noktasında okul psikolojik danışmanlarının ve bu gruplarla çalışan diğer ruh sağlığı profesyonellerinin çalışmalarına ışık tutacağı düşünülmektedir.

Bu çalışmada, sınava girecek grubun çoğunluğu ergenlerden oluştuğu ve Reardon ve diğ. (2009), ergenlik dönemini kaygı sorunlarının başlaması ve yoğunlaşması açısından riskli bir dönem olarak görüldüğünü ifade ettiği için örneklem olarak lise son sınıf öğrencileri seçilmiştir. Bu çalışmanın amacı, lise son sınıfta okuyan öğrencilerin sınav kaygılarını çeşitli değişkenler açısından incelemektir.

Yöntem

Bu araştırmada, betimsel yönteme dayalı kesitsel araştırma deseni kullanılmıştır. Kesitsel araştırma deseni, farklı özellikleri bulunan kişilerin aynı anda belirlenen özellikler açısından incelendiği bir modeldir (Fraenkel ve Wallen, 2003).

Çalışma Grubu

Çalışma grubu, Mersin ilinde bulunan başarı düzeyleri ve sosyoekonomik düzeyleri açısından evreni daha iyi temsil edeceği düşünülen Mersin Özel İz Fen ve Anadolu Lisesi, Mahmut Arslan Anadolu Lisesi ve İçel Anadolu Liselerinden oluşturulmuştur. Çalışma grubu, 2021-2022 eğitim-öğretim yılında okuyan 169'u kız (%46.2) ve 197'si erkek (%53.8) olmak üzere araştırmaya gönüllü olarak katılan toplam 366 lise son sınıf öğrencisinden oluşmaktadır. Çalışma grubuna ait demografik bilgilere göre çalışmaya katılan ergenler 16-21 yaşları arasındadır ve yaş ortalamaları 17.28, Ss= .49'dur. Öğrencilerin %9.3'ü tek çocuktur; %50'sinin 1 kardeşi, %19.4'ünün 2 kardeşi, %12.3'ünün 3 kardeşi varken %9'unun 4 ve üzeri kardeşi vardır. Öğrencilerin %83.1'inin anne-babası birlikteyken %13.4'ünün ayrıdır. Ayrıca %2.7'sinin anne vefat iken %0.8'inin baba vefattır. Öğrencilerin anne eğitim düzeyine bakıldığında %2.7'sinin öğrenimi yok, %15.6'sı ilkokul mezunu, %15'i ortaokul mezunu, %31,1'i lise mezunu ve %35.5'i üniversite mezunudur. Baba eğitim düzeyi ise %0.5'in öğrenimi yok, %11.2'si ilkokul mezunu, %15.3'ü ortaokul mezunu, %29.2'si lise mezunu ve %43.7'si üniversite mezunudur. Öğrencilerin aile gelir durumuna bakıldığında %7.9'u 2500 TL ve altı, %18.3'ünün 2500-4000 TL, %18.6'sının 4000-6000 TL, %24.3'ünün 6000-10000 TL, %30.9'unun 10000 TL ve üstü gelire sahiptirler. Araştırma grubunu belirlemede uygun örnekleme yönteminden yararlanılmıştır. Uygun örnekleme yöntemi; zaman, işgücü ve para gibi konulardan kaynaklı sınırlılıklardan dolayı örneklemin kolay uygulamanın yapılabileceği birimlerden seçilmesidir (Büyüköztürk ve diğ. 2018). Bu yöntemde örneklem seçilirken kolay ulaşılabilen çevre seçilir (Aziz, 2014). Bu şekilde araştırmaya pratiklik ve hız kazandırılır (Yıldırım ve Şimşek, 2021).

Veri Toplama Araçları

Lise Son Sınıf Öğrencilerinin Sınav Kaygılarının İncelenmesi isimli araştırmada veri toplama aracı olarak Kişisel Bilgi Formu ve Çocuk ve Ergenler için Sınav Kaygısı Ölçeği (ÇESKÖ) kullanılmıştır.

Kişisel Bilgi Formu

Öğrencilerin yaş, cinsiyet, kardeş sayısı, anne-baba birlikteliği, anne-baba öğrenimi, hane geliri, kendilerine ait odalarının olma durumu, ders çalışmaya başlamakta zorlanma durumu, düzenli bir çalışma programı uygulamakta zorlanma durumu, özel ders alma durumu, günlük çalışma süreleri, günlük uyku durumları, günlük işlere vakit ayırabilme, beslenme düzenleri, kendi başarılarını görmeleri, haftalık deneme sayıları, ortalama deneme sınavı puanları, okul psikolojik danışmanından yardım alma değişkenlerini belirlemek amacıyla araştırmacılar tarafından oluşturulmuştur.

Çocuk ve Ergenler için Sınav Kaygısı Ölçeği (ÇESKÖ)

Çocuk ve Ergenler için Sınav Kaygısı Ölçeği (ÇESKÖ), Tan (2020) tarafından geliştirilmiştir. ÇESKÖ toplam 30 maddeden oluşmaktadır. Ölçeğin; biyolojik, psikolojik ve sosyal olmak üzere 3 alt boyutu vardır. Ölçek, 3'lü likert tipi bir ölçektir. ÇESKÖ'den alınan en düşük puan 30 iken en yüksek puan 90'dır. Alt boyutlardan alınabilecek en düşük puan 10, en yüksek puan 30'dur. Ölçeğin yapı geçerliği için yapılan Açıklayıcı Faktör Analizi sonuçlarına göre ölçeğe ait alt boyutların açıkladığı toplam varyans değeri %42.99 olarak bulunmuştur. Özdeğerler; 10 maddelik biyolojik alt boyutunda 8, 63; 10 maddelik psikolojik alt boyutunda 2, 44; 10 maddelik sosyal alt boyutunda 1, 82 bulunmuştur. ÇESKÖ'nün ölçüt geçerliği için "Westside Sınav Kaygısı Ölçeği" ve "Revize Edilmiş Sınav Kaygısı Ölçeği" kullanılmıştır ve ölçekler arasında anlamlı düzeyde ilişki bulunmuştur. Ölçeğin Cronbach Alfa iç tutarlık katsayısı değeri .90'dır. Bu çalışmanın verileri üzerinden hesaplanan Cronbach Alfa iç tutarlık katsayısı değeri ise tüm ölçek için .93 olarak bulunmuştur.

İşlem

Bu araştırma için Mersin İl MEM'den gerekli izinler alındıktan sonra veri toplanmıştır. Araştırmacılar tarafından gönüllü olan lise son sınıf öğrencilerine ölçme aracı ve kişisel bilgi formu uygulanmıştır. Çalışmaya katılan gönüllülerin cevaplandırma süreleri yaklaşık 10-15 dakikadır.

Verilerin Analizi

Araştırmanın veri analizinde betimsel istatistikler, Pearson Korelasyon Analizi, Tek Yönlü ANOVA ve bağımsız gruplar için t testi kullanılmıştır. Gruplar arasındaki farkı belirlemek için post hoc testlerinden Tukey testinden yararlanılmıştır. Çalışmanın veri analizi öncesinde Tek Yönlü ANOVA ve bağımsız gruplar için t testinin varsayımları için verilerin normalliğine bakılmıştır. Normallik varsayımları için ilk olarak değişkenlerin basıklık ve çarpıklık değerlerine bakılmıştır. Daha sonra varyansların homojenliği için Levene istatistiğine bakılmıştır. Araştırmanın verilerinin analizinde, IBM SPSS 23 programı kullanılmıştır. Anlamlılık düzeyi .05 olarak kullanılmıştır.

Etik Kurul Beyanı

Araştırma Adıyaman Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu'nun 12.01.2022 tarihli 189 sayılı onayı ile gerçekleştirilmiştir.

Bulgular

Çalışma grubuna ait demografik özellikler ve tanımlayıcı istatistikler Tablo 1'de sunulmuştur.

Tablo 1. Çalışma grubuna ait özellikler

Değişkenler		**f**	**%**
Kendinize Ait Odanız	Var	311	85
	Yok	55	15
Ders Çalışmaya Başlama Zorluğu	Hiç zorlanmıyorum	19	5,2
	Bazen zorlanıyorum	165	45,1
	Çoğu zaman zorlanıyorum	110	30,1
	Her zaman zorlanıyorum	72	19,7
Düzenli Bir Çalışma Programı Uygulama Zorluğu	Hiç zorlanmıyorum	24	6,6
	Bazen zorlanıyorum	144	39,3
	Çoğu zaman zorlanıyorum	118	32,2
	Her zaman zorlanıyorum	80	21,9
Özel Ders Alma Durumu	Evet	152	41,5
	Hayır	214	58,5
Günlük Ders Çalışma Süresi	1 saatten az	51	13,9
	1-2 saat	59	16,1
	2-3 saat	97	26,5
	3-4 saat	77	21
	4-5 saat	52	14,2
	5 saat üzeri	30	8,2
Günlük Uyku Süresi	2 saatten az	6	1,6
	2-4 saat	21	5,7
	4-6 saat	122	33,3
	6-8 saat	192	52,5

	8 saat ve üzeri	25	6,8
Günlük Uyku Durumu	Uykuya dalmakta zorluk	50	13,7
	Kesintili	38	10,4
	Uyanmakta zorluk	91	24,9
	Normal	187	51,1
Günlük İşlere Gerekli Zamanı Ayırma	Evet	241	65,8
	Hayır	125	34,2
Beslenme Düzeni	Düzenli	172	47
	Düzensiz	194	53
Kendi Başarınızı Nasıl Görüyorsunuz	Düşük	79	21,6
	Orta	248	67,8
	Yüksek	39	10,7
Haftalık Deneme Sınavı Sayısı	0	34	9,3
	1	163	44,5
	2	133	36,3
	3	30	8,2
	4	1	0,3
	5	1	0,3
	6	4	1,1
	7 ve üzeri	0	0
Deneme Sınavından Alınan Ortalama Puanlar	Girmiyorum	31	8,5
	0-100	3	0,8
	100-200	23	6,3
	200-300	184	50,3
	300-400	105	28,7
	400-500	20	5,5
Okul Psikolojik Danışmanından Yardım Alma	Evet	78	21,3
	Hayır	288	78,7

Tablo 1 incelendiğinde, araştırmaya katılan öğrencilerin %85'inin kendisine ait odası varken %15'inin kendisine ait odası yoktur. Öğrencilerin %5,2'si ders çalışmaya başlarken hiç zorlanmamakta, %45,1'i bazen zorlanmakta, %30,1 çoğu zaman zorlanmakta, %19,7'si ise her zaman zorlanmaktadır. Öğrencilerin %6,6'sı düzenli bir çalışma programı uygulamakta hiç zorlanmamakta, %39,3'ü bazen zorlanmakta, %32,2'si çoğu zaman zorlanmakta ve %21,9'u her zaman zorlanmaktadır. Öğrencilerin %41,5'i özel ders alırken %58,5 özel ders almamaktadır. Öğrencilerin günlük ders çalışma sürelerine bakıldığında, %13,9'u 1 saatten azdır, %16,1 1-2 saat, %26,5 2-3 saat, %21'i 3-4 saat, %14,2'si 4-5 saat ve %8,2'si 5 saat üzeri ders çalışmaktadır. Ayrıca, öğrencilerin %1,6'sı 2 saatten az, %5,7'si 2-4 saat, %33,3'ü 4-6 saat, %52,5'i 6-8 saat ve %6,8'i 8 saat ve üzeri günlük uyku süreleri vardır. Öğrencilerin %13,7'si uykuya dalmakta zorluk yaşarken %10,4'ü kesintili, %24,9'u uyanmakta zorluk ve %51,1'inin normal uyku durumları vardır. Öğrencilerin %65,8'i günlük işlere vakit ayırabilirken %34,2'si günlük işlere zaman ayıramamaktır. Öğrencilerin %47'si düzenli %53'ü düzensiz bir beslenme alışkanlığına sahiptirler. Öğrencilerin %21,6'ı kendi başarısını düşek düzeyde, %67,8'si kendi başarısını orta düzeyde, %10,7'si kendi başarısını yüksek düzeyde görmektedir. Öğrencilerin %9,3'ü haftalık 0 deneme, %44,5'i haftalık 1 deneme, %36,3'ü haftalık 2 deneme, %8,2'si haftalık 3 deneme, %0,3'ü haftalık 4 deneme, %0,3'ü haftalık 5 deneme, %1,1'i haftalık 6 deneme çözmektedir. Öğrencilerin %8,5'i deneme sınavına girmiyorken %0,8'i 0-100 puan arasında, %6,3'ü 100-200 puan arasında, %50,3'ü 200-300 puan arasında, %28,7'si 300-400 puan arasında ve %5,5'i 400-500 arasında puan almıştır. Öğrencilerin %21,3'ü psikolojik danışmandan yardım alırken %78,7'si psikolojk danışmandan yardım almamaktadır.

Sınav kaygısının alt boyutları ile toplam puanları arasındaki korelasyon sonuçları Tablo 2'de sunulmuştur.

Tablo 2. Sınav kaygısı puanlarına ilişkin pearson korelasyon analizi değerleri

Değişkenler	$\overline{X}$	Ss	Basıklık	Çarpıklık	1.	2.	3.	4.
1.Biyolojik	14.57	4.31	.75	1.05	---			
2.Psikolojik	19.48	4.91	-.63	-.01	.73**	---		
3.Sosyal	19.42	5.0	-.84	.05	.64**	.77**	---	
4.Sınav Kaygısı Toplam	53.47	12.80	-.45	.30	.87**	.93**	.90**	---

N=366 **p<.01

Tablo 2 incelendiğinde, sınav kaygısının biyolojik alt boyutu ile psikolojik alt boyutu (r=.73, p<.01), sosyal alt boyutu (r=.64, p<.01) ve sınav kaygısı toplam puanı arasında (r=.87, p<.01) pozitif yönde anlamlı bir ilişki bulunmaktadır. Sınav kaygısının psikolojik alt boyutu ile sosyal alt boyutu (r=.77, p<.01) ve sınav kaygısı toplam puanı arasında (r=.93, p<.01) pozitif yönde anlamlı bir ilişki bulunmaktadır. Sınav kaygısının sosyal alt boyutu ile sınav kaygısı toplam puanı arasında (r=.90, p<.01) pozitif yönde anlamlı bir ilişki bulunmaktadır. Çalışmanın verilerinden elde edilen basıklık ve çarpıklık değerlerinin -1.5 ile +1.5 arasında olması normal dağılama işaret etmektedir (Tabachnick ve Fidell, 2013).

Cinsiyet, kendine ait odanın olması, özel ders alma, günlük işlere vakit ayırabilme, beslenme biçimleri ve psikolojik yardım alma durumlarına göre sınav kaygısı puanlarının gruplar arasında farklı olup olmadığını belirlemek için yapılan t testi sonuçları Tablo 3'te sunulmuştur.

Tablo 3. Sınav kaygısı ölçeği puanlarının çeşitli değişkenlere göre bağımsız gruplar için t-testi sonuçları

Değişkenler	Gruplar	N	$\overline{X}$	Ss	t	Sd	p
Cinsiyet	Kız	169	57,19	12,89	5,31	344,674	.001
	Erkek	197	50,27	11,85			
Kendine Ait Oda	Var	311	52,64	12,17	-2,54	66,826	.013
	Yok	55	58,14	15,18			
Özel Ders	Evet	152	53,48	11,95	0,13	345,631	.989
	Hayır	214	53,46	13,40			
Günlük İşlere Zaman Ayırma	Evet	241	51,16	11,76	-4,72	222,100	.001
	Hayır	125	57,92	13,57			
Beslenme	Düzenli	172	51,43	11,98	-2,91	363,848	.004
	Düzensiz	194	55,27	13,25			
Psk. Dan. Yardımı	Evet	78	56,88	12,31	2,73	125,747	.007
	Hayır	288	52,54	12,79			

Varyansların homojenliği varsayımını test etmek için yapılan Levene testi sonuçları (p>.05) varyansların homojenliğinin sağlandığını göstermektedir. Tablo 3 incelendiğinde, lise son sınıf öğrencilerinin sınav kaygısı puanları açısından cinsiyete göre gruplar arasında anlamlı bir fark vardır ($t_{[344,67]}$=5,31; p<.001). Kız öğrencilerin sınav kaygısı düzeyleri ($\overline{X}$ =57,19, Ss=12,89), erkek öğrencilerin sınav kaygısı düzeylerinden ($\overline{X}$ =50,27, Ss=11,85) daha yüksektir. Lise son sınıf öğrencilerinin sınav kaygısı düzeylerinde kendilerine ait odası olmasına göre gruplar arasında anlamlı bir farklılık vardır ($t_{[66,826]}$=-2,54; p<.05). Kendine ait odası olmayan öğrenciler ($\overline{X}$ =58,14, Ss=15,18), kendine ait odası olan öğrencilere ($\overline{X}$ =52,64, Ss=12,17) göre daha fazla sınav kaygısı yaşamaktadır. Lise son sınıf öğrencilerinin sınav kaygısı düzeylerinde özel ders alma durumuna göre gruplar arasında anlamlı bir fark yoktur ($t_{[345,63]}$=,13; p>.05). Lise son sınıf öğrencilerinin sınav kaygısı düzeyleri günlük işlere vakit ayırabilme durumlarına göre gruplar arasında anlamlı bir farklılık vardır ($t_{[222,1]}$=-4,72; p<.001). Günlük işlerine zaman ayıramayan lise son sınıf öğrencilerinin kaygı düzeyleri ($\overline{X}$ =57,92, Ss=13,57), günlük işlerine vakit ayırabilen lise son sınıf öğrencilerine göre ($\overline{X}$ =51,16, Ss=11,76) daha yüksektir. Lise son sınıf öğrencilerinin sınav kaygısı düzeyleri açısından beslenme şekillerine göre gruplar arasında anlamlı bir farklılık vardır ($t_{[363,84]}$= -2,91; p<.01). Düzensiz beslenen öğrencilerin sınav kaygısı düzeyleri ($\overline{X}$ =55,27, Ss=13,25), düzenli beslenen öğrencilerin sınav kaygısı düzeylerinden ($\overline{X}$ =51,43, Ss=11,98) daha yüksektir. Lise son sınıf öğrencilerinin sınav kaygısı düzeyleri psikolojik danışmandan yardım almalarına göre anlamlı bir farklılık göstermektedir ($t_{[125,747]}$ =2,73; p<.01). Psikolojik danışmandan yardım alan öğrencilerin kaygı düzeyleri ($\overline{X}$ =56,88, Ss=12,31), psikolojik danışmandan yardım almayan öğrencilere ($\overline{X}$ =52,54, Ss=12,79) göre daha yüksektir.

Düzenli çalışma programı uygulamaya göre sınav kaygısı düzeyleri açısından gruplar arasında fark olup olmadığını belirlemeye yönelik yapılan Tek Yönlü Varyans Analizi Sonuçları Tablo 4'te sunulmuştur.

Tablo 4. Sınav kaygısı ölçeğinin düzenli çalışma programı uygulamaya göre tek yönlü varyans analizi sonuçları

Düzenli Program Uygulama	N	$\overline{X}$	Ss	Varyansın Kaynağı	KT	Sd	KO	F	p	Anlamlılık
Hiç Zorlanmıyorum (1)	24	45,375	13,292	G. Arası	2959,145	3	986,382			
Bazen										

Zorlanıyorum (2)	144	51,944	11,679	G. İçi	56874,024	362	157,111			
Çoğu Zaman Zorlanıyorum (3)	118	54,762	11,852	Toplam	59833,169	365		6,278	0,001	3-1; 4-1, 4-2
Her Zaman Zorlanıyorum (4)	80	56,737	14,612							
Toplam	366	53,469	12,803							

Tablo 4 incelendiğinde, lise son sınıf öğrencilerinin sınav kaygı düzeyleri puanları açısından düzenli ders çalışma programı uygulayabilme durumlarına göre gruplar arasında anlamlı bir fark vardır ($F_{(3-362)}$=6,278; p<.001). Varyansların homojenliği varsayımını test etmek için yapılan Levene testi (Levene istatistiği= 2.32, p=.07) varyansların homojenliğinin sağlandığını göstermektedir. Gruplar arasındaki farkın hangi gruptan kaynaklı olduğunu tespit etmek için kullanılan Tukey HSD testine göre düzenli ders çalışma programı uygulamakta her zaman zorlanan öğrencilerin ($\overline{X}$ =56,737, Ss=14,612) hiç zorlanmayan öğrencilerden ($\overline{X}$ =45,375, Ss=13,292) ve bazen zorlanan öğrencilerden ($\overline{X}$ =51,944, Ss=11,679) daha yüksek düzeyde sınav kaygısı yaşadıkları tespit edilmiştir. Düzenli çalışma programı uygulamakta çoğu zaman zorlanan öğrencilere göre ise gruplar arasında anlamlı bir fark bulunmamıştır. Ayrıca çalışma programı uygulamakta çoğu zaman zorlanan öğrencilerin ($\overline{X}$ =54,762, Ss=11,852) sınav kaygısı düzeyleri düzenli ders çalışma programı uygulamakta her zaman zorlanan öğrencilere ($\overline{X}$ =56,737, Ss=14,612) göre daha yüksek bulunmuştur. Düzenli çalışma programı uygulamakta hiç zorlanmayan ile bazen zorlanan ve bazen zorlanan ile çoğu zaman zorlanan öğrenciler arasında sınav kaygısı düzeyleri açısından gruplar arasında anlamlı bir fark bulunmamıştır.

Günlük uyku uyuma durumuna göre sınav kaygısı düzeyleri açısından gruplar arasında fark olup olmadığını belirlemeye yönelik yapılan Tek Yönlü Varyans Analizi Sonuçları Tablo 5'te sunulmuştur.

Tablo 5. Sınav kaygısı ölçeğinin günlük uyku durumuna göre tek yönlü varyans analizi sonuçları

Günlük Uyku Durumu	N	$\overline{X}$	Ss	Varyansın Kaynağı	KT	sd	KO	F	p	Anlamlılık
Uykuya Dalmakta Zorluk (1)	50	57,82	15,232	G. Arası	5298,762	3	1766,254			
Kesintili (2)	38	55,605	13,716	G. İçi	54534,407	362	150,648			
Uyanmakta Zorluk (3)	91	57,736	11,841	Toplam	59833,169	365		11,724	0,001	1-4; 2-4; 3-4
Normal (4)	187	49,796	11,26							
Toplam	366	53,469	12,803							

Tablo 5 incelendiğinde, lise son sınıf öğrencilerinin sınav kaygı düzeyleri günlük uyku durumlarına göre gruplar arasında anlamlı bir fark vardır ($F_{(3-362)}$=11,724; p<.001). Varyansların homojenliği varsayımını test etmek için yapılan Levene testi (Levene istatistiği= 2.31, p=.08), varyansların homojenliğinin sağlandığını göstermektedir. Gruplar arasındaki farkın hangi gruptan kaynaklı olduğunu tespit etmek için kullanılan Tukey HSD testine göre; uykuya dalmakta zorlandığını bildiren öğrencilerin ($\overline{X}$ =57,82, Ss=15,232), kesintili uyuduğunu bildiren öğrencilerin ($\overline{X}$ =55,605, Ss=13,716) ve uyanmakta zorlandığını bildiren öğrencilerin ($\overline{X}$ =57,736, Ss=11,841) kaygı düzeyleri uyku düzenini normal bildiren öğrencilere göre ($\overline{X}$ =49,796, Ss=11,26) daha yüksek olduğu tespit edilmiştir. Diğer gruplar arasında ise sınav kaygısı düzeyi açısından aralarında anlamlı bir fark bulunmamıştır.

Kendi başarılarını algılama durumuna göre sınav kaygısı düzeyleri açısından gruplar arasında fark olup olmadığını belirlemeye yönelik yapılan Tek Yönlü Varyans Analizi Sonuçları Tablo 6'da sunulmuştur.

Tablo 6. Sınav kaygısı ölçeğinin kendi başarılarını algılama durumuna göre tek yönlü varyans analizi sonuçları

Başarınızı Nasıl Görüyorsunuz	N	$\overline{X}$	Ss	Varyansın Kaynağı	KT	Sd	KO	F	p	Anlamlılık

Düşük (1)	79	59,493	14,404	G. Arası	5749,814	2	2874,907			
Orta (2)	248	52,883	11,694	G. İçi	54083,356	363	148,990	19,296	0,001	1-2, 1-3; 2-3
Yüksek (3)	39	45	10,412	Toplam	59833,169	365				
Toplam	366	53,469	12,803							

Tablo 6 incelendiğinde, öğrencilerin sınav kaygısı düzeyleri kendi başarılarını algılama durumları açısından gruplar arasında anlamlı bir fark vardır ($F_{(2-363)}$=19,30; p<.001). Varyansların homojenliği varsayımını test etmek için yapılan Levene testi (Levene istatistiği= 3.24, p=.06) varyansların homojenliğinin sağlandığını göstermektedir. Gruplar arasındaki farkın hangi gruptan kaynaklı olduğunu tespit etmek için kullanılan Tukey HSD testine göre; kendi başarılarını düşük görenlerin ($\overline{X}$ =59,493, Ss=14,404) sınav kaygısı düzeyleri kendi başarılarını orta düzeyde görenlerden ($\overline{X}$ =52,883, Ss=11,69) ve kendi başarılarını yüksek gören öğrencilerden ($\overline{X}$ =45, Ss=10,412) daha yüksek olduğu belirlenmiştir. Kendi başarılarını orta düzeyde gören öğrencilerin ($\overline{X}$ =52,883, Ss=11,694) sınav kaygısı düzeyleri, kendi başarılarını yüksek gören öğrencilere ($\overline{X}$ =45, Ss=10,412) göre daha yüksek çıkmıştır.

Tartışma, Sonuç ve Öneriler

Bu çalışmada, lise son sınıfta okuyan ergenlerin sınav kaygılarının incelenmesi amaçlanmıştır. Katılımcıların sınav kaygısı puanlarına çeşitli değişkenler açısından bakıldığında; cinsiyet, kendine ait oda, günlük işlere zaman ayırma, beslenme, psikolojik danışmandan yardım alma, düzenli çalışma programı uygulayabilme, günlük uyku durumları ve kendi başarılarını algılama değişkenleri açısından anlamlı farklılık varken özel ders alma değişkeninde anlamlı bir farklılık yoktur.

Araştırmanın sonuçlarına göre, kız lise son sınıf öğrencilerinin sınav kaygısı düzeyleri erkek lise son sınıf öğrencilerinden daha yüksek çıkmıştır. Çalışmanın bu sonucunu destekleyen bir çalışmada Softa ve diğ. (2015), lise son sınıfta okuyan öğrencilerin sınav kaygısını ve onu etkileyen faktörleri inceledikleri araştırmalarında kızların erkeklerden daha kaygılı olduğunu belirlemişlerdir. Ayrıca alanyazında yer alan bazı çalışmalar da bu çalışmanın bulgularını desteklemektedir (Acar, 2018; Arslan ve Aksekioğlu, 2017; Cassady ve Johnson, 2002; Demirci ve Bütün Ayhan, 2016; Dursun, 2022; Güler ve Çakır, 2013; Karakoç, 2023; Kısa, 1996; Núñez-Peña ve diğ., 2016; Yıldız, 2007; Yıldız, 2019; Zeidner ve Safir, 1989). Trifoni ve Shahini (2021) yaptıkları çalışmalarında, sınav kaygısını kızlar lehine yüksek bulmuştur. Kız öğrenciler sınava daha fazla hazırlansalar da kendilerini daha endişeli ve kaygılı hissettiklerini ifade etmektedirler. Pagaria'nın (2020) çalışmasında, kız öğrencilerin sınav kaygısı puanları daha yüksek çıkmıştır. Bu durumun eğitimciler tarafından kızların erkeklere oranla daha yüksek bir akademik performans göstermeleri için daha fazla baskı altında tutulmaları ile cinsiyete ilişkin atfedilen rollerle ilişkili olduğu savunulmuştur. Ayrıca erkeklerin cinsiyet açısından erkekliklerini baltalayacağı ya da zayıf görünmemek için kaygı düzeylerini olduğundan düşük göstermiş olabileceklerini belirtilmektedir. Hanımoğlu (2010), kadınların toplumsal kimliklerini kazanmada mesleklerinin ve ekonomik bağımsızlıklarının önemli olduğunu, kadının meslek sahibi olması için üniversiteye giriş sınavında istediği sonucu alması gerektiğini ve bu durumun kaygı düzeylerinin yüksek olmasında etkili olduğunu ifade etmiştir. Ayrıca, kadınların üniversiteyi kazanamadıklarında ekonomik ve sosyal bağımsızlıklarını tam sağlayamayacakları düşüncesinin de sınav kaygısı düzeylerini etkilediği düşünülmektedir (Erzen, 2013). Bazı ulusal çalışmalarda ise farklı bulgular elde edilmiştir. Baştürk'ün (2007) yaptığı araştırmada erkeklerin sınav kaygısı puanları kızlardan daha yüksek çıkmıştır. Bu farkın sebebi olarak; geleneksel aile yapısı, iyi bir gelecek kurma ve erkeklerden beklenilen iyi iş sahibi olma düşüncesinden kaynaklı olabileceği ifade edilmiştir. Erözkan'ın (2004) çalışmasında ise erkeklerin sınav kaygısının kuruntulu olma puanları, kızlardan daha yüksek çıkmıştır ve bunun sebebi olarak toplumun erkeklerden beklentilerinin yüksekliğinden kaynaklı kaygı yaşadıklarını ve başarısız olacağım düşüncesinin bu kaygıyı tetikleyebileceği ifade edilmiştir. Bozkurt'un (2012) çalışmasında ise cinsiyet açısından gruplar arasında anlamlı bir fark bulunmamıştır.

Araştırma sonuçlarına göre, kendisine ait odası olmayan öğrenciler kendisine ait odası olan öğrencilere göre daha fazla sınav kaygısı yaşamaktadırlar. Ulusal alanyazın incelendiğinde, mevcut çalışmanın bulgularını destekleyen çalışmalar bulunmaktadır. Buna göre kendine ait odası bulunan öğrencilerin sınav kaygısı düzeyleri odası olmayan öğrencilere göre daha düşük bulunmuştur (Acar, 2018; Aydın ve Keskin, 2017; Dursun, 2022; Korhan ve diğ., 2021). Ulusal alanyazında araştırmadan elde edilen sonuca karşıt bulgular olarak sınav kaygısı ile öğrencilerin kendisine ait odası olma durumları arasında anlamlı ilişki elde edilmeyen çalışmalar da yer almaktadır (Arslan ve Aksekioğlu, 2017; Kurtaran ve diğ., 2021). Tekbaş (2009) yaptığı çalışmada, lise öğrencilerinin kendilerine ait odalarının olup olmamasının kaygı düzeyini etkilemediği sonucuna ulaşmıştır. Bu,

çalışmanın bulgularıyla örtüşmemektedir. Fakat aynı araştırma kapsamında ilköğretim öğrencilerinde kendine ait odası olmayan öğrencilerin sınav kaygısının daha yüksek olduğu sonucuna ulaşılmıştır. Buna sebep olarak da kendine ait odası olmayan öğrencilerin kendilerini rahat hissedemedikleri ve düzenli bir çalışma ortamı kuramadıkları ifade edilmiştir. Mevcut çalışmanın sonucuna göre kendisine ait odası olmayan öğrenciler, kalabalık aile ortamında ya da kısıtlı olan ev koşullarında çalışmak zorunda kaldıklarından ve sınava yeterince hazırlanamadıklarından dolayı sınavda başarısız olacaklarını düşündükleri için kaygı düzeyleri artıyor olabilir.

Çalışmadan elde edilen bulgulara göre, lise son öğrencilerinin sınav kaygısı düzeylerinde özel ders alma durumlarına göre anlamlı bir farklılık yoktur. Ayrıca, alanyazında yer alan bazı çalışmalar bu çalışmanın bulgularını desteklemektedir (Arslan ve Aksekioğlu, 2017; Başpınar Erten, 2020; Ekşi, 1998; Erzen ve Odacı, 2014; Kutlu, 2001; Tekbaş, 2009). Günümüzde özel ders almanın ulaşılabilirliği ve öğrenciler için sunulan imkanların artmasından dolayı özel ders alma durumunun sınav kaygısı üzerinde anlamlı bir farklılık oluşturmadığı düşünülmektedir. Ayrıca özel ders almak sınavlara hazırlanma sürecinin dışsal bir parçası olmakla beraber kaygı gibi bireyde içsel olarak gelişen bir duygusal durum üzerinde etkide bulunmayabilir. Alanyazında yer alan araştırmalarda, sınav kaygısı ile öğrencilerin özel ders alma durumları arasında anlamlı farklılık olduğu sonucuna ulaşan araştırmalar da mevcuttur (Ekici, 2005; Yolcu, 2015). Kurtaran ve diğ. (2021) yaptıkları çalışmada, sınav kaygısı düzeyi yüksek olan lise öğrencilerinin özel ders aldıklarını görmüşlerdir. Buna ilişkin olarak öğrencilerde oluşabilecek yüksek sınav beklentisinin öğrencilerde kaygıya sebep olduğu çıkarımını yapmışlardır.

Bu çalışmadan elde edilen başka bir bulguya göre, düzensiz beslendiğini ifade eden öğrencilerin sınav kaygısı düzeylerinin düzenli beslendiğini ifade eden öğrencilerden daha yüksek olduğu görülmektedir. Kaygı, depresyon, stres ve kızgınlık gibi olumsuz duygular beslenme alışkanlıklarını etkilemektedir (Macht, 2008). Artan kaygı düzeyinin öğrencilerde yarattığı fiziksel sonuçlarının mide ve sindirim sistemlerini olumsuz etkilediği ve bunun da yeme içme düzeninde bozulmalara yol açtığı düşünülmektedir. Macht ve diğ. (2005) yaptıkları bir çalışmada, sınava hazırlanan öğrencilerin sınav yaklaştıkça daha fazla stres yaptıklarını ve bu yüzden daha çok yemek yeme eğilimlerinin olduğunu ifade etmektedir. Çalışmanın bulgusunu destekleyen bir çalışma olan Gokcen ve Seylam Kusumler (2021)'in çalışmasında, sınav kaygısı ile duygusal yeme arasında olumlu yönde bir ilişki olduğu görülmüştür. Başka bir çalışmada ise Bayındır Gümüş ve diğ. (2018), üniversite sınavına hazırlanan öğrencilerde kaygı düzeyleri ile beslenme alışkanlıkları arasında ilişki bulamamışlardır. Ancak öğün sıklığı arttıkça durumluk kaygı puanının düştüğünü tespit etmişlerdir. Bu yüzden öğrencilerin öğün atlamamaları ve sağlıklı yiyeceklerle beslenmeleri önerilmektedir.

Çalışmadan elde edilen bulgulara göre, psikolojik danışmandan yardım alan lise son sınıf öğrencilerinin sınav kaygısı düzeyleri psikolojik danışmandan yardım almayan öğrencilere göre daha yüksek çıkmıştır. Bu durum kaygı düzeyi yüksek olan öğrencilerin yardım almak için psikolojik danışmanlara başvurma motivasyonlarının daha yüksek olması ile ilişkilendirilebilir. Ayrıca, okul ortamında psikolojik danışmanlar ve öğretmenler tarafından sınav kaygısı yüksek düzeyde olan öğrencilerin gözlemlenmesi ya da belirlenmesi ile birlikte okul psikolojik danışma ve rehberlik servislerine daha fazla yönlendirilmeleri ile ilişkili olabilir. Bu durumu bir nevi hasta-doktor ilişkisi gibi düşünebiliriz. Yapılan araştırmalarda, sınav kaygısına sahip öğrenciler ile yapılan bireysel psikolojik danışma süreçleri (Akkaya ve Demirtaş Zorbaz, 2023; Işıkay, 2019) ve grupla danışma süreçleri sonunda (Kaya ve Bedir, 2019) öğrencilerin sınav kaygılarının azaldığı görülmüştür. Bu sonuçlara bakıldığında, psikolojik danışmanların, öğrencilerle daha sık görüşmeler gerçekleştirmesi ve daha aktif çalışması öğrencilerin sınav kaygıları üzerinde etkili olacaktır (Çakıcı, 2021).

Çalışmadan elde edilen bulgulara göre, günlük işlerine zaman ayıramayan lise son sınıf öğrencilerinin sınav kaygısı düzeyleri günlük işlerine vakit ayıran öğrencilerden daha yüksektir. Sınav kaygısı düşük olan öğrencilerin zamanlarını daha iyi planlamaları ve kaygı düzeyi daha yüksek olan öğrencilere göre daha iyi organize olmaları ve günlük işlerini daha rahat yapmaları beklenir. Kaygı düzeyi yüksek olan öğrencilerin yaşadıkları yüksek kaygıyı yok etmeye çalışmaları ve endişe dolu düşünceleri yani içsel süreçleri ile daha fazla meşgul olduklarından günlük işlerine zaman ayıramıyor olabilirler. Lise son sınıf öğrencilerinin düzenli ders çalışma programı uygulayabilme durumlarına göre ise düzenli çalışma programı uygulamakta çoğu zaman zorlanan öğrencilerin hiç zorlanmayan öğrencilerden; düzenli çalışma programı uygulamakta her zaman zorlanan öğrencilerin hiç zorlanmayan öğrencilerden ve bazen zorlanan öğrencilerden daha yüksek düzeyde sınav kaygısı yaşadıkları sonucuna ulaşılmıştır. Numan ve Hasan (2017) Pakistan'da lisans öğrencileriyle yaptıkları çalışmalarında, düzenli çalışma programı uygulayan öğrencilerin sınav kaygısı puanlarının daha düşük olduğu sonucuna ulaşmıştır. Bu sonuç araştırma sonucuyla paralellik göstermektedir. Tsegay ve diğ. (2019) tıp öğrencilerinin sınav kaygı düzeyleri ile düzenli çalışma planı uygulamak arasında anlamlı bir ilişki bulmuştur. Düzenli çalışma planı uyguladıkça öğrencilerin kaygı düzeylerinin düştüğü görülmüştür. Bu sonuç ile araştırma sonucumuz paralellik göstermektedir. Yüksek düzeyde kaygı yaşayan öğrenciler kaygıya ilişkin duygularını etkili düzenleyemedikleri için düzenli bir çalışma programı uygulayamıyor olabilirler.

Lise son sınıf öğrencilerinin günlük uyku durumlarına göre uykuya dalmakta zorlandığını bildiren öğrencilerin, kesintili uyuduğunu bildiren öğrencilerin ve uyanmakta zorlandığını bildiren öğrencilerin sınav kaygısı düzeyleri uyku düzenini normal bildiren öğrencilerden daha yüksek olduğu görülmektedir. Yüksek düzeyde kaygı yaşayan öğrencilerin fizyolojik olarak da aşırı uyarılmaları, endişeli bir bilişsel yapıya sahip olmaları ve kaygı belirtileri ile baş edememeleri nedeniyle uykuya dalmakta zorluk yaşadıkları düşünülmektedir. Alanyazında mevcut çalışmanın bulgularını destekler nitelikte bazı çalışmalar bulunmaktadır. Köse ve diğ. (2018) yaptıkları çalışmada, sınav kaygısı puanları arttıkça uyku kalitesinin düştüğü sonucuna ulaşmıştır. Moalla ve diğ. (2016) tıp fakültesi öğrencileri üzerinde yaptıkları çalışmada, öğrencilerin sınav dönemi kaygı yaşadıklarını ve bu yüzden uyku kalitelerinin olumsuz etkilendiğini belirtmektedirler. Ayrıca, Lazaratou ve diğ. (2013) Yunanistan'da yaptıkları çalışmada, uyku süresi ile kaygı puanları arasında negatif bir ilişki olduğu sonucuna ulaşmışlardır.

Lise son sınıf öğrencilerinin kendi başarılarını algılama durumlarına göre, kendi başarılarını düşük algılayanların sınav kaygısı düzeyi kendi başarılarını orta ve yüksek algılayanlara göre daha yüksek olduğu görülmektedir. Ayrıca kendi başarılarını orta algılayanların da sınav kaygısı düzeyi kendi başarılarını yüksek algılayanlardan daha yüksek çıkmıştır. Sınav kaygısı düşük düzeyde olan öğrencilerin, sınavlarda rahat oldukları ve daha iyi sonuçlar aldıkları için öz yeterlik ve iyimserlik düzeylerinin daha yüksek düzeyde olduğu ve bunun sonucunda kendilerini daha başarılı algıladıkları düşünülmektedir. Sınav kaygısı yüksek öğrenciler ise kendi potansiyellerine çok fazla güvenmiyor ve şüphe içinde olabilirler. Bu nedenle kendi başarılarını algılama durumları daha düşük düzeyde kalıyor olabilir. Nitekim, Stoeber'in (2004) çalışmasında sınav kaygısı yüksek düzeyde olan öğrencilerin daha fazla endişeli oldukları ve öz güven eksikliği yaşadıkları sonucuna varılmıştır. Khalaila (2015) yaptığı çalışmada, akademik açıdan kendini yeterli hisseden öğrencilerin daha iyi içsel motivasyona sahip oldukları için sınavlarda daha az kaygılı hissettiklerini ve daha başarılı olduklarını ifade etmiştir. Ayrıca, Steinmayr ve diğ. (2016) yaptıkları çalışmada, yüksek düzeyde kaygının daha düşük başarı puanıyla ilişkili olduğunu ifade etmektedirler.

Araştırmanın sonucunda, lise son sınıf öğrencilerinin; cinsiyet, kendine ait odalarının olması, günlük işlere vakit ayırma durumları, beslenme düzenleri, psikolojik danışmandan yardım alma durumları, düzenli çalışma programı uygulamaları, uyku durumları ve kendi başarılarını algılama durumlarının sınav kaygısı düzeylerini etkilediği sonucuna ulaşılmışken özel ders almanın sınav kaygısını etkilemediği sonucuna ulaşılmıştır.

Araştırmadan elde edilen sonuçlar ışığında, araştırmacılara ve alanda çalışanlara şu önerilerde bulunulabilir:

1. Sınava hazırlanacak öğrencilere özel çalışma alanları sağlanabilir.

2. Sınava hazırlanan öğrencilerine yönelik diyet ve düzenli beslenme programları yapılabilir.

3. Sınava hazırlanan öğrencilere zamanı etkili kullanma yollarıyla ilgili bilgilendirme ve zaman çizelgesi hazırlanması konusunda rehberlik çalışmaları yapılabilir.

4. Öğrencilere uykunun önemi, düzeni ve kaliteli uykuyla ilgili bilgilendirme çalışması ve uyku hijyeni eğitimleri yapılabilir.

5. Sınava hazırlanan öğrencilerin başarı algılarını iyileştirmek amacıyla ödül ve pekiştireçler kullanılabilir.

6. Okullarda yoğun sınav kaygısı yaşayan öğrenciler tespit edilip bu öğrencilere yönelik olarak Bilişsel ve Davranışçı Terapi temelli bireyle psikolojik danışma veya grupla psikolojik danışma hizmeti verilebilir.

7. Öğrencilerin sınav kaygısı durumları hakkında öğrenci, aile ve okul işbirliği sağlanabilir.

8. Bu araştırmadan elde edilen sonuçlar okul psikolojik danışmanları tarafından okul rehberlik hizmetlerinde kullanılabilir.

9. Çalışma Mersin iliyle sınırlı olduğu için farklı illerde daha geniş bir örneklem ile yapılabilir.

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Teaching Career Steps in Turkey from the Teachers' Perspective

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Teaching Career Steps in Turkey from the Teachers' Perspective*

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Abstract

The purpose of this study is to determine the views of teachers about teaching career steps. The study group of the research which adopts a qualitative case study design consisted of 52 teachers working at various education levels in the 2022-2023 academic year in Türkiye. The research data were collected through a semi-structured interview form and employing interviews, and it was analyzed by content analysis. Depending on the findings, teachers' views on career steps were gathered under the themes of general, exam application conditions, professional studies and education program, and these themes were categorized under positive and negative views. While teachers found career steps positive in terms of continuous learning and professional development in general, they found it negative in terms of separating teachers and disrupting the school climate, exam-related anxiety and stress, and discrediting the postgraduate education. Some of the suggestions developed by the researcher within the scope of the research results are as follows: Continuity in practice should be ensured, the requirement of long working years for the application should be reduced, and the sixteen-year lost service periods of teachers who have not taken the exam since 2006 should be added to the ten-year and twenty-year periods. Provided that the candidacy stage has been completed, master's degree graduates in the field and in educational sciences should be given the title of expert teacher, and doctoral graduate teachers should be regarded as head teacher without a working-year requirement.

Key words: Teaching Profession, Teaching Career Steps, Expert Teacher, Head Teacher.

Introduction

Education has an important mission in the development of a government. Nations with a high level of education can be more successful in achieving advanced development. Teachers are one of the most important actors taking over the duty and responsibilities in achieving educational goals. Despite the rapid developments and innovations in the 21st century, the place and importance of the teaching profession in the education system continues because the teacher is at the center of the educational activities offered to the students. That teachers can give qualified education services depends on their knowledge, skills, and expertise. In a constantly changing and developing world, teachers' keeping their knowledge up-to-date and being aware of developments and innovations and ensuring their professional development depend on the continuity of their professional development. As a matter of fact, all countries in the world are looking for ways and practices to ensure the professional development of teachers, to make the teaching profession as financially and morally attractive as it used to be, and to motivate them. One of these practices is the career system that allows teachers to advance in their careers (Bakan, 2013), and increase the status and reputation of the profession. A satisfactory career offers a person money, status, self-efficacy, and every teacher needs to balance the importance of these in his/her life (Donnely, 2002). It is a fact that the regulation of the career system in teaching will make significant contributions to the development of teacher quality in the Turkish education system. As well as being a notable source of motivation for teachers who are committed to their profession by eliminating their deficiencies, it will be an important tool that will enable teachers to take responsibility for their own individual development (Gümüşeli, 2005).

Career refers to the process of progressing by gaining the necessary competencies from teaching to specialist teaching, from expert teaching to head teacher, continuously rising from the steps in the organizational hierarchy, assuming more responsibility, and developing oneself with the personal and professional experiences, and activities of the individual [Ministry of National Education, Review of Promotion in Teaching Career Steps, 2006]. The pursuit of modernizing the education system, improving the status of teachers, ensuring the

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professional and personal development of teachers, ensuring the necessary reputation for teachers depending on the importance, difficulty, and responsibilities of their duties (Deniz, 2009), increasing the quality of the teaching profession, encouraging teachers to follow new developments related to their profession by directing them to research and examination, increasing the function and efficiency of the teacher in the education system, and preventing occupational burnout (Demir, 2011), providing the right of teachers to move from one level of education or order to another level of education (Vural, 2004), the necessity of having a system of education and promotion that will encourage teachers and administrators to be educated in service (Tekık, 1989) can be expressed as the necessity of implementing career steps.

There is an ongoing search for professional development of teachers and increasing the reputation of the profession in Türkiye too. In order to increase the quality of the teaching profession, which is a specialized profession, studies are carried out by the Ministry of National Education (MoNE) in various periods. The issues of making teaching a profession of career has been included in the National Education Councils since the foundation of The Republic. The career steps of teaching were established after making a change in the National Education Basic Law (Law No: 1739, art. 43) having it as, "After the candidacy period, the teaching profession is divided into three career steps as teacher, expert teacher and head teacher." As a matter of fact, the regulation on career steps, which was issued in 2005 and published in the Official Gazette was applied only once after the exam held in 2006 within the scope of the "Regulation on Promotion in Teaching Career Steps". It was applied again as the "Teaching Professional Law" published in the Official Gazette (Date: February 11, 2022, No: 31750) and the "Regulation on Candidate Teacher and Teaching Career Steps" published in the Official Gazette (Date: May 12, 2022, No: 31833) within the scope of the Article 11 of the "Regulation on Candidate Teaching and Teaching Career Steps" (2022), teaching is divided into three career steps after the candidacy period as teacher, expert teacher and head teacher, and those who successfully complete the candidate teaching period within the framework of the provisions of the regulation are assigned to the profession as teachers. According to the Article 12 of the Regulation, the required conditions for those who will apply for the written exam for the titles of expert teacher or head teacher are stated as follows:

ARTICLE 12:

1- For teachers who will apply for the written exam for the title of expert teacher, these following requirements are sought:

a) To serve at least ten years in teaching, including candidate teaching, as of the last day of application date for the written exam,

b) To be a teacher currently,

c) Not to have been punished for haulting of level progress,

d) To have completed at least 180 hours of Expert Teacher Training Program prepared for the professional development of teachers,

e) To have completed Expert Teacher Professional Development Practices.

2- For teachers who will apply for the written exam for the title of head teacher, these following requirements are sought:

a) To have served at least ten years as an expert teacher as of the last day of application date for the written exam,

b) To be an expert teacher currently,

c) Not to have been punished for haulting of level progress,

d) To have completed at least 240 hours of Head Teacher Training Program prepared for the professional development of expert teachers,

e) To have completed Head Teacher Professional Development Practices.

3- The staff currently working as the principal, the chief vice-principal and the vice-principal of the educational institution may apply for the promotion in the teaching career steps if they meet the requirements for application of the written exam.

4- Those who have been punished with haulting the level progress may apply for the title of expert teacher or head teacher after the punishments are removed from the personal file.

According to the Article 13 of the Regulation on Teaching Career Steps (2022), teachers who have completed their postgraduate education are exempt from the written exam for the title of expert teacher, and

expert teachers who have completed their doctoral education are exempt from the written exam for the title of head teacher. Teachers who have completed their postgraduate education may apply for the title of expert teacher if they meet the requirements of applying for the written exam in line with the first paragraph of the Article 12, and expert teachers who have completed their doctoral education may apply for the title of head teacher if they meet the conditions required for applying for the written exam according to the second paragraph of the Article 12.

According to the Article 15 of the Regulation on Teaching Career Steps (2022), the training program is determined by the decision of the Board of Education and is carried out within the framework of the MoNE In-Service Training Regulation (2022). Teachers who have at least ten years of service as of the last day of the written exam can apply for the Expert Teacher Training Program, and expert teachers having at least ten years of service as of the last day of the written exam can apply for the Head Teacher Training Program.

Within the scope of the "Directive on Professional Development Practices and Training Program of Teaching Career Steps" (2022), professional development studies, which are one of the requirements sought by teachers/expert teachers who will apply for the titles of expert and head teacher, have been determined as three fields of study as "Education, Teaching and Counseling Studies, Participation in Management and Research and Development Studies" in a way that all branch/field teachers working in official and private education institutions affiliated to our Ministry can perform at least one of the tasks in each field. Those who will apply for the title of expert teacher/head teacher among the teachers/expert teachers working in official and private education institutions affiliated to the MoNE must complete one study from at least two of the study areas in order to complete the professional development studies determined as three study areas (MoNE, 2022).

After the training program that started on July 18th, 2022, negative criticism has arisen towards the career system on social media platforms, and this situation has led to a lot of speculation and confusion. Therefore, investigating the subject according to the scientific research method and evaluating it in the context of the opinions of teachers who are personally interested, and offering suggestions to policy makers and decision makers reveal the originality and importance of the research. Although there are studies on career steps in the literature (Altunkaynak, 2023; Aydoğan, Leflef & Özcan, 2024; Bakioğlu & Banoğlu, 2013; Boydak-Ozan & Kaya, 2009; Çelikten, 2008; Çobanoğlu & İlkin, 2023; Dağlı, 2007; Deniz, 2009; Gümüşeli 2005; Demir, 2011; Kaplan & Gülcan, 2020; Kocakaya, 2006; Kurt, 2007; Laçin, 2006; Nartgün & Ural, 2007; Özan & Kaya, 2009; Turan & Turan, 2009; Urfalı, 2008; Yang Keo, 2016; Yücel, 2023) the lack of an up-to-date study on the regulation in 2022 makes the research significant. Within this context, it was aimed to determine the opinions of teachers about teaching career steps in this study. In line with this purpose, following research questions are addressed:

1- What are the teachers' views about teaching career steps?

2- What are their suggestions for teaching career steps practices?

Method

The study adopts a case study design as a qualitative research methodology. Qualitative research approach is used to obtain in-depth and comprehensive information about a subject (Patton, 2014). Case study is a methodological approach that involves an in-depth examination of a system using multiple data collection to collect systematic information about how a limited system operates (Chmiliar, 2010). This type of invgestigation tries to richly describe events occurring in their natural conditions using various data collection tools under time and space constraints and they are based on profound basis (Hancock & Algozzine, 2006). In this context, the purpose of the study is to investigate the teachers' views on career steps in depth and to obtain information about their perspectives on this issue.

Participants

The study group of the research consisted of 52 teachers working at various educational levels during the 2022-2023 academic year in Bolu. The participants were reached through online sources. To determine the study group, maximum variation sampling was used. In order to ensure heterogeneity within the sample group and reveal the teachers' opinions at different career levels, teachers' with different gender, education level and seniority levels were selected, and varition was also established by selecting both teachers who would take and exempt from the exam. Of the teachers, 58% were female (n=30), 42% were male (n=22); 58% were undergraduate (n=30), 29% were postgraduate (n=15), and 13% were doctoral (n=7) graduates. 21% of the teachers have 10 years of seniority or less (n=11), 29% of them have 11 to 20 years of seniority (n=15), 27% have 20 to 30 years of seniority (n=14), and 23% have 20-30 years of seniority (n=12). 58% of the participating teachers are the ones who would take the exam (n=30) and 42% of them are exempt from the exam (n=22).

Data Instruments Collection and Procedure

The research data were collected through a semi-structured interview form using the interview method. Semi-structured form is a flexible and powerful tool that allows the researcher to explore the experiences of participants who are able to ask additional questions during the interview (Rabionet, 2011). The interview method allows researchers to investigate situations that cannot be observed by other methods (Wellington & Szczerbinski, 2007). Before the interview form was prepared, the opinions of two experts - in the field of Educational Administration and Inspection and Assessment and Evaluation, were taken and the questions were prepared in this direction. The experts stated in the interview form that general questions would be more appropriate and that questions could be asked during the interview if necessary. After the interview form was prepared, five teachers were interviewed for the piloting, and it was determined that the teachers' answers to the questions were understandable and coincided with the topic of the study. So, the interview form was finalized and implemented. During the interview, teachers were informed with the necessary explanations about the questions. Interviews lasted an average of 23 minutes and 37 seconds. The questions in the interview form are listed below.

1- What are your views on teaching career steps?
2- What are your suggestions for teaching career steps?

Data Analysis

The data were analyzed using the inductive analysis method, one of the content analysis types. Content analysis provides the opportunity to gather similar data together and analyze them systematically, gather the data around certain themes, and organize and interpret them in a way that the reader can understand (Yıldırım & Şimşek, 2015; Mayring, 2000). The data subjected to content analysis is coded, themes are created from the codes and presented afterwards (McMillan & Schumacher, 2001). Accordingly, the data recorded during the interview were analyzed in detail in line with the purpose of the research and codes were created. Following the coding process, categories and themes were identified by analyzing the similarities and differences among codes that exhibited meaningful relationships with one another. The teachers' views were presented in direct quotations to support the findings in the results section.

Validity and Reliability

In the qualitative data analysis process, it is important to have an expert opinion on the codes and themes created by the researcher to check the accuracy of the coding (Kabakçı Yurdakul, 2016). The codes, categories and themes created to ensure the reliability of the research were examined by two expert faculty members in the field of Assessment and Evaluation and Educational Administration, and it was checked whether the codes were congruent with the themes. In order to ensure the internal validity, the researcher asked for an expert opinion in the preparation of the interview questions and the form was finalized after the pilot study. The findings are presented directly without a comment. As for the reliability, Miles and Huberman's (1994) [Consensus / (Consensus + Dissensus) X 100] formula was used and the consistency rate of the analyses yielded %94. It can be said that the conducted analyses are reliable since 80% consistency or over is considered sufficient for the consensus. The design, participants, and their demographic characteristics, the preparation process of the data collection tool and the data analysis procedure were explained in detail in the method section and the external validity was tried to be strengthened. The teachers were informed in detail about the study before the interviews. Also, the transferability of the research was increased by including the opinions of the participating teachers as direct quotations. The participants were coded as T1, T2, T3, T52 etc. and ethical principles were complied with.

Ethics Approval

This research was examined ethically at the meeting of Bolu Abant İzzet Baysal University Ethics Committee for Human Research in Social Sciences dated 04.09.2022 and 2022/09 and approved as ethically appropriate with the protocol number 2022/340. The research data were collected in September and October followingly.

Findings

In this section, teachers' views and suggestions for the career steps are presented. Teachers' views on the career steps were gathered under the themes of general views, application conditions for the exams, professional studies, and training program. The related categories and codes are presented respectively. So, general views of the teachers on teaching career steps are given in Table 1'.

Table 1. General views of the teachers on teaching career steps

Theme	Categories	Codes	f
General Views	Positive	Providing continuous learning and professional development	12
		Being specific to teachers	7
		Identifying successful and unsuccessful teachers	4
		Enabling experienced teachers to be paid more	2
	Negative	Having no benefits apart from economic growth	37
		Segregating teachers and disrupting the school atmosphere	29
		Being a memorization and exam-based system	26
		Lack of continuity in the exam execution and causing loss of rights	22
		Discrediting the teaching profession	19
		Not making a change in teachers' personal rights, status, authority and responsibilities	17
		The exam causing anxiety and stress	14
		Decreasing teachers' performance	13
		Performing the exam and training program at the wrong time	11
		Discrediting the graduate education, thus, spreading of short-term and paid programs	10
		Having a multi-staged application process	5
		The exam's being insufficient to measure the expertise in the classroom	4
		Every teacher being an expert in his/her field already	2

As shown in Table 1, the teachers' general views on career steps are grouped under positive and negative categories. It emerged that teachers found the regulation of career steps positive in terms of continuous learning and professional development (f=12), being specific to teachers (f=7), determining successful and unsuccessful teachers (f=4), and ensuring that experienced teachers receive more wages (f=2). On the other hand, teachers found it negative in that it does not lead any benefits apart from an increase in income (f=37), it separates teachers and disrupts the school atmosphere (f=29), it is a system based on memorized knowledge and exams (f=26), the lack of continuity in the exam execution and the loss of rights. (f=22). Their views were also negative about the regulation due to its discrediting the teaching profession (f=19), not changing teachers' personal rights, status, authority and responsibilities (f=17), the exam anxiety and stress (f=14), reducing teachers' performance (f= 13), the application of the exam and the curriculum at the wrong time (f=11), the discrediting of graduate education, the opening of short-term and paid programs (f=10), the multi-stage application processes (f=5), the exam lacking of a quality to measure the expertise in the classroom (f=4). Besides, they stated their negative views on this regulation since they thought every teacher was an expert in his/her field already (f=2).

Some of the positive and negative general views of the teachers about career steps are presented below as direct quotations:

The teachers' statements below can be given as positive examples towards the regulation.

"This regulation enables teachers to learn continuously. These learnings also contribute to professional development." (T15) "Professional development, continuous learning and renewal are indispensable for a teacher. Therefore, this regulation can be seen as positive in terms of our learning and professional development" (T38).

On the other hand, such statements below can be examples for teachers' negative views.

"As a result of this regulation, we will only have a salary increase. Apart from that, there are no benefits" (T36). "Exam gives me anxiety and stress. What if I don't pass? What do my teachers and friends think? Such questions increase my anxiety and stress" (T43). "The fact that the conditions for application are multi-stage makes it difficult to follow. I heard that there are teachers who miss these stages and become victims." (T20).

Teachers' views about the requirements for exam application to be an expert and head teacher are given in Table 2.

Table 2. The teachers' views about the requirements for exam application to be an expert and head teacher

Theme	Categories	Codes	**f**
Requirements for exam application	Positive	Contributing to renewal and development in the profession	8
		Exemption of master's and doctoral graduates from exams	7
		Requirements are fine	5
		Academic and in-school studies being a criterion	3
		Having a requirement of 10-year service to become an expert teacher and 10-year service as an expert teacher to be a head teacher	2
	Negative	Requirement of working years being too long to become an expert and head	

	teacher	28
	Non-thesis and non-area master's degree holders being exempted from the exam	13
	Existence of unnecessary criteria in professional working conditions	11
	Obligation to follow a training program	8

As illustrated in Table 2, teachers' views about the conditions for applying to the expert and head teacher exams are divided into two categories as positive and negative. Accordingly, teachers expressed a positive view in terms of contributing to renewal and development in the profession (f=8), graduate and doctoral graduates being exempt from exams (f=7), fine requirements (f=5), academic and in-school studies being criteria (f=3), 10-year service to become an expert teacher and 10-year service as an expert teacher to become a head teacher (f=2). Teachers expressed negative views about the application requirements in terms of the fact that the minimum service year is too long to become an expert and head teacher (f=28), non-thesis and non-area master's degree holders are exempt from the exam (f=13), there are unnecessary criteria in professional working conditions (f=11), and they have an obligation to follow an education program (f=8).

Some of the positive and negative teachers' views about the requirements for applying for expert and head teacher exams are presented below as direct quotations:

Such statements below can be given as examples for positive teacher views:

"... I also positively evaluate the fact that MA and PhD graduates do not take exams." (T29), "When the application requirements are considered in terms of year, I think it is correct. I find it appropriate for someone who has a master's degree or doctorate to be exempt from the exam..." (T38), "I think there should be an exam. I also positively evaluate the lack of examinations for graduate and doctoral graduates." (T5), "... I mostly find the application requirements positive in terms of contributing to teachers' self-renewal and professional development because a teacher who primarily tries to fulfill the professional duties stated in the application conditions develops and renews himself/herself professionally." (T14).

Such statements below can be given examples as negative teacher views:

"...I do not find it correct to exempt non-field and non-thesis MA graduates. I am in the last semester of my master's degree with thesis, and I cannot be exempt because I cannot finish it." (T47), "I do not understand the obligation to follow the training program. If this practice depends on the teacher's request, it should not be mandatory to follow a training program." (T43), "I think the minimum ten-year of service is a long time. In the application conditions, the ten-year requirement can be reduced." (T16).

Teachers' views on the professional studies included in the expert and head teacher application requirements are given in Table 3.

Table 3. Teachers' views on the professional studies included in the expert and head teacher application requirements

Theme	Categories	Codes	f
Professional studies	Positive	I find professional studies positive	17
		Having a chance for every teacher to meet the application requirement among professional studies	9
	Negative	Some criteria's being unnecessary	14
		Difficulty in documenting and uploading previous works to the system	7
		Creating a complexity of finding documents to prove professional work	5

As Table 3 shows, teachers' views about professional studies as a requirement for applying to the expert and head teacher exams are divided into two categories as positive and negative. It was shown that, in terms of the application criteria, the teachers found the professional studies to be positive with statements such as just finding it positive (f=17), having a chance for every teacher to meet the application requirement among professional studies (f=9), however, they found the application requirements negative stating that some criteria are unnecessary (f=14), it is difficult to document and upload previous studies to the system (f=7), and that it creates complexity of about finding documents to prove professional studies (f=5).

Some of the positive and negative teachers' views on the application requirements are presented below as direct quotations:

These statements below are some positive teacher views:

"I find professional studies positive Professional studies are necessary for every teacher to fulfill his/her profession and to ensure his/her personal and professional development. "(T42), "I find it positive in terms of encouraging teachers to work professionally." (T20).

The statements below are the teachers' negative views:

".....There was a complete confusion in documenting and uploading our previous works to the system. In addition, there were difficulties in proving some of the studies." (T6), "I did many studies, but some of them remained in my old school. How do I document them? This is very difficult." (T51).

Teachers' views on the training program applied to take the expert and head teacher exam are given in Table 4.

Table 4. Teachers' views on the training program applied to take the expert and head teacher exam

Theme	Categories	Codes	f
Training Program	Positive	Refreshing our knowledge	5
		Presentation of current approaches	2
	Negative	The way the training program is presented is monotonous	3
		The content of the training program is very detailed and academic	2
		Program duration is too long, watching time is short	2
		Unnecessary information	2
		Not contributing to professional development	2
		The training program's not contributing to in-class teaching practices	1
		Failure to support the training program with real-life or educational sample	
		Failure to provide practical suggestions for implementation	1
		Obligation to watch the training program	1
		Providing the same trainings to teachers in all branches and levels	1
		Inclusion of non-area information in the program	1
		Insufficient training program	1
		Being prepared in a hurry	9
		Having us be seated in front of the screen for a long time	7
		Being boring	7
		Having too many theoretical expressions	5
		Fitting the training program and exam schedule into a short period of time	4
		Leading to loss of time	2
		Having an abstract and complex training program mod	2

As demonstrated in Table 4, teachers' views about training program as a prerequisite of applying to the expert and head teacher exams are divided into two categories as positive and negative. While the teachers expressed positive views about the training program in terms of its refreshing the knowledge (f=5) and presenting current approaches (f=2), their views were negative due to the monotonous style of presentation (f=32), detailed and academic content of the training (f=28), long duration of program with a limited time for watching (f=24), unnecessary information (f=21), not contributing to professional development (f=20), not contributing to in-class teaching practices (f=18), the content not being supported by real-life or educational sample practices (f=16), not providing practical suggestions (f=16), the obligation to watch the training (f=14), giving the same trainings to teachers in all branches and levels (f=13), non-area information (f=11), insufficient training program (f=10), being prepared in a hurry (f=9), being seated in front of the screen for a long time (f=7), being boring (f=7), having too many theoretical expressions (f=5), fitting the training and the exam calendar into a short period of time (f=4), leading to loss of time (f=2), having an abstract and complex training program module (f=2).

Some of the positive and negative teachers' views about the training program are presented below as direct quotations:

These statements are positive teachers' views on the related construct:

"The topics in the training program enabled me to remember my knowledge and learn up-to-date information. I find them positive because some subjects provide current education approaches. "(T22), "I had the opportunity to refresh myself with the training program. Because it's been many years since I graduated as I am a senior now. Although I attended professional trainings, I could not reach such detailed and comprehensive information." (T18).

On the other hand, following statements are examples of negative views of the teachers on this issue:

"The training program is very detailed and academic, and there is a lot of information unrelated to the field. I found it uniform, boring, and tiring." (T10), "The training program should not be common to all branches. The program is very comprehensive, tightly packed with intense detail." (T32), "There are too many unnecessary details. There is a lot of detail on some issues. I think that these are not necessary in this era when it is so easy to access information." (T2), "I think that the program does not contribute to my professional development since it does not include sample practices that can contribute to the educational activities of teachers in the classroom." (T49).

Teachers' suggestions for regulation of teaching career steps are given in Table 5.

Table 5. Teachers' suggestions for regulation of teaching career steps

Theme	Categories	Codes	f
Suggestions	General Suggestions	Carrying out a career regulation according to seniority without an exam	41
		Conducting the exam every year	36
		Combining horizontal and vertical careers, including promotion	33
		Contributing to teachers' personal rights, status, level, stage and additional indicators in addition to the salary increase	32
		Granting to be an expert teacher to the MA graduates and head teacher to the PhD graduates in their field or educational sciences without minimum working-year requirement provided that the candidacy stage has been completed	29
		Elimination of the loss of rights of the teachers who, in this process, cannot take the exam that has not been done for a long time	25
		Removing the exemption of postgraduate education that are not field-related or in educational sciences	23
		Creating a system in which all studies are scored and evaluated by dividing training, exam, professional studies, activities and achievement certificates into certain percentages	17
		Teachers who meet criteria such as academic studies (books, articles, etc.), projects, and success in sports and artistic fields can become specialists and head teachers without requiring years	11
		Extending the salary increase brought by the regulation to retirement as well	6
		Being a scoring-based system by scoring the teachers' studies	3
	Training Program	Updating the content and presentation of the program	28
		Preparation of programs specific to the different branches	24
		Extension of the implementation period of the program	19
		Including the trainings that teachers really need and giving the teachers opportunity to choose among these trainings	16
		Evaluating the program at regular intervals after each time and averaging all evaluation scores	11
		Making the program face-to-face	9
		Giving some sample questions at the end of each topic in the program	4
	Professional Studies	Having a system based on increasing the level of meeting the professional working criteria	6
		Making the implementation based on professional studies	2
		Expansion of professional working criteria	1
	Application Requirements	Reducing the duration of service in expert and head teacher application requirements	14

As shown in Table 5, the suggestions of teachers for the implementation of teaching career steps are collected in the categories of general suggestions, training program, professional studies and application requirements Teachers' views under the general suggestions category are as follows: carrying out a career regulation according to seniority without an exam (f=41), conducting the exam every year (f=36), combining horizontal and vertical careers, including promotion (f=33), contributing to teachers' personal rights, status, level, degree and additional indicators in addition to salary increase (f=32), granting to be an expert teacher to the MA graduates and head teacher to the PhD graduates in their field or educational sciences without minimum working-year requirement provided that the candidacy stage has been completed (f=29), elimination of the loss of rights of the teachers who, in this process, cannot take the exam that has not been done for a long time (f=25), removing the exemption of postgraduate education that are not field-related or in educational sciences (f=23), creating a system in which all studies are scored and evaluated by dividing training, exam, professional studies, activities and achievement certificates into certain percentages (f=17), teachers who meet criteria such as academic studies (books, articles, etc.), projects, and success in sports and artistic fields can become specialists and head teachers without requiring years (f=11), extending the salary increase brought by the regulation to retirement as well (f=6), being a scoring-based system by scoring the teachers' studies (f=3).

Some of the general views of teachers about career steps are presented below as direct quotations:

"There are colleagues who have master's and doctorate degrees. These people have completed their education by going through difficult processes. Especially teachers who have completed their postgraduate education in the field of education should be ensured to be expert and head teachers without the requirement of a year."

(T40), "The career steps exam has not been held for a long time. During this period, many of colleagues, including myself, waited for the exam to be held. However, since the exam was not held, that period caused the loss of rights. For this reason, these periods should be taken into consideration and the loss of rights should be eliminated. " (T23), "The exam should be held every year, when the exam is not held every year, this causes loss of rights." (T1).

Teachers' suggestions for the training program are as follows; updating the content and presentation of the program (f=28), preparation of programs specific to the different branches (f=24), extension of the implementation period of the program (f=19), including the trainings that teachers really need and giving the teachers opportunity to choose among these trainings (f=16), evaluating the program at regular intervals after each time and averaging all evaluation scores (f=11), making the program face-to-face (f=9), giving some sample questions at the end of each topic in the program (f=4).

Some of the teachers' views about the training program for teaching career steps are presented below as direct quotations:

"The teacher should be able to follow the subjects they need among the subjects in the training program and should not be obliged to follow all subjects." (T49), "If this system is to be continued, a completely different content should be chosen. That content should be guiding so that teachers can renew and improve themselves with the 'necessary' information that will broaden their horizons, feel equipped, and produce quality ideas. In short, the content of the program should be updated." (T19), "It would be better if the training is held face-to-face. because watching video tutorials prevents us from asking questions." (T22).

It was found out that teachers' suggestions for professional studies were as follows: having a system based on increasing the level of meeting the professional working criteria (f=6), making the implementation based on professional studies (f=2), expanding the professional work criteria (f=1). Besides, their suggestions for application requirements were as follows: reducing the service time, which is an application requirement for expert and head teacher (f=14).

Some of the teachers' views about the professional studies and application requirements for teaching career steps are presented below as direct quotations:

"Instead of an exam-based system, it would be better to increase the number of fulfillment of professional work in the application requirements. Because professional studies consist of activities that expertise the teacher." (T46), "Having a system based on professional studies will enable teachers to work more diligently." (T37).

Conclusion, Discussion and Recommendations

This section includes the study findings, discussion, comments and suggestions about the results pertaining to findings within the scope of the literature.

According to the findings, teachers' views on career steps were grouped under the themes of general opinions, exam application requirements, professional studies and training program. Teachers' general views on career steps are both positive and negative. Teachers think positivetly about the regulation of career steps in terms of continuous learning and professional development, being specific to teachers, determining successful and unsuccessful teachers, and ensuring that experienced teachers receive more salary. It is a significant finding that teachers think in positive way about the regulation in terms of learning and professional development. Because, despite many negativities, teachers' thinking positively about the practice in terms of ensuring their professional development and learning can be considered as an opportunity to ensure their professional development. Thus, it will be easier to increase the professional qualifications of teachers and the quality of education, provide quality teaching services to students, achieve success in the regulation, and contribute to the development of teachers. As a matter of fact, Demir (2011) Kaplan and Gülcan (2020), Turan Cımbız and Küçüker (2015) reached results that support this research.

According to findings of the current study, it is remarkable and important to consider that teachers think that the regulation of career steps separates teachers, disrupts the school atmosphere, discredits the teaching profession and postgraduate education due to the short-term paid graduate programs, creates stress, and reduces teachers' performance. Such a regulation is expected to increase the reputation of the teaching profession, the importance of postgraduate education, the teachers' willingness of work and performance, improve their status, take more responsibility and develop themselves. However, it leads to negative results instead, which makes it necessary to take urgent actions and revise the existing regulation. In this respect, teachers must be able to fulfill their duties and responsibilities in a positive and peaceful school climate in cooperation to have a successful education system. It could be very difficult for teachers working in a negative atmosphere to provide qualified education. The quality of teachers' relationships with each other is effective in

creating a peaceful and positive atmosphere in the school. The quality of these relationships in creating a positive school environment also contributes to create a positive learning and teaching environment (Şişman & Turan, 2004). Peaceful and positive school atmosphere positively increases student success, maximizes the morale, and ensures a positive working learning condition (Wei, 2003). A negative environment, on the other hand, could lead to students' alienation, teachers' indifference to each other and their students, the school principal's resistance to change, authoritarian management style and lack of communication with teachers (Ellis, 1988). For this reason, it will have positive effects on the teachers' performance to avoid all kinds of practices that may negatively affect the school atmosphere or revise them by eliminating their deficiencies. Morover, it could be stated that it will be very difficult for teachers to fulfill their duties under the stress and anxiety caused by career practice as constant anxiety can negatively affect teachers' performance by causing stress. Obviously, teachers with low performance will negatively affect student success.

The discrediting of postgraduate education by the regulation of career steps is against the purpose of the application. In this sense, for the application to be more useful, it is necessary to take the necessary measures to ensure that teachers have postgraduate education in educational sciences or field-related area. In this respect, as the postgraduate education provides an exemption from the exam, many teachers have turned to non-thesis master's degree in the field, and even distant short-term postgraduate education programs have started to be opened for a certain fee. Therefore, this situation has led to a damage to the reputation of postgraduate education, which includes long-term course and thesis period. In the literature, there are studies that support the results of this research (Demir, 2011; Gümüşeli, 2005; Çelikten, 2008; Akgündüz, 2022; Urfalı, 2008; Özan & Kaya, 2009; Kaplan & Gülcan, 2020; Ural, 2011; Bakioğlu & Banoğlu, 2013; Nartgün & Ural, 2007).

The findings show that the teachers are open to learning and professional development regarding their evaluations of the application requirements as contributing to professional renewal and development. The teachers view positively that academic and in-school studies are included in the application requirements, so this will contribute them to work more diligently. Educational activities are complete in that they include not only the class level but also the school. Therefore, the teachers' positive views will ensure both the increase of their individual effort and their participation in school activities, and this will increase their productivity of the school-wide activities and projects.

The findings have also revealed that except for technical problems such as finding the documents and uploading documents to the system, teachers view it positively to include their professional studies as required by the application criteria. Professional development is the most important variable determining teacher quality (Hamdan & Lai, 2015). It will be important for teachers to organize and implement professional studies in a planned and systematic way since professional development is a long process which includes systematically planned opportunities and experiences (Guskey, 2000; Wells, 2014) to improve their teaching techniques, expand knowledge of the field, and take responsibility for educating students in line with the needs of the future society in the light of the latest information (Hoque, Alam & Abdullah, 2011). As a matter of fact, it can be said that the most important factor in the progress and promotion of societies to the level of development is the presence of qualified teachers since it is very important for teachers to provide quality education.

Teachers find the training program positive in terms of updating their knowledge and presenting up-to-date approaches; however, they find it negative because the training program is presented in a monotonous way, the content is very detailed and academic, the program duration is very long and the watching time is short. Giving the same trainings to teachers in all branches and levels, there is unnecessary information, it does not contribute to professional development, and the education program does not contribute to the teaching practices in the classroom. In the career steps regulation, the basis of which is to ensure the professional development of teachers, the training program should be watched and listened to by the teachers with enthusiasm. It is expected that the training that teachers listen and follow with enthusiasm will contribute more to teachers. In the 21st century, when technological opportunities are increasing rapidly, the preparation of educational programs in a way that will attract the teachers' attention and increase their motivation rather than uniformity, and the participation of teachers in the program with web 2.0 tools and the opportunity for two-way communication will facilitate to achieve the program objectives.

According to findings, teachers' suggestions for the regulation of teaching career steps are grouped under general suggestions, professional studies and application requirements. Thanks to the career steps system, teachers are offered the opportunity to advance in their professions based on their success, productivity and performance (Çakıroğlu, 2006, as cited in, Gündoğdu & Kızıltaş, 2008). In this context, teachers' suggestions should be taken into consideration, which is very important for the success of the application. For example, the continuity in the career steps exam will prevent the loss of rights and increase the teachers' interest in professional development studies. Teachers will take up graduate education, and their productivity and performance will increase in project, sports and art activities. In addition, the evaluation of various factors within the scope of graduate education-such as examinations, professional studies, participation in activities, and

certifications-will enhance teachers' professional qualifications. As a matter of fact, these results are in the same line with the stated findings in the literature. Kaplan and Gülcan (2020) stated that other performance criteria should be used apart from the exam to rise in the career steps. Also, Bakioğlu and Banoğlu (2013) expressed that performance evaluation methods that can be applied outside the exam should be brought to the agenda as soon as possible. In a similar vein, it could be postulated that the correct management of career planning and processes and utilizing a contemporary and multifaceted approach including the promotion in profession and horizontal career will emerge positive and important results in many respects. Received by the teacher, etc. will enable teachers to operate in many areas and to develop professionally. In fact, career is also socially important because it enables interaction and integration with many people and gives individuals a status in society in addition to the income that meet the physiological needs of individuals. Career which has an important place in psychological job satisfaction and the development of personality also offers the individual the opportunity to attain more prestige (Sağ, 2004). As a matter of fact, Akçay (2005) proposed a career system of horizontal quality and emphasized that the teaching profession system is structured under the influence of the traditional career understanding, thus, feeling the effect of the contemporary career approach late. He also indicated that there are fewer high positions in teaching, so this situation makes the career system less dynamic, and that the lack of horizontal career opportunities causes the profession to be influenced by the main teaching understanding in the profession. In this sense, considering that there are fewer vertical career opportunities in the teaching profession, it can be said that it would be correct to apply a multifaceted career approach that includes promotion in duty and horizontal career. In this regard, Kaplan and Gülcan (2020) stated that experts and head teachers could be given priority in the transition to school directorate, inspectorate and branch directorate. In addition, Erdoğmuş (1999) emphasized that career should be handled with a new understanding beyond being an organizational phenomenon, and that career is a phenomenon that is largely shaped by the responsibility of the individual but supported by the organization (as cited in, Ural, 2011). Therefore, a multifaceted career approach which is important for the individual to try to learn with self-enthusiasm for rapid adaptation to changing conditions, that provides the opportunity to be more motivated by protecting personal ideals and principles (Hall, 2004), and that involves the individual development by relying more on their relationships and experiences (Deniz, 2009) stands out. In a multifaceted career approach, the goal is psychological satisfaction, which includes the feeling of success and self-confidence that comes with the fulfillment of goals in life. Psychological satisfaction gives the individual more movement and autonomy. In the literature, there are studies that support the results of this research (Bakioğlu & Banoğlu, 2013; Demir, 2011; Kocakaya, 2006; Dağlı, 2007; Boydak-Ozan & Kaya, 2009; Aydın, 2007; Ural, 2007).

Considering the teachers' suggestions for the education program in the research; the career steps regulation should be reviewed with the participation of all stakeholders, and it could be put forward that the application method and the training program will become more feasible with the improvements to be made in the context of professional studies and application requirements. The leading problem of teachers in developed and developing countries has emerged as lack of motivation (Crehan, 2016). According to their own success and work, the teacher can be motivated to learn and improve himself/herself by reaching the next career step (Kaplan & Gülcan, 2020). The creation of teacher career steps will help to recruit high-performing individuals and train excellent teachers by supporting and rewarding the teacher's continuous professional and leadership development through different roles and responsibilities. Teaching career steps will transform schools into professional work organizations, building the infrastructure to support a stronger and ever-evolving teaching profession, which over time will ensure a strong profession, high levels of student success, as well as a shift towards high-performing and equitable school systems across the country (Yang Keo, 2016), thus, increasing the motivation of teachers. Therefore, the regulation of career steps could be revised and made more feasible, making it an important force in increasing the teachers' motivation. There are also researches in the literature that offer suggestions for the teachers' career development (Tümkaya,1996; Uçan, 2001; Alkan, 2000; Ural, 2011).

To conclude, the economic benefit of the career system, teachers expect it to contribute to personal rights, status, additional courses, grade and level progression, and additional indicators. Despite the negativities, the regulation of career steps is a very important action in terms of the professionalism of the teaching, increasing its reputation and ensuring the professional development of teachers. In this sense, the career steps regulation should be revised without losing time. A long-term system should be established in which all processes that will contribute to the professional development of teachers are evaluated rationally and the results of these evaluations should be directed for the teachers' support and development.

In line with the study findings, the following recommendations have been developed:

1- A system including comprehensive evaluation should be established in which all studies are scored and postgraduate education, examination, professional studies, activities, audit results and success certificates are evaluated by dividing them into certain percentages.

2- The salary increases and personal rights brought by the application should also be extended to the retirement. A contemporary, multifaceted career system including promotion in the profession and horizontal career should be implemented in addition to salary increase.

3- Reducing the requirements of ten years of work to become an expert teacher and head teacher after expert teacher will motivate teachers more.

4- These periods should be added to the ten-year and twenty-year periods to compensate for the loss of rights and sixteen years of service of teachers who have not been able to take the exam which has not been held since 2006.

5- In addition to the common topics that concern all teachers, teachers could have special training content for their own field. The content of the training program could be redesigned to contribute to teachers' in-class activities. In addition to theoretical knowledge, examples of classroom practice including innovative and integrated approaches should also be included.

6- Continuity should be ensured by holding the exam every year.

7- It can be ensured that those who have obtained a master's degree in their field and in educational sciences, provided that their candidacy is approved, can be appointed to the position of expert teacher without the necessity of having spent a number of years in the role. Furthermore, those who have completed a PhD can be appointed to the position of head teacher.

Limitations

The results of the research are limited to the questions in the semi-structured interview form prepared within the scope of the research and the opinions of the 52 teachers in the study group on these questions.

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Predicting Classroom Teachers' Program Evaluation Skills from Program Literacy

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Predicting Classroom Teachers' Program Evaluation Skills from Program Literacy

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Abstract

This study aims to predict the level to which classroom teachers' program literacy explains their program evaluation level, utilizing the "Program Literacy Scale" developed by Bolat (2017) and the "Program Evaluation Scale" developed by Baş (2016). Additionally, we seek to determine the impact of participant demographics, including gender, age, seniority, and faculty type graduated, on these skills. We employed a quantitative research method with a scanning design and a random sampling approach. The study involved 380 classroom teachers from state schools during the 2023-2024 academic year. We analysed the obtained data by using descriptive analyses, independent t-tests, ANOVA tests, Tukey's HSD test, and Simple Linear Regression. Analysis revealed significant differences ($p<.05$) in program literacy based on teacher age, seniority, and faculty graduation. Additionally, program evaluation skills differed based on gender, seniority, and faculty graduation factors. Importantly, the study found that program literacy positively predicted the level of program evaluation skills. These results suggest a link between teachers' program knowledge and their capability to evaluate program effectively.

Key words: Program evaluation, Program literacy, Classroom teacher

Introduction

Educational environments are considered to play a crucial role in enabling individuals and societies to adapt to the developments and changes experienced in economies (National Research Council, 2011). Educational programs, on the other hand, require innovation to cultivate students who can respond to these changes and contribute to them (Smith, 2015). Since 2000, the PISA exams have been conducted worldwide to reveal the economic levels, socio-cultural characteristics, basic mathematics, reading, and science competencies of educational systems (OECD, 2023a). According to this exam, Finland, Japan, and Hong Kong are ranked at the top. When Steiner, Magee, Jensen, and Button (2018) investigated the reasons behind these countries' high rankings, they found that they provided high-quality in their educational systems and possessed well-designed programs.

Programs comprised of aims, content, learning-teaching processes, and assessment-evaluation sections, function as a roadmap that defines the standards and determines progress within the educational system that will be implemented nationwide (Çetinkaya & Tabak, 2019; OECD, 2023b). Programs also contribute to directing the teaching and learning process, cultivating qualified individuals, ensuring societal development, and enhancing the quality and efficiency of education. By doing so, they emerge as a significant prerequisite for the realization of high-quality education and instruction (Çetinkaya & Tabak, 2019; Özdemir, 2012). The components within programs address the following questions:

Aims section: "Why?"

Content section: "What?"

Learning-teaching process section: "How?"

Assessment-evaluation section: "To what extent?" (Demirel, 2020).

The effectiveness of programs heavily relies on the teachers' abilities to interpret, implement, and evaluate these programs. Teachers who lack sufficient knowledge and skills might not be able to fully realize the programs' aims, which could negatively impact the overall success of the educational system. Even though programs might be very well-designed theoretically and delivered to teachers for implementation, discrepancies

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might likely arise in practice. To address these issues and ensure a more effective application of theoretically sound programs, teachers require a specific set of skills related to programs. The skills expected from teachers in comprehending the programs employed in cultivating the human resources needed by the 21st century are also transforming. According to the report prepared by the Teacher Training and Development Directorate (TTDD) within the Ministry of National Education (MoNE) in 2017, teachers need to possess the following.

Professional knowledge: Subject matter knowledge, educational theory and practice knowledge, and relevant laws and regulations knowledge,

Professional skills: Planning instruction, creating learning environments, managing the teaching and learning process, and assessment and evaluation,

Attitudes and values: National, spiritual, and universal values, student approach, communication and cooperation, and personal and professional development values.

Competence in educational planning, on the other hand, is described as the ability to prepare plans following the instructional programs, make economic plans during the teaching process, consider students' differences, and consider spiritual values when planning the process (MEB, 2017). Program literacy skills, in this respect, are among the fundamental skills of a teacher (Bolat, 2017). The level of program literacy of a teacher is considered important enough to allow for interpretation of the teacher's readiness for the profession and professional performance (Esen-Aygün, 2019; Süğümlü, 2022).

Program literacy is defined as the ability of teachers to understand the concepts related to the program, take the initiative to make necessary changes, and observe the elements of the program (Tanaş & Murat, 2023). Schroeder and Curcio (2022) define program literacy skill as the integration and use of materials specific to this century in lessons, while Modiba and Van Rensburg (2009) express it as the ability to make necessary changes in a program that disregards cultural differences. Based on these definitions, the skill of program literacy can be defined as the ability of teachers to understand the dimensions of programs, adapt them to the target group of students when it is understood that changes are needed, and create feasible programs by making necessary adjustments.

According to Moon et al. (2021), providing the same education to teacher candidates in different branches related to university education programs is quite problematic. It is not possible to speak of a common program literacy skill for all branches of education programs. In this sense, the program literacy skill varies from one course to another. For example, the program literacy skill of the mathematics branch may differ from the literacy skill of another branch (Moon et al., 2021). Despite the differences between branches, program literacy skill emerges as an important skill that all teachers need to possess for the successful transfer of programs. Another skill necessary for the success of educational programs is program evaluation.

The failure of programs, which are aimed at training the desired workforce for countries to achieve prosperity, leads to the training of an unqualified workforce and individuals who cannot respond to the conditions of the era. The understanding of the importance of evaluating programs has emerged because of the negative consequences experienced in history. Experts concluded that economic crisis and depression in America are due to insufficient programs. For this reason, experts needed to evaluate education programs to prevent such negativity in the future (McCormick & James, 1988). In the UK, the process of evaluating education programs emerged due to increasing suspicions about universities (Leathwood & Phillips, 2000). In Türkiye, program evaluation began with the method and implementation report on the 1948 Primary School Program (Turgut, 1983). Nowadays, the evaluation of education programs is managed through scientific processes by consulting various sources. Among these sources are programs used by different countries, academic studies, constitutions, legislation, development plans, government programs, Ministry of Education survey result reports, commission reports, and special reports requested from faculties (Ağlar et al., 2024a). In Türkiye, it is considered important for programs to be evaluated scientifically, effectively, and collaboratively to ensure that programs are up-to-date, effective, and successful (Ağlar et al., 2024b; Özdemir, 2009).

To reach their aims and meet current needs, programs need to be continuously developed and evaluated. In this context, various program evaluation models have emerged over the years. These models differ according to the emphasis they place on program dimensions. According to Demirel (2020), the main program evaluation models are shown in Table 1. The developers of program evaluation models, their years of emergence, and their key features are shown in Table 1.

Table 1. Main program evaluation models

Model	Developer	Year	Main Feature of the Model
Objective-based evaluation model	R. Tyler	1933-1941	Looks at both the effectiveness of aims and teaching experiences.
Provus' discrepancy approach evaluation model	M. Provus	1966	Measures the difference between program standards and action.
Metfessel-Michael evaluation model	N. Metfessel & J. Michael	1967	Evaluation is done with pluralistic participation. Aims are identified from general to specific and evaluated.
Congruence-contingency model of stake	R. Stake	1967	It examines the congruence between the design and output. Regular evaluation is essential.
Stufflebeam's context, input, process, product (CIPP) model	Stufflebeam	1971	Evaluation is conducted at every stage of the program.
Stake's responsive evaluation model	Stake	1974	It focuses on the processes rather than the outcomes of the program.
Eisner's educational criticism model	Eisner	1979	It consists of description, interpretation, and evaluation by expert individuals.
Stufflebeam macro evaluation model	Stufflebeam	1983	Planning, structuring, implementation, and feedback decisions are made.

As seen in Table 1, program evaluation models have emerged in the historical process. These models highlight various aspects of programs and are designed to meet dissimilar needs. This demonstrates the importance and diversity of program evaluation. Given the importance of evaluating programs, which are of such significant importance, it is accepted that teachers who are the implementers of these programs should have the program evaluation skills to decide on:

- The appropriateness of the aims specified in the program,
- Suitability for the needs of students, society, and the day,
- Teaching-learning processes,
- Assessment-evaluation tools and materials,
- The product or outcome obtained from the program,
-The program's aims and expectations,
- Whether the program meets the objectives or expectations.

The final stage of the program development process is the program evaluation dimension (Ağlar et al., 2024a). Program evaluation, which makes the education process visible and provides a report on its quality, aims to respond to the needs of policymakers, administrators, and other sectors of society by identifying areas that need to be developed in terms of content, method, material, teaching-learning process, and assessment-evaluation (Bharvad, 2010). The program evaluation skill to be used in this process is considered an important skill that reveals the deficiencies, errors, and points to be revised in a program and assists in the reorganization of the program (Demirtaş, 2017).

Teachers' ability to teach and evaluate topics covered in programs seems to be possible only through program literacy and program evaluation skills. Especially for classroom teachers who assume responsibility for all subjects at the elementary school level and are the main implementers of the program, it is considered critically important for them to have sufficient knowledge and skills in program literacy and program evaluation. Therefore, it is important to determine the impact of teachers' program literacy and program evaluation levels on their explanatory abilities.

Research Objective

Research shows that teachers who have a deep understanding of program literacy and program assessment skills are more likely to align their teaching practices with the program, which helps the teacher improve student learning outcomes, select the most appropriate materials and methods to use in the course, and identify student needs (Bharvad, 2010; Öner & Cırık, 2023).Conversely, teachers with limited program literacy and program assessment skills may struggle to effectively support their students' academic progress (Bharvad, 2010; Steiner et al., 2018). With this study we aim to predict the level to which classroom teachers' program literacy explains their program evaluation level, utilizing the Program Literacy Scale (CLS) developed by Bolat (2017) and the Program Evaluation Scale (CES) developed by Baş (2016). Additionally, we seek to determine the impact of participant demographics, including gender, age, seniority, and faculty type graduated, on these skills.

Contributions to the Scientific Literature

There is no study in the literature investigating the relationship between program literacy and program evaluation. However, studies state that program literacy will shed light on the development and evaluation of educational programs (Akınoğlu & Doğan, 2012). At the same time, program literacy is considered a prerequisite for the evaluation of programs. Küçüktepe and Kerimoğlu (2021) state this situation as teachers with low program literacy cannot evaluate the program correctly. Examining the knowledge and skills of classroom teachers in program literacy and evaluation is a crucial step toward improving the overall success of the education system and students' learning. We expect that this research will play a significant role in determining the level of knowledge and skills in this area and contributing to developments in this field.

Method

We provide information on the method, design, population, sample, data collection tools, data collection process, and data analysis of the research in this section.

Research Method

In this study, we preferred a survey design as a quantitative research method. The survey design allows for the quantitative expression of general trends, attitudes, or opinions towards the population obtained from the sample selected from within the population (Creswell, 2013). Additionally, the survey design allows for economic data collection in studies where the population is large, and cross-sectional or longitudinal data collection is preferred (Fowler, 2014).

Population and Sample

The population of the study consists of classroom teachers working in primary schools in Türkiye. We determined the sample group of the study by using the random method, also known as random sampling. Care has been taken to ensure that each unit in the population is included in the research without hindering each other, which is one of the greatest advantages of the random method (Dawson & Trapp, 2001; Sharma, 2017). Statistical analyses have not been conducted in determining the sample, which allows for the rapid progression of the process, and any errors can be easily corrected (Gürbüz & Şahin, 2018).

The sample of the study consists of 380 (144 female - 236 male) primary school teachers working in schools affiliated with the Ministry of National Education in a city located in the Inner Anatolia region of Türkiye during the 2023-2024 academic year. During the period when the study was conducted, there were 1088 classroom teachers in the city center, and 139 of them were not actively teaching in the classroom due to their administrative duties. The universe of the study consisted of 949 teachers. Considering the sampling error of d= ± 0.03 at the significance level of 0.05, it is seen that a number above the minimum number (min=244) (Yazıcıoğlu & Erdoğan, 2014) was reached from this universe. The demographic data of the sample are presented in Table 2.

Table 2. Demographic data of the sample

Variables		***f***	**%**
Gender	Female	144	37.9
	Male	236	62.1
Age	20-30	72	18.9
	31-35	20	5.3
	36-40	70	18.4

	41-45	50	13.2
	46-50	74	19.5
	51+	94	24.7
Years of Experience	1-5	64	16.8
	6-10	26	6.8
	11-15	32	8.4
	16-20	58	15.3
	21-25	78	20.5
	26-30	76	20.0
	30+	46	12.1
University Graduation	Faculty of Education	304	80.0
	Faculty of Science and Literature	32	8.4
	Other Faculties	44	11.6

As seen in Table 2, more than half of the participants in the study are male. The highest participation in the sample is from the age group of 51 years and above, while in terms of years of experience, the highest participation is from teachers with 21-25 years of experience. Additionally, eight out of ten of the participants graduated from the education faculty.

Data Collection Instruments of the Study

The variables to be examined to determine teachers' levels of program evaluation and literacy are gender, age, teaching experience, and graduated faculty. In this study, we collected the data by using the "Program Literacy Scale (CLS)" developed by Bolat (2017) and the "Program Evaluation Scale (CES)" developed by Baş (2016).

Program Literacy Scale (CLS): Developed by Bolat (2017), consists of a total of 29 items in the reading (15 items) and writing (14 items) sub-dimensions. In the scale development study, the reliability of the reading sub-dimension was .88, the writing sub-dimension was .91, and the overall scale reliability was .94. In this study, the reliability of the scale is .96 for the reading sub-dimension, .96 for the writing sub-dimension, and .98 for the overall. The scale, prepared in a five-point Likert type, is rated as "Strongly Agree" and "Strongly Disagree." A minimum of 29 and a maximum of 145 points can be obtained from the scale.

The Program Evaluation Scale (CES), developed by Baş (2016), consists of 35 items across four sub-dimensions: aim (10 items), content (10 items), teaching-learning process (TLP) (10 items), and assessment-evaluation (AE) (5 items). In the scale development study, the sub-dimension reliabilities were as .89/.88/.87 and .78, respectively, the overall reliability of the scale was determined as .92. In this study, the reliabilities of the sub-dimensions of the scale are as .88/.91/.93/.83, and the overall reliability of the scale is .97. The scale, prepared in a five-point Likert type, is rated as "Strongly Agree" and "Strongly Disagree." A minimum of 35 and a maximum of 175 points can be obtained from the scale. Descriptive statistics obtained for CLS and CES in this study are presented in Table 3.

Table 3. Descriptive statistics for CLS and CES

	n	**Min score**	**Max score**	$\overline{X}$	**Item mean (1-5)**	**Item mean (100)**	**ss**	**Skewness**	**Kurtosis**	**Cronbach Alfa**
CLS										
Reading	380	15	75	61.24	4.08	81.65	9.48	-1.017	1.646	.964
Writing	380	14	70	57.25	4.09	81.79	9.13	-.787	.982	.960
Total	380	29	145	118.49	4.09	81.72	17.61	-.958	1.688	.975
CES										
Aim	380	10	50	35.56	3.56	71.12	6.70	-.789	.782	.882

Content	380	10	50	35.81	3.58	71.62	6.88	-.816	.913	.910
TLP	380	10	50	34.05	3.41	68.10	7.64	-.729	.217	.928
AE	380	5	25	16.76	3.35	67.04	3.95	-.559	-.077	.827
Total	380	35	175	122.70	3.51	70.11	23.50	-.813	.660	.970

According to Table 3, participants have a prominent level of program literacy skills based on the total score obtained from CLS (81.72 > 70), and the general evaluation of primary school programs indicates that they are sufficient (70.11 > 70). Participants obtained the highest scores in the writing sub-dimension of CLS with 81.79 points, while in CES, they achieved a score of 71.62 in the content sub-dimension. The reliability values obtained from the two scales, CLS (.975) and CES (.970), are quite high.

Data Collection Process

We prepared a list of 63 primary schools affiliated with the Ministry of National Education (MoNE) in the city centre, and we printed the names of the schools on separate pieces of paper and put them into a bag. Then, we randomly drew the names of 33 primary schools from the bag and noted them down. Subsequently, we visited the selected schools, where we presented a presentation explaining the purpose, method, and contribution of the study to the field to potential participants. Any questions related to the research were answered, and photocopies of the scales were distributed by hand. We ended the data collection process of the research for 21 days, and at the end of this process, we collected the data from 380 primary school teachers who provided voluntary consent by reading and approving the informed consent form. Then, we transferred the collected data to the SPSS 26 program for data analysis.

Data Analysis Process

We transferred the data to SPSS 26 program in one day. We checked the 380 scale one by one, but there were no incorrect filling or missing value, then we checked with SPSS 26 program, but we did not encounter any extreme outlier within them. Then, we checked the normality values of the entire scale and its sub-dimensions. We examined recreation assumptions. We determined that there was a simple linear relationship, normality was at an acceptable level and there was covariance. In this context, we checked the assumptions. Initially, we examined the frequencies and percentages of the participants, followed by the interpretation of the scores obtained by the participants from the sub-dimensions and total scores of the scales based on the variables of gender, age, seniority, and faculty. When we encountered significant differences between groups, the determination of which groups exhibited these differences was found. Finally, we examined the skills related to the CES sub-dimensions based on the scores obtained from CLS, and we presented the findings in tables. We conducted descriptive statistics in the research, followed by checking the normality of the scale. As the scales did not meet the normality assumption, we examined skewness and kurtosis values. We observed that these values were within a range that could be considered flexible (Table 2), and thus, we deemed the use of parametric tests appropriate. In the analysis process, we used independent t-tests for pairwise comparisons employed one-way ANOVA for comparing multiple groups, and applied Tukey's test for post hoc multiple comparisons. Finally, we conducted a simple linear regression analysis to determine the level of predicting CES sub-dimensions based on the scores obtained from CLS.

Ethics Approval

We initiated the data collection process after the ethical approval decision numbered E-50704946-100-363551 dated November 27, 2023, by the Ethics Committee of the Faculty of Education at Sivas Cumhuriyet University.

Findings

We present the findings obtained from the analysis of the data collected from the participants in the research in this section in tables, according to the objectives of the study.

Table 4 presents the t-test results regarding gender in CLS and CES scores by sub-dimensional and overall.

Table 4. t-test results of regarding gender in CLS and CES scores

		Gender	n	x̄	Sd	T	Df	*p*
CLS	Reading	Female	144	61.43	8.86	.310	.378	.757
		Male	236	61.13	9.85			
	Writing	Female	144	57.60	8.41	.592	.378	.554
		Male	236	57.04	9.55			
	Total	Female	144	119.08	15.72	.480	.378	.631
		Male	236	118.17	18.69			
CES	Aim	Female	144	34.93	7.04	-1.399	.378	.163
		Male	236	35.94	6.46			
	Content	Female	144	34.94	7.13	-1.881	.378	.061
		Male	236	36.33	6.68			
	TLP	Female	144	32.83	8.20	-2.435	.378	**.015***
		Male	236	34.79	7.20			
	AE	Female	144	16.04	4.47	-2.806	.378	**.005***
		Male	236	17.20	5.53			
	Total	Female	144	119.32	25.33	-.2201	.378	**.028***
		Male	236	124.76	22.11			

*p<.05

According to Table 4, there is no significant difference in CLS based on gender. However, there is a significant difference in CES in the teaching-learning process (TLP) and evaluation and assessment (EA) sub-dimensions, as well as the total scores, based on gender. Regarding the Table 4, the significant difference favoured male classroom teachers (p<.05).

Table 5 presents the ANOVA test results for the CLS scores of classroom teachers according to the age variable.

Table 5. ANOVA test results for CLS by age variable

	Age	n	x̄	sd	Source of Variance	df	F	*p*	Significant Difference
Reading	20-30[1]	72	60.44	8.29	Between groups	5	2.028	.074	-
	31-35[2]	20	59.10	12.16					
	36-40[3]	70	62.80	7.09	Within groups	374			
	41-45[4]	50	61.84	10.64					
	46-50[5]	74	58.95	9.62	Total	379			
	51+[6]	94	62.63	10.21					
Writing	20-30[1]	72	57.33	7.51	Between groups	5	2.468	**.032***	**1>5**
	31-35[2]	20	56.70	11.16					
	36-40[3]	70	58.77	8.39	Within groups	374			**3>5**
	41-45[4]	50	57.16	10.00					
	46-50[5]	74	54.24	9.65	Total	379			**6>5**
	51+[6]	94	58.60	9.06					
Total CLS	20-30[1]	72	117.78	14.52	Between groups	5	2.396	**.037***	**3>5**
	31-35[2]	20	115.80	23.02					

	36-40[3]	70	121.57	14.90	Within groups	374		**6>5**
	41-45[4]	50	119.00	19.40				
	46-50[5]	74	113.19	18.49	Total	379		
	51+[6]	94	121.3	17.99				

*p<.05

Upon examining Table 5, we observed significant differences in the writing sub-dimension and the total score of the CLS (p<.05). The significant differences are between the age groups of 20-30 and 46-50, 36-40 and 46-50, 51 and over, and 46-50 (1>5, 3>5, 6>5) for the writing sub-dimension, and between the age groups of 36-40, 46-50, 51 and over and 46-50 for the total score (3>5, 6>5). Regarding Table 5, there is no significant difference in the reading sub-dimension of the scale.

Table 6 presents the ANOVA test results for the CES scores of classroom teachers according to the age variable.

Table 6. ANOVA test results for CES by age variable

	Age	**n**	**x̄**	**sd**	**Source of Variance**	**df**	**F**	***p***	**Significant Difference**
Aim	20-30[1]	72	37.14	4.73	Between groups	5	1.888	.096	-
	31-35[2]	20	33.30	8.71					
	36-40[3]	70	35.80	5.87	Within groups	374			
	41-45[4]	50	36.36	6.77					
	46-50[5]	74	35.03	7.04	Total	379			
	51+[6]	94	34.64	7.56					
Content	20-30[1]	72	37.00	5.71	Between groups	5	1.238	.291	-
	31-35[2]	20	34.10	8.23					
	36-40[3]	70	36.37	6.43	Within groups	374			
	41-45[4]	50	36.36	7.55					
	46-50[5]	74	35.35	7.34	Total	379			
	51+[6]	94	34.89	6.94					
TLP	20-30[1]	72	34.81	6.22	Between groups	5	1.088	.367	-
	31-35[2]	20	30.60	9.56					
	36-40[3]	70	34.31	7.77	Within groups	374			
	41-45[4]	50	34.52	8.30					
	46-50[5]	74	34.24	8.06	Total	379			
	51+[6]	94	33.60	7.36					
AE	20-30[1]	72	16.44	3.72	Between groups	5	1.867	.099	-
	31-35[2]	20	14.80	5.02					
	36-40[3]	70	17.60	4.09	Within groups	374			
	41-45[4]	50	17.04	3.91					
	46-50[5]	74	16.92	3.88	Total	379			
	51+[6]	94	16.53	3.74					
Total CES	20-30[1]	72	126.11	18.35	Between groups	5	1.375	.233	-
	31-35[2]	20	113.30	29.98					
	36-40[3]	70	124.66	22.35	Within groups	374			
	41-45[4]	50	124.84	24.85					

	46-50[5]	74	121.92	24.81	Total	379		
	51+[6]	94	120.11	24.30				

*p<.05

According to Table 6, there is no significant difference in the sub-dimensions or total scores of the CES scale, based on the age variable of the participants.

We present the analysis results regarding the scores from the CLS according to the seniority variable in Table 7.

Table 7. ANOVA test results for CLS seniority variable

	Seniority	**N**	**x̄**	**sd**	**Source of Variance**	**df**	**F**	***p***	**Significant Difference**
Reading	1-5[1]	64	59.10	10.03	Between groups	6	2.574	**.019***	**3>1, 3>4, 3>6, 5>1, 5>4**
	6-10[2]	26	61.70	5.86					
	11-15[3]	32	65.50	4.94	Within groups	373			
	16-20[4]	58	59.55	10.70					
	21-25[5]	78	62.82	8.59					
	26-30[6]	76	60.24	10.56	Total	379			
	30+[7]	46	62.13	9.64					
Writing	1-5[1]	64	56.00	9.15	Between groups	6	1.962	.070	-
	6-10[2]	26	59.31	5.13					
	11-15[3]	32	61.44	6.61	Within groups	373			
	16-20[4]	58	55.90	10.41					
	21-25[5]	78	57.28	9.02					
	26-30[6]	76	56.37	9.82	Total	379			
	30+[7]	46	58.04	8.89					
CLS Total	1-5[1]	64	115.09	18.14	Between groups	6	2.376	**.029***	**3>1, 3>4, 3>6**
	6-10[2]	26	121.00	9.98					
	11-15[3]	32	126.94	10.83	Within groups	373			
	16-20[4]	58	115.45	20.50					
	21-25[5]	78	120.10	16.43					
	26-30[6]	76	116.60	18.81	Total	379			
	30+[7]	46	120.17	18.28					

*p<.05

According to Table 7, based on the seniority variable, there are significant differences in the reading sub-dimension and the total scale scores (p<.05). Specifically, there are significant differences in the reading sub-dimension between participants with 11-15 years of experience and those with 1-5 years, 16-20 years, and 26-30 years of experience (3>1, 3>4, 3>6), and between participants with 21-25 years of experience and those with 1-5 years and 16-20 years of experience (5>1, 5>4). There are also significant differences in total scores between classroom teachers with 11-15 years of experience and those with 1-5 years, 16-20 years, and 26-30 years of experience (3>1, 3>4, 3>6). However, there is no significant difference in the writing sub-dimension.

Table 8 provides the ANOVA test results for participants' scores on CES sub-dimensions and total scores according to the seniority year variable.

Table 8. ANOVA test results for CES by seniority year variable

	Seniority	**n**	**x̄**	**Sd**	**Source of Variance**	**df**	**F**	***p***	**Significant Difference**
Aim	1-5[1]	64	37,34	4,81	Between groups	5	3.588	**.002***	**1>2, 1>4, 1>7, 3>2, 3>4, 3>6, 3>7, 5>2**
	6-10[2]	26	32,77	6,59					
	11-15[3]	32	38,31	5,47	Within groups	374			
	16-20[4]	58	34,03	6,78					
	21-25[5]	78	36,23	6,37					
	26-30[6]	76	35,21	7,38	Total	379			
	30+[7]	46	34,09	7,86					
Content	1-5[1]	64	36,81	6,01	Between groups	5	2.312	**.033***	**1>4, 3>2, 3>4, 3>6, 3>7, 5>4**
	6-10[2]	26	34,54	6,85					
	11-15[3]	32	38,44	6,61	Within groups	374			
	16-20[4]	58	34,24	7,32					
	21-25[5]	78	36,69	6,55					
	26-30[6]	76	35,47	7,05	Total	379			
	30+[7]	46	34,30	7,33					
TLP	1-5[1]	64	34,53	6,59	Between groups	5	.986	.435	-
	6-10[2]	26	32,08	8,71					
	11-15[3]	32	35,81	7,87	Within groups	374			
	16-20[4]	58	32,66	8,70					
	21-25[5]	78	34,51	7,46					
	26-30[6]	76	34,13	7,47	Total	379			
	30+[7]	46	34,09	7,39					
AE	1-5[1]	64	16,69	3,83	Between groups	5	2.793	**.011***	**1>2, 3>1, 3>2, 3>5, 4>2, 5>2, 6>2, 7>2**
	6-10[2]	26	14,23	4,08					
	11-15[3]	32	18,38	4,06	Within groups	374			
	16-20[4]	58	16,90	4,29					
	21-25[5]	78	16,69	3,77					
	26-30[6]	76	16,95	3,91	Total	379			
	30+[7]	46	16,83	3,38					
CES Total	1-5[1]	64	126,0	19,53	Between groups	5	2.060	.057	-
	6-10[2]	26	114,38	24,58					
	11-15[3]	32	131,44	22,00	Within groups	374			
	16-20[4]	58	118,48	25,54					
	21-25[5]	78	124,67	22,33					
	26-30[6]	76	122,11	24,53	Total	379			
	30+[7]	46	119,70	24,84					

*p<.05

According to Table 8, there are significant differences in the aim, content, assessment, and evaluation sub-dimensions of CES's scores based on the participants' seniority years (p<.05). In particular, there are

significant differences in the aim sub-dimension between participants with 1-5 years of experience and those with 6-10 years, 16-20 years, and 30 years and above of experience (1>2, 1>4, 1>7), between participants with 11-15 years of experience and those with 6-10 years, 16-20 years, 26-30 years, and 30 years and above of experience (3>2, 3>4, 3>6, 3>7), and between participants with 21-25 years of experience and those with 11-15 years of experience (5>2). There are significant differences in the content sub-dimension between participants with 1-5 years of experience and those with 16-20 years of experience (1>4), between participants with 11-15 years of experience and those with 6-10 years, 16-20 years, 26-30 years, and 30 years and above of experience (3>2, 3>4, 3>6, 3>7), and between participants with 21-25 years of experience and those with 16-20 years of experience (5>4). There are significant differences in the assessment and evaluation sub-dimension, between participants with 1-5 years of experience and those with 6-10 years of experience (1>2), between participants with 11-15 years of experience and those with 1-5 years, 6-10 years, and 21-25 years of experience (3>1, 3>2, 3>5), between participants with 16-20 years of experience and those with 6-10 years of experience (4>2), between participants with 21-25 years of experience and those with 6-10 years of experience (5>2), between participants with 26-30 years of experience and those with 6-10 years of experience (6>2), and between participants with 30 years and above of experience and those with 6-10 years of experience (7>2). Based on the seniority variable, there is no significant difference in the CES's learning-teaching process sub-dimension and total scores.

Table 9 presents the analysis results for the scores obtained from CLS according to the variable of the faculty from which the participants graduated.

Table 9. ANOVA test results for CLS by faculty variable

	Graduated Faculty	**n**	**x̄**	**sd**	**Source of Variance**	**df**	**F**	***p***	**Significant Difference**
Reading	Education[1]	304	61.19	9.28	Between groups	2	5.572	**.004***	**1>2, 3>1, 3>2**
	Science&Literature[2]	32	57.25	11.59	Within groups	377			
	Other[3]	44	64.50	8.07	Total	379			
Writing	Education[1]	304	57.14	9.02	Between groups	2	2.405	.092	-
	Science&Literature[2]	32	55.06	9.65	Within groups	377			
	Other[3]	44	59.59	9.19	Total	379			
CLS Total	Education[1]	304	118.34	17.45	Between groups	2	4.281	**.015***	**3>1, 3>2**
	Science&Literature[2]	32	112.31	18.36	Within groups	377			
	Other Faculties[3]	44	124.09	16.80	Total	379			

*p<.05

According to Table 9, there are significant differences in the scores of the reading sub-dimension and total scale of CLS according to the faculty variable (p<.05). Significant differences in the reading sub-dimension are between graduates of education faculty and graduates of arts and sciences faculty (1>2), and between graduates of other faculties and graduates of education faculty and arts and sciences faculty (3>1, 3>2). Significant differences in total scores are between graduates of other faculties and graduates of education faculty and arts and sciences faculty. There is no significant difference in the writing sub-dimension of the scale.

Table 10 presents the analysis results for the scores obtained by participants in the sub-dimensions and total of CES according to the faculty year variable.

Table 10. ANOVA test results for CES by faculty variable

	Graduated Faculty	n	x̄	sd	Source of Variance	df	F	*p*	Significant Difference
Aim	Education[1]	304	36.07	6.28	Between groups	2	6.704	**.001***	**1>2, 3>2**
	Science&Literature[2]	32	31.69	6.74	Within groups	377			
	Other Faculties[3]	44	34.82	8.42	Total	379			
Content	Education[1]	304	36.21	6.77	Between groups	2	4.633	**.010***	**1>2, 3>2**
	Science&Literature[2]	32	32.38	5.60	Within groups	377			
	Other[3]	44	35.50	7.83	Total	379			
TLP	Education[1]	304	34.32	7.60	Between groups	2	1.806	.166	-
	Science&Literature[2]	32	31.63	6.59	Within groups	377			
	Other Faculties[3]	44	33.95	8.49	Total	379			
AE	Education[1]	304	16.89	3.95	Between groups	2	3.890	**.021***	**1>2, 3>2**
	Science&Literature[2]	32	14.94	3.26	Within groups	377			
	Other Faculties[3]	44	17.18	4.18	Total	379			
CES Total	Education[1]	304	124.06	22.80	Between groups	2	4.757	**.009***	**1>2, 3>2**
	Science&Literature[2]	32	110.75	21.21	Within groups	377			
	Other Faculties[3]	44	122.00	27.56	Total	379			

*p<.05

According to Table 10, there are significant differences in the scores of the aim, content, assessment sub-dimensions, and the total scale of CES according to the faculty variable (p<.05). Significant differences in the aim, content, assessment sub-dimensions, and total scale scores are between graduates of the education faculty and graduates of the arts and sciences faculty, as well as between graduates of other faculties and graduates of the arts and sciences faculty (1>2, 3>2). There is no significant difference in the teaching-learning process sub-dimension of the scale.

Table 11 presents the findings of a simple linear regression analysis conducted to determine the level of prediction of participants' program literacy on program evaluation skills.

Table 11. Simple linear regression findings on CLS predicting CES sub-dimensions

Dependent Variable	Independent Variable	β	t	p	F	Model (*p*)	R^2
Aim	Constant	18.359	8.474	0.000	64.409	0.000	0.146
	CLS	0.145	8.026	0.000			
Content	Constant	16.579	7.567	0.000	78.706	0.000	0.172
	CLS	0.162	8.872	0.000			
TLP	Constant	16.443	6.543	0.000	50.158	0.000	0.117
	CLS	0.149	1.082	0.000			

AE	Constant	7.270	5.629	0.000	55.214	0.000	0.127
	CLS	0.080	7.431	0.000			

Upon examination of Table 11; firstly, the regression model established to evaluate the extent to which participants' skills in the aim dimension of CES are influenced by CLS is statistically significant ($F=64.409$; $p<0.05$). As teachers' levels of CLS increase, their skills in the aim dimension of CES also increase ($\beta=0.145$; $t=8.026$; $p<0.05$). Participants' program literacy explains approximately 15% of the evaluation skills in the aim sub-dimension of CES.

Secondly, the regression model examining the extent to which participants' skills in the content dimension of CES are influenced by CLS is also significant ($F=78.706$; $p<0.05$). As teachers' levels of CLS increase, their skills in the content dimension of CES are positively affected ($\beta=0.162$; $t=8.872$; $p<0.05$). Participants' program literacy explains approximately 17% of the evaluation skills in the content sub-dimension of CES.

Thirdly, the regression model that teachers' skills in the teaching-learning process dimension of CES are significantly influenced by CLS ($F=50.158$; $p<0.05$). As teachers' CLS scores increase, their skills in the teaching-learning process dimension of CES are also positively affected ($\beta=0.149$; $t=1.082$; $p<0.05$). However, participants' program literacy predicts approximately 12% of the evaluation skills in the teaching-learning process sub-dimension of CES.

Finally, according to the established model, the level of influence of participants' skills in the assessment dimension of CES by CLS, is statistically significant ($F=55.214$; $p<0.05$). As participants' CLS scores increase, their skills in the assessment dimension of CES are positively affected ($\beta=0.080$; $t=7.431$; $p<0.05$). Participants' program literacy explains approximately 13% of the evaluation skills in the assessment sub-dimension of CES.

Results, Discussion, and Recommendations

This study aims to determine how classroom teachers' program literacy predicts their program evaluation levels. It also examines the scores that classroom teachers receive on relevant scales based on variables such as gender, age, years of seniority, and the type of faculty from which they graduated. The findings from the analysis of the research data are discussed in this section and evaluated alongside other studies in the literature. Within the framework of the results obtained, suggestions are made for future researchers, classroom teachers, teacher candidates, academicians who provide education in classroom teaching departments, and educational policy makers.

Within the scope of the research, it is observed that the program literacy levels of classroom teachers are in the value range considered high ($81.72 > 70$) (Yıldırım & Şimşek, 2021). This finding is supported by the literature (Çetinkaya & Tabak, 2019; Erdem & Eğmir, 2018; Esen-Aygün, 2019; Gündoğan, Şan, & Uyar, 2023; Karakuyu, 2023). However, qualitative research findings by Süer and Demirkol (2023) suggest that more support is needed for classroom teachers regarding the educational philosophy, aims, values, and competencies included in the program. According to the results of the Program Evaluation Scale applied to the participants in the research, primary school programs are at a satisfactory level ($70.11 > 70$). In the literature, there are equivalent results measuring classroom teachers' evaluations of program (Bal et al., 2021). Considering the importance attributed to shaping education through programs, this research seems quite significant. Additionally, the reliability values of the two scales used in this research are high (Table 3). This finding indicates that the research meets the prerequisite for correct interpretation (Creswell, 2013).

No significant difference was found between the scores of the participants in the program literacy scale according to the gender variable. When these results obtained in the study are compared with the results in the literature, it is seen that they are consistent with the studies of Aslan (2019) and Erdamar and Akpunar (2020). On the other hand, significant differences were found in all sub-dimensions of the scale in the studies conducted by Esen-Aygün (2019), Süğümlü (2022) and Gündoğan, Şan, and Uyar (2023). Erdem and Eğmir (2018) determined that there was a significant difference only in the writing sub-dimension in their study. It can be stated that sample differences are effective in obtaining different results in the studies conducted. In the study, a significant difference was determined in favor of male participants in the teaching-learning process and measurement-evaluation sub-dimensions of the program evaluation scale of the participants. In the study conducted by Ak and Nalçacı (2012), it was concluded that gender did not create a significant difference. Özenç and Çakar (2015) concluded in their study that there was a significant difference in favor of female participants in the measurement-evaluation sub-dimension of the scale. It is thought that the fact that there are not many courses on program evaluation in faculties, as well as the sample studied, is effective in obtaining different findings in the literature. There is no course on program evaluation in most of the education faculties. This

course is only included in some programs in postgraduate courses. This negatively affects the teachers' competence in making evaluations for the program they are responsible for.

It was determined that the program literacy of the teachers included in the study showed a significant difference in the total score of the scale and the writing sub-dimension according to the age variable. It was observed that participants between the ages of 46-50 received higher scores in the writing sub-dimension of the scale than participants between the ages of 20-30, 36-40, and 51 and above. In terms of the total score of the scale, it was determined that participants between the ages of 36-40 and 51 and above received higher scores. It is seen that the findings of this study are not supported in the literature. No significant difference was determined in the studies conducted by Erdem and Eğmir (2018) and Gündoğan et al. (2023). The literature review revealed an absence of studies examining the age variable in the context of program evaluation research. It was concluded that the program literacy of classroom teachers differed in the total score of the scale and the reading sub-dimension according to their years of seniority. It was determined that the average scores of teachers with seniority between 1-5, 16-20, 26-30 years were low, while those with seniority between 11-15 and 21-25 years were high. There are studies in the literature that yielded different results. In the study conducted by Süğümlü (2022) in which he tried to determine the professional experience and program literacy skills of Turkish teachers; no significant difference was found. A similar finding was reached by Sağ and Sezer (2012). An important finding that draws attention in the study of Sağ and Sezer (2012) is that the program literacy levels of classroom teachers decrease as their seniority years increase. It was commented here that there is a negative relationship between experience and program literacy. It can be commented that the contents of current programs can be understood more easily by teachers who graduated recently, but not by teachers who graduated earlier.

In the scores obtained from the education program evaluation scale according to the seniority variable of the participants of the primary school programs, differences were found between the groups in the target sub-dimension of the scale. It was observed that the differences between the seniority groups were in favor of the participants with 1-5 and 11-15 years of seniority. The situation remains unchanged in the content and assessment-evaluation sub-dimensions as well, but in all three sub-dimensions, scores are against teachers with 6-10 years of experience. While no significant difference was found between the teaching-learning process and the total scores on the scale in this study, previous research by Bal et al. (2021), Bulut (2008), and Süğümlü (2022) has demonstrated a positive correlation between teachers' experience levels and outcomes. However, other studies, such as those by Alak & Nalçacı (2012) and Orbeyi & Güven (2008) found no significant differences based on years of experience.

When evaluating the scores received from the literacy scale by classroom teachers based on their faculty of graduation, a significant difference was found between graduates of the Faculty of Science and Letters and those of the Faculty of Education. Specifically, graduates from the Faculty of Education scored higher in the reading sub-dimension of the scale. No significant difference was found in the writing sub-dimension of the scale. According to these findings, it was concluded that the universities the participants graduated from affected their program literacy. Esen-Aygün (2019) determined in his study that the graduates of the faculty of education received higher scores than the graduates of all the faculties compared in the total and sub-dimensions of the scale. A similar finding was obtained by Erdem and Eğmir (2018) in their study. While the generally expected result here is that the graduates of the faculty of education receive higher scores, this study contradicts other studies in the literature. In this study, more than one-third of the classroom teachers working in the city center were reached. This reveals that a truly important group was worked with. It is thought that the reason for the difference is that the sample reached in the studies consists of university students. It was determined that the participants' evaluation levels of educational programs showed a significant difference according to the faculty of graduation variable. It was determined that the scores of teachers who graduated from the Faculty of Education were significantly higher compared to those who graduated from the Faculty of Science and Letters, as well as when comparing the education group with other groups. This finding appears inconsistent with existing literature on the subject. Bal et al. (2021), Orbeyi and Güven (2008) did not find a difference according to the type of faculty of graduation in their studies. When this study is considered together with other studies, it can be commented that the inadequacy of the courses on program literacy and program evaluation given to classroom teachers in education faculties is effective. The knowledge and application skills of teacher candidates who are not trained in the relevant subject are generally similar to other teachers appointed from different fields. It is thought that these competencies are acquired or not acquired at a similar level in schools with a study on this subject.

As a result of the research, it is seen that the participants' program literacy positively predicts all sub-dimensions of the program evaluation scale. According to this result, it can be stated that as the program literacy levels of teachers increase, their skill levels in all sub-dimensions of program evaluation increase in parallel. No study has been found in the literature investigating the relationship between program literacy and program evaluation.

However, it is stated in the studies that program literacy will shed light on the development and evaluation of program (Akınoğlu & Doğan, 2012). At the same time, program literacy is accepted as a prerequisite for the evaluation of programs. Küçüktepe and Kerimoğlu (2021) support the result of our research by stating that teachers with low program literacy cannot evaluate the program correctly.

Conclusions

When the results of this study are evaluated in general, it is seen that the program literacy of classroom teachers is at a high level and in this context, they express the primary school program as above average. One of the most striking results of the study is the differences found in terms of age and seniority variables. No increase or decrease was found in a certain order. Another important finding is that as the program literacy of classroom teachers increases, it positively predicts their thoughts about the program. It can be thought that teachers with a high level of literacy evaluate the program they cover in classes more realistically.

Recommendations

Based on the results, we can recommend the following items:

- The program literacy skills of classroom teachers were determined to be at a high level. However, these results can also be interpreted as teachers perceiving themselves as competent. In order for this result to reflect reality, it is recommended that a different study be conducted through practical activities regarding program literacy.

- Program literacy and the ability to evaluate a program in practice are important competencies that a teacher should have. While it is expected that graduates of education faculties would be in an advantageous position here, different results were encountered. For this reason, the contents of the courses related to these competency areas in education faculties should be checked. Considering that these courses are not offered in most faculties, it can be stated that this is a very important deficiency. It is recommended that the results of this be examined correctly and the program of education faculties be updated.

- Teachers' program skills vary by age and years of experience. Therefore, we can recommend peer education among classroom teachers. Seferoğlu (2001) states that peer education increases solidarity and development within the teaching profession group. Therefore, peer education is expected to enhance program literacy and evaluation skills.

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Sınıf Öğretmenlerinin Eğitim Programları Okuryazarlığı Becerilerinin Eğitim Programlarını Değerlendirmelerini Yordaması

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Özet

Bu çalışma, Bolat (2017) tarafından geliştirilen "Program Okuryazarlığı Ölçeği" ve Baş (2016) tarafından geliştirilen "Program Değerlendirme Ölçeği" kullanılarak sınıf öğretmenlerinin program okuryazarlığının program değerlendirme düzeylerini ne düzeyde açıkladığını tahmin etmeyi amaçlamaktadır. Ayrıca, cinsiyet, yaş, kıdem ve mezun olunan fakülte türü gibi katılımcı demografik özelliklerinin bu beceriler üzerindeki etkisini belirlemeyi amaçlamaktadır. Tarama tasarımı ve rastgele örnekleme yaklaşımı ile nicel bir araştırma yöntemi kullanılmıştır. Çalışmaya 2023-2024 akademik yılında devlet okullarından 380 sınıf öğretmeni katıldı. Elde edilen veriler ile betimsel analizler, bağımsız t-testleri, ANOVA testleri, Tukey'in HSD testi ve Basit Doğrusal Regresyon kullanarak analiz edildi. Analiz, öğretmen yaşı, kıdem ve mezun olunan fakülteye dayalı olarak program okuryazarlığında anlamlı farklılıklar ($p<.05$) olduğunu ortaya çıkardı. Ayrıca, program değerlendirme becerileri cinsiyet, kıdem ve mezun olunan değişkenlerine göre farklılık gösterdi. Önemli olarak, çalışma ile program okuryazarlığının program değerlendirme becerilerinin seviyesini pozitif şekilde yordadığı görüldü. Bu sonuçlar öğretmenlerin program bilgisi ile programı etkili bir şekilde değerlendirme yetenekleri arasında bir bağlantı olduğunu göstermektedir.

Anahtar kelimeler: Program değerlendirmesi, Program okuryazarlığı, Sınıf öğretmeni

Giriş

Eğitim çevrelerinin ekonomilerde yaşanan gelişmeler ve değişmelere uyum sağlamasında birey ve toplumun başarılı olabilmesi önemli kabul edilmektedir (National Research Council, 2011). Eğitim programları ise bu değişimlere cevap verebilecek ve katkı sunabilecek öğrenciler yetiştirmek için yeniliklere ihtiyaç duymaktadır (Smith, 2015). 2000 yılından itibaren dünya genelinde eğitim sistemlerinin ekonomik düzeylerini, sosyokültürel özelliklerini, matematik, okuma ve fen temel yeterliliklerini ortaya çıkaran PISA sınavına göre, Finlandiya, Japonya ve Hong Kong ülkelerinin üst sıralarda yer aldığı görülmektedir (OECD, 2023a). Steiner, Magee, Jensen ve Button, (2018) bu ülkelerin eğitim sistemlerinin yüksek kaliteli, iyi tasarlanmış eğitim programlarına sahip olmaları bulgusuna erişmiştir.

Eğitim programları; hedef, içerik, öğrenme-öğretme süreci ve ölçme-değerlendirme bölümlerinden oluşan eğitim programları, ülke genelinde uygulanacak olan eğitim sistemindeki standartları tanımlamayı ve ilerlemeyi belirleyen bir yol haritası niteliğindedir (Çetinkaya ve Tabak, 2019; OECD, 2023b). Eğitim programları aynı zamanda, öğretme ve öğrenme sürecinin yönlendirilmesine, nitelikli bireylerin yetiştirilmesine, toplumsal gelişimin sağlanmasına, eğitimin kalite ve verimliliğinin artırılmasına da katkı sağlayarak, kaliteli bir eğitim ve öğretimin gerçekleşmesinde önemli bir ön koşul olarak karşımıza çıkmaktadır (Çetinkaya ve Tabak, 2019; Özdemir, 2012). Eğitim programları içerisinde yer alan; hedef bölümüyle "neden öğretiyoruz?", içerik bölümüyle "neler öğretiyoruz?", öğrenme-öğretme süreci bölümüyle "nasıl öğretiyoruz?" ve ölçme-değerlendirme bölümüyle "ne kadar?" öğretiyoruz sorularının cevaplarını içermektedir (Demirel, 2020).

Eğitim programlarının etkinliği, büyük ölçüde öğretmenlerin bu programları yorumlama, uygulama ve değerlendirme becerilerine bağlıdır. Yeterli bilgi ve beceriye sahip olmayan öğretmenler, programların hedeflerini tam olarak gerçekleştiremeyebilir ve bu da eğitim sisteminin genel başarısını olumsuz etkileyebilir. Eğitim programları her ne kadar teorik olarak oldukça iyi tasarlansa ve uygulanmaları için öğretmenlere ulaştırılsa da uygulamalarda aksaklıkların yaşanması olası görülmektedir. Bu sorunların giderilmesi ve teorik olarak iyi olan programların daha iyi şekilde uygulanabilmesi adına öğretmenlerin eğitim programları ile ilgili birtakım becerilere sahip olması gerekmektedir. Yirmi birinci yüzyılın ihtiyaç duyduğu insan gücünün yetiştirilmesinde işe koşulan eğitim programlarının anlaşılabilmesi için öğretmenlerden beklenen beceriler de

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farklılaşmaktadır. Milli Eğitim Bakanlığı (MEB) bünyesindeki Öğretmen Yetiştirme ve Geliştirme Müdürlüğü (ÖYGM) tarafından (2017) hazırlanan rapora göre öğretmenlerin;

- alan bilgisi, alan eğitimi bilgisi ve mevzuat bilgisi mesleki bilgilerine,
- eğitim öğretimi planlama, öğrenme ortamları oluşturma, öğretme öğrenme sürecini yönetme ve ölçme-değerlendirme mesleki becerilerine,
- milli, manevi evrensel değerler, öğrenciye yaklaşım, iletişim ve iş birliği, kişisel ve mesleki gelişim tutum ve değerlerine sahip olması gerekmektedir.

Eğitim öğretimi planlama yeterliliklerini ÖYGM (2017), planları öğretim programlarına uygun hazırlama, öğretim sürecinde ekonomik planlar yapma, öğrencilerin farklılıklarını gözetme ve süreci planlarken manevi değerleri dikkate alma olarak açıklamaktadır. Eğitim programları okuryazarlığı becerisi bu yönüyle, bir öğretmenin temel becerileri arasında yer almaktadır (Bolat, 2017). Bir öğretmenin program okuryazarlık becerisi düzeyi, öğretmenin mesleğe hazır bulunuşluk ve mesleki performansı hakkında yorum yapılmasına imkan tanıyacak kadar önemli kabul edilmektedir (Esen-Aygün, 2019; Süğümlü, 2022).

Program okuryazarlığı, öğretmenlerin programla ilgili kavramları anlayabilmeleri, gerekli değişiklikleri yapabilecek inisiyatifi alabilmeleri ve programın öğelerini gözetmeleri becerisi olarak tanımlanmaktadır (Tanaş ve Murat, 2023).Program okuryazarlık becerisini Schroeder ve Curcio (2022), bu yüzyıla özgü materyallerin derslere entegre edilerek kullanılması olarak, Modiba ve Van Rensburg (2009) ise kültürel farklılıkları göz ardı eden bir programda yapılması gereken değişiklikleri yapma becerisi olarak ifade etmektedirler. Bu tanımlardan yola çıkarak program okuryazarlık becerisiyle ilgili öğretmenlerin eğitim programlarının boyutlarını anlayabilmeleri, değişikliğe gidileceğinin anlaşılması durumunda hedef grubu olan öğrencilere ve duruma göre uyarlayabilmeleri, gerektiğinde değişikliklere giderek ve uygulanabilir programlar ortaya çıkarma becerisi olarak tanımlayabiliriz.

Üniversitelerde eğitim programlarıyla ilgili öğretmen adaylarına verilen eğitimlerde her branş için aynı eğitimin verildiği görülmektedir ve bu durum oldukça sakıncalı kabul edilmektedir (Moon, Harris ve Hays, 2021). Bütün branşların eğitim programları için ortak bir program okuryazarlığı becerisinden ise bahsetmek mümkün değildir. Bu anlamda program okuryazarlığı becerisi dersten derse değişmektedir, örneğin matematik branşının program okuryazarlığı becerisi ile başka bir branşın okuryazarlık becerisi farklılık göstermektedir (Moon et al., 2021). Branşlar arası farklılıklar olmasına rağmen, program okuryazarlığı becerisi programların başarılı bir şekilde aktarılabilmesi adına tüm öğretmenlerin sahip olması gereken önemli bir beceri olarak karşımıza çıkmaktadır. Eğitim programlarının başarılı olabilmesi için gerekli olan başka bir beceri ise programların değerlendirilmesidir.

Ülkelerin refaha ulaşabilmesi için istendik iş gücünü yetiştirme amacı taşıyan eğitim ve eğitim sürecinde kullanılan programların başarısız olması niteliksiz iş gücüne ve koşullara cevap veremeyen insanların yetiştirilmesine neden olmaktadır. Programların değerlendirilmesinin öneminin anlaşılması yaşanan bu olumsuzluklar sonucunda ortaya çıkmıştır. Amerika'da yaşanan ekonomik kriz ve buhranın sebebi olarak eğitim programlarının yeterli olmadığı sonucuna ulaşan uzmanlar, gelecekte bu olumsuzlukları önlemek için eğitim programlarının değerlendirmesine ihtiyaç duymuşlardır (McCormick ve James, 1988). İngiltere'de ise eğitim programlarının değerlendirilmesi süreci üniversitelerle ilgili şüphelerin artması sonucunda ortaya çıkmıştır (Leathwood ve Phillips, 2000). Ülkemizde ise program değerlendirmesi 1948 İlkokul Programı üzerinde yöntem uygulama raporuna yer verilmesi ile başlamıştır (Turgut, 1983). Günümüzde eğitim programlarının değerlendirilmesi çeşitli kaynaklara başvurularak bilimsel süreçlerle yönetilmektedir. Bu kaynaklar arasında farklı ülkelerin kullandığı programlar, akademik çalışmalar, anayasalar, mevzuatlar, kalkınma planları, hükümet programları, Milli Eğitim Bakanlığı anket sonuç raporları, komisyon raporları ve fakültelerden talep edilen özel raporlar yer almaktadır (Ağlar vd., 2024a). Türkiye'de programların güncel, etkili ve başarılı olmasını sağlamak için programların bilimsel, etkili ve işbirlikçi bir şekilde değerlendirilmesinin önemli olduğu düşünülmektedir (Ağlar vd., 2024b; Özdemir, 2009).

Eğitim programlarının hedeflerine ulaşabilmesi ve güncel ihtiyaçlara cevap verebilmesi için de sürekli geliştirilmesi ve değerlendirilmesi gerekmektedir. Bu kapsamda, yıllar içerisinde çeşitli program değerlendirme modelleri ortaya çıkmıştır. Bu modeller, önem verdikleri program boyutuna göre farklılık göstermektedir. Demirel'e (2020) göre, başlıca program değerlendirme modelleri Tablo 1'de gösterilmektedir. Program değerlendirme modellerinin geliştiricileri, ortaya çıkış yılları ve temel özellikleri Tablo 1'deki gibidir.

Tablo 1. Program değerlendirme modelleri, geliştiren kişi, yılı ve başlıca özelliği

Model	Geliştiren	Yıl	Modelin Başlıca Özelliği
Hedefe dayalı değerlendirme modeli	R. Tyler	1933-1941	Hem hedeflerin hem de öğretme yaşantılarının etkililiğine bakılır.
Provus'un farklar yaklaşımı ile değerlendirme modeli	M. Provus	1966	Programın standartları ile edim arasındaki fark ölçülür.
Metfessel-Michael değerlendirme modeli	N. Metfessel ve J. Michael	1967	Çoğulcu bir katılımla değerlendirme yapılır. Genelden özele hedefler belirlenir ve sınanır.
Stake'in uygunluk-olasılık modeli	R. Stake	1967	Tasarlanan ile çıktının uygunluğuna bakılır. Düzenli değerlendirme esastır.
Stufflebeam'in bağlam, girdi-süreç ve ürün modeli	Stufflebeam	1971	Program'ın her aşamasında değerlendirme yapmak esastır.
Stake'in ihtiyaca cevap verici program değerlendirme modeli	Stake	1974	Programın sonuçlarından çok süreçleri ile ilgilenilir.
Eisner'ın eğitsel eleştiri değerlendirme modeli	Eisner	1979	Uzman kişilerin betimleme, yorumlama ve değerlendirmesinden oluşur.
Stufflebeam toplam değerlendirme modeli	Stufflebeam	1983	Planlama, yapılandırma, uygulama ve geri dönüşüm kararları alınır

Tarihsel süreçte program değerlendirmeye yönelik birçok model ortaya çıkmıştır (Tablo 1). Bu modeller, programların çeşitli yönlerini ön plana çıkarmakta ve farklı ihtiyaçlara cevap vermektedir. Bu durum, program değerlendirmenin önemini ve çeşitliliğini açıkça ortaya koymaktadır. Bu denli önemli olan eğitim programlarının değerlendirilmesi ile ilgili programların uygulayıcısı olan öğretmenlerin;

- programda belirtilmiş olan hedeflerin uygunluğunu,
- öğrencilerin, toplumun ve günün ihtiyaçlarına uygunluğunu,
- öğretme-öğrenme süreçlerini,
- ölçme-değerlendirme araç-gereçlerini,
- programdan elde edilen ürünü veya sonucunu,
- programın hedeflerini veya beklentilerini,
- bireylerin, toplumun ve ülkelerin ihtiyaçlarına göre karşılayıp karşılamadığına karar verebilmesi için program değerlendirme becerilerine sahip olması önemli kabul edilmektedir.

Eğitim sürecini görünür kılan ve kalitesi hakkında bir rapor sunma imkanı tanıyan program değerlendirme süreci, eğitimde kullanılan; içerik, yöntem, materyal, öğretme-öğrenme tecrübesi ve ölçme-değerlendirme süresi hakkında geliştirilmesi gereken yönlerin tanımlanmasına yardımcı olarak, politika yapıcılara, yöneticilere ve toplumun diğer kesimlerinin sorularına cevap verme amacını taşımaktadır (Bharvad, 2010). Bu süreçte kullanılacak olan program değerlendirme becerisi ise bir eğitim programının eksiklerini, hatalarını, revize edilmesi gereken noktalarını ortaya çıkaran ve programın yeniden düzenlenmesine yardımcı önemli bir beceridir (Demirtaş, 2017).

Öğretmenlerin eğitim programlarında yer alan konuları nasıl öğretebilecekleri ve değerlendirebilecekleri bilgilerine sahip olmaları, ancak eğitim programları okuryazarlığı ve eğitim programları değerlendirme becerileri ile mümkün gözükmektedir. Özellikle ilkokul seviyesinde tüm derslerin sorumluluğunu üstlenen ve programın temel uygulayıcıları olan sınıf öğretmenlerinin, eğitim programları okuryazarlığı ve değerlendirme becerileri konusunda yeterli bilgi ve beceriye sahip olmaları, eğitim sisteminin başarısı için kritik öneme sahip olduğu düşünülmektedir. Bu amaçla eğitimin öğretmenlerin derslerinde takip ettikleri eğitim programları okuryazarlık beceri ve eğitim programları değerlendirme düzeylerinin belirlenmesi önemli kabul edilmektedir.

Araştırmanın Amacı (Araştırma Problemleri)

Araştırmalar, program okuryazarlığı ve program değerlendirme becerileri konusunda derin bir anlayışa sahip öğretmenlerin öğretim uygulamalarını programla uyumlu hale getirme olasılığının daha yüksek olduğunu göstermektedir; bu da öğretmenin öğrenci öğrenme sonuçlarını iyileştirmesine, derste kullanılacak en uygun materyalleri ve yöntemleri seçmesine ve öğrenci ihtiyaçlarını belirlemesine yardımcı olmaktadır (Bharvad, 2010; Öner ve Cırık, 2023). Buna rağmen, sınırlı program okuryazarlığı ve program değerlendirme becerilerine sahip öğretmenler, öğrencilerinin akademik ilerlemesini etkili bir şekilde desteklemekte zorlanabilmektedirler (Bharvad, 2010; Steiner ve diğerleri, 2018). Bu çalışma, Bolat (2017) tarafından geliştirilen Eğitim Programı Okuryazarlığı Ölçeği'ni (EPOÖ) ve Baş (2016) tarafından geliştirilen Eğitim Programları Değerlendirme Ölçeği'ni (EPDÖ) kullanarak sınıf öğretmenlerinin program okuryazarlığının program değerlendirme düzeylerini ne düzeyde açıkladığını yordamayı amaçlamaktadır. Ayrıca, cinsiyet, yaş, kıdem ve mezun olunan fakülte türü gibi katılımcı demografik özelliklerinin bu beceriler üzerindeki etkisinin belirlenmesi amaçlanmaktadır.

Bilimsel Literatüre Katkılar

Literatürde program okuryazarlığı ile program değerlendirmesi arasındaki ilişkiyi inceleyen bir çalışma bulunmamaktadır. Ancak, bu alanda yapılacak olan çalışmalar program okuryazarlığının eğitim programlarının geliştirilmesi ve değerlendirilmesine ışık tutacağını belirtilmektedir (Akınoğlu ve Doğan, 2012). Aynı zamanda program okuryazarlığı programların değerlendirilmesi için bir ön koşul olarak kabul edilmektedir. Küçüktepe ve Kerimoğlu (2021) bu durumu düşük program okuryazarlığına sahip öğretmenlerin programı doğru bir şekilde değerlendirememeleri olarak belirtmektedir. Sınıf öğretmenlerinin program okuryazarlığı ve değerlendirme konusundaki bilgi ve becerilerinin incelenmesi, eğitim sisteminin genel başarısını ve öğrencilerin öğrenmesini iyileştirmeye yönelik önemli bir adım olarak görülmektedir. Bu araştırmanın bu alandaki bilgi ve beceri düzeyini belirlemede ve bu alandaki gelişmelere katkıda bulunmada önemli bir rol oynayacağı düşünülmektedir.

Yöntem

Bu bölümde araştırmanın yöntemi, deseni, evreni, örneklemi, veri toplama araçları, veri toplama süreci ve veri analizine yönelik bilgilere yer verilmektedir.

Araştırmanın Yöntemi

Bu araştırmada nicel araştırma yöntemlerinden tarama deseni tercih edilmiştir. Tarama deseni evren içerisinden seçilen örneklemden elde edilen veriler ile evrene yönelik genel trendi, tutumu veya fikirleri nicel olarak ifade edilmesine olanak sağlamaktadır (Creswell, 2013). Tarama deseni aynı zamanda kalabalık evreninin büyük olduğu, kesitsel veya boylamsal veri toplamanın tercih edildiği araştırmalarda ekonomik şekilde veri toplanmasına izin vermektedir (Fowler, 2014).

Evren ve Örneklem

Araştırmanın evrenini Türkiye'deki ilkokullarda görev yapan sınıf öğretmenleri oluşturmaktadır. Çalışmanın örneklem grubunu, rastgele örnekleme olarak da bilinen rastgele örnekleme yöntemi kullanarak belirledik. Evrendeki her birimin birbirini engellemeden araştırmaya dahil edilmesine özen gösterilmiştir; bu, rastgele yöntemin en büyük avantajlarından biridir (Dawson ve Trapp, 2001; Sharma, 2017). Örneklemin belirlenmesinde istatistiksel analizler yapılmamış olması, sürecin hızlı ilerlemesine olanak sağlamakta ve herhangi bir hata kolayca düzeltilebilmektedir (Gürbüz ve Şahin, 2018).

Araştırmanın örneklemini, 2023-2024 eğitim öğretim yılında Türkiye'nin İç Anadolu bölgesinde yer alan bir ilde Milli Eğitim Bakanlığı'na bağlı okullarda görev yapan 380 (144 kadın- 236 erkek) ilkokul öğretmeni oluşturmaktadır. Araştırmanın yapıldığı dönemde il merkezinde 1088 sınıf öğretmeni bulunmakta olup, bunlardan 139'u idari görevi nedeniyle sınıfta aktif olarak ders vermemektedir. Araştırmanın evrenini 949 öğretmen oluşturmaktadır. Örneklem hatası d= ± 0.03 ve anlamlılık düzeyi 0.05 olarak dikkate alındığında bu evrenden minimum sayının (min=244) üstünde bir sayıya (Yazıcıoğlu ve Erdoğan, 2014) ulaşıldığı görülmektedir. Örnekleme ait demografik veriler Tablo 2'de sunulmuştur.

Tablo 2. Örnekleme ait demografik veriler

Değişkenler		*f*	%
Cinsiyet	Kadın	144	37.9
	Erkek	236	62.1
Yaş	20-30	72	18.9
	31-35	20	5.3
	36-40	70	18.4

	41-45	50	13.2
	46-50	74	19.5
	51+	94	24.7
Kıdem Yılı	1-5	64	16.8
	6-10	26	6.8
	11-15	32	8.4
	16-20	58	15.3
	21-25	78	20.5
	26-30	76	20.0
	30+	46	12.1
Mezun Olunan Üniversite	Eğitim Fakültesi	304	80.0
	Fen-Edebiyat Fakültesi	32	8.4
	Diğer Fakülteler	44	11.6

Tablo 2'de görüldüğü üzere araştırma katılımcılarının büyük çoğunluğunun cinsiyeti erkektir. Örneklemde en çok 51 yaş ve üzeri yaş grubunda olan sınıf öğretmenleri yer alırken, kıdem yılına göre en yüksek katılımı 21-25 yıllık kıdeme sahip öğretmenler gerçekleştirmişlerdir. Ayrıca, örneklemin 5\4'ünün eğitim fakültesi mezunu olduğu görülmektedir.

Araştırmanın Veri Toplama Araçları

Öğretmenlerin eğitim programları değerlendirme ve program okuryazarlığı düzeylerini belirlemek için incelenecek değişkenler; cinsiyet, yaş, kıdem yılı ve mezun olunan fakülte olarak belirlenmiştir. Bu çalışmada veriler Bolat (2017) tarafından geliştirilmiş olan "Eğitim Programı Okuryazarlığı Ölçeği (EPOÖ)" ve Baş (2016) tarafından geliştirilmiş olan "Eğitim Programlarını Değerlendirme Ölçeği (EPDÖ)" kullanılarak toplanmıştır.

Eğitim Programı Okuryazarlığı Ölçeği (EPOÖ): Bolat (2017) tarafından geliştirilmiş olup, okuma (15 madde) ve yazma (14 madde) alt boyutlarında toplam, 29 maddeden oluşmaktadır. Ölçeği geliştirme çalışmasında okuma alt boyutu .88 yazma alt boyutu .91 ve ölçeğin bütününün güvenirliği ise .94 olarak belirlenmiştir. Bu araştırmada ise ölçeğin güvenirliği okuma alt boyutu .96 yazma alt boyutu .96 ve toplamda .98 olarak hesaplanmıştır. Beşli likert tipinde hazırlanan ölçek "Kesinlikle Katılıyorum" ve "Kesinlikle Katılmıyorum" şeklinde derecelendirilmiştir. Ölçekten en az 29, en çok ise 145 puan alınabilmektedir.

Eğitim Programlarını Değerlendirme Ölçeği (EPDÖ): Baş (2016) tarafından geliştirilmiş olup, hedef (10 madde), içerik (10 madde), öğretme-öğrenme süreci (10 madde) ve ölçme-değerlendirme (5 madde) alt boyutlarında, toplam 35 maddeden oluşmaktadır. Ölçeği geliştirme çalışmasında alt boyut güvenirlikleri sırasıyla .89/.88/.87 ve .78 olarak belirlenirken, ölçeğin bütününün güvenirliği .92 olarak belirlenmiştir. Bu araştırmada ise ölçeğin alt boyutlarının güvenirliği sırasıyla .88/.91/.93/.83 ve ölçeğin toplam güvenirliği .91 olarak hesaplanmıştır. Beşli likert tipinde hazırlanmış olan ölçek "Kesinlikle Katılıyorum" ve "Kesinlikle Katılmıyorum" şeklinde derecelendirilmiştir. Ölçekten en az 35, en çok ise 175 puan alınabilmektedir. Bu araştırma kapsamında ölçeklere ilişkin elde edilen betimsel bulgulara Tablo 3'te yer verilmektedir.

Tablo 3. Ölçeklere ilişkin betimsel istatistikler

	n	En düşük puan	En yüksek puan	$\bar{X}$	Madde ort. (1-5)	Madde ort. (100)	ss	Skewness	Kurtosis	Cronbach Alfa
EPOÖ										
Okuma	380	15	75	61.24	4.08	81.65	9.48	-1.017	1.646	.964
Yazma	380	14	70	57.25	4.09	81.79	9.13	-.787	.982	.960
Top.	380	29	145	118.49	4.09	81.72	17.61	-.958	1.688	.975
EPDÖ										
Hedef	380	10	50	35.56	3.56	71.12	6.70	-.789	.782	.882
İçerik	380	10	50	35.81	3.58	71.62	6.88	-.816	.913	.910
ÖÖS	380	10	50	34.05	3.41	68.10	7.64	-.729	.217	.928
ÖD	380	5	25	16.76	3.35	67.04	3.95	-.559	-.077	.827
Top.	380	35	175	122.70	3.51	70.11	23.50	-.813	.660	.970

Tablo 3 incelendiğinde; katılımcıların EPOÖ'den elde ettiği toplam puan bakımından program okuryazarlık becerileri yüksek düzeyde (81.72 >70) olduğu belirlenirken, katılımcıların ilkokul programlarıyla ilgili genel değerlendirmesi sonucunda ilkokul programlarının yeterli olduğu tespit edilmiştir (70.11 >70). Katılımcılar en yüksek puanları EPOÖ'de 81.79 puan ile yazma alt boyutunda elde ederken, EPDÖ'de ise

programların içerik alt boyutu 71.62 puan elde etmiştir. EPOÖ (.975) ve EPDÖ (.970) olmak üzere iki ölçekten elde edilen güvenirlik değerlerinin oldukça yüksek olduğu tespit edilmiştir.

Veri Toplama Süreci

İl merkezinde MEB'e bağlı 63 ilkokulun listesi çıkartılarak ilkokulların isimleri tek tek kağıtlara yazılarak torbaya atılmıştır ve araştırmacılar rastgele torbadan ilkokulların isimleri yazılı olan kağıtları çekerek, 33 ilkokulun ismini not etmişlerdir. Ardından, belirlenen okullar araştırmacılar tarafından ziyaret edilerek, olası katılımcılara çalışmanın amacı, yöntemi ve alana katkısını anlatan sunum yapılmış ve araştırmayla ilgili varsa sorular cevaplanarak ölçeklerin fotokopileri elden dağıtılmıştır. Araştırmanın veri toplama süreci 21 gün sürmüştür ve bu sürecin sonunda 33 okuldaki sınıf öğretmenlerinden gönüllülük onam formunu okuyarak onay veren 380 sınıf öğretmeninden elde edilen veriler SPSS 26 programına aktarılarak veri analiz sürecine geçilmiştir.

Veri Analiz Süreci

Veriler bir günde SPSS 26 programına aktarılmıştır. 380'lik ölçeği tek tek kontrol ettik yanlış doldurma veya eksik değere rastlanmamıştır, daha sonra SPSS 26 programı ile kontrol edilmiştir fakat veriler içerisinde uç değerlere rastlanılmamıştır. Daha sonra ölçeğin tamamının ve alt boyutlarının normallik değerlerini kontrol edilmiştir. Rekreasyon varsayımları incelenmiştir. Basit doğrusal ilişki olduğu, normalliğin kabul edilebilir düzeyde olduğu ve kovaryans olduğu tespit edilmiştir. Bu bağlamda varsayımlar kontrol edilmiştir. Öncelikle katılımcıların frekans ve yüzdeleri incelenmiştir, ardından katılımcıların alt boyutlardan aldıkları puanlar ile ölçeklerin toplam puanlarının cinsiyet, yaş, kıdem ve fakülte değişkenlerine göre yorumlanmasına geçilmiştir. Gruplar arasında anlamlı farklılık gördüğümüzde bu farklılıkların hangi gruplarda görüldüğünün belirlenmesine geçilmiştir. Son olarak EPOÖ'den alınan puanlara göre EPDÖ alt boyutlarına ilişkin beceriler incelenmiş ve bulgular tablolar halinde sunulmuştur. Araştırmada tanımlayıcı istatistikler yapılarak, ölçeğin normalliği kontrol edilmiştir. Ölçekler normallik varsayımını karşılamadığından çarpıklık ve basıklık değerleri incelenmiştir. Bu değerlerin esnek olarak kabul edilebilecek bir aralıkta olduğu gözlemlenmiştir (Tablo 3) ve bu nedenle parametrik testlerin kullanımı uygun görülmüştür. Analiz sürecinde, çiftler arası karşılaştırmalar için bağımsız t-testleri, çoklu grupları karşılaştırmak için ise tek yönlü ANOVA kullanılmış ve post-hoc çoklu karşılaştırmalar için Tukey testi uygulanmıştır. Son olarak, EPOÖ'den elde edilen puanlara dayanarak EPDÖ alt boyutlarının tahmin etme düzeyini belirlemek için basit bir doğrusal regresyon analizi gerçekleştirilmiştir.

Etik Onay Beyanı

Veri toplama süreci, Sivas Cumhuriyet Üniversitesi Eğitim Bilimleri Araştırma Önerisi Etik Değerlendirme Kurulunun E-50704946-100-363551 sayılı 27 Kasım 2023 tarihli etik kurul izin kararının ardından araştırmacılar tarafından başlatılmıştır.

Bulgular

Araştırmada katılımcılardan elde edilen verilerin analizi sonucunda araştırma amaçlarına yönelik uygulanan analizlerden elde edilen bulgular tablolar halinde bu bölümde sunulmaktadır.

Cinsiyet değişkenine göre sınıf öğretmenlerinin eğitim program okuryazarlık düzeylerini belirleyen EPOÖ ve katılımcıların ilkokul programlarını değerlendirdikleri EPDÖ alt boyutları ve toplam puanlara ilişkin analiz bulgularına Tablo 4'te yer verilmektedir.

Tablo 4. Cinsiyet değişkenine göre EPOÖ ve EPDÖ t-testi bulguları

Alt Faktörler		Cinsiyet	n	x̄	sd	t	df	*p*
EPOÖ	Okuma	Kadın	144	61.43	8.86	.310	.378	.757
		Erkek	236	61.13	9.85			
	Yazma	Kadın	144	57.60	8.41	.592	.378	.554
		Erkek	236	57.04	9.55			
	Toplam	Kadın	144	119.08	15.72	.480	.378	.631
		Erkek	236	118.17	18.69			
EPDÖ	Hedef	Kadın	144	34.93	7.04	-1.399	.378	.163
		Erkek	236	35.94	6.46			
	İçerik	Kadın	144	34.94	7.13	-1.881	.378	.061
		Erkek	236	36.33	6.68			
	ÖÖS	Kadın	144	32.83	8.20	-2.435	.378	**.015***
		Erkek	236	34.79	7.20			
	ÖD	Kadın	144	16.04	4.47	-2.806	.378	**.005***

	Toplam	Erkek	236	17.20	5.53	-.2201	.378	**.028***
		Kadın	144	119.32	25.33			
		Erkek	236	124.76	22.11			

*p<.05

Tablo 4'e göre katılımcıların cinsiyet değişkenine göre EPOÖ'den aldıkları puanlar arasında anlamlı farklılığa rastlanılmamaktadır. Cinsiyet değişkenine göre EPDÖ'de ÖÖS ve ÖD alt boyutlarında ve toplam puanlarında anlamlı farklılık tespit edilmiştir. Anlamlı farklılığın erkek sınıf öğretmenleri lehine olduğu tespit edilmiştir (p<.05).

Yaş değişkenine göre sınıf öğretmenlerinin EPOÖ aldıkları puanlara yönelik bulgulara Tablo 5'te yer verilmektedir.

Tablo 5. EPOÖ Yaş Değişkeni ANOVA Testi Bulguları

	Yaş	n	x̄	sd	Varyans Kaynağı	df	F	p	Anlamlı Farklılık
Okuma	20-30[1]	72	60.44	8.29	Gruplar arası	5	2.028	.074	-
	31-35[2]	20	59.10	12.16					
	36-40[3]	70	62.80	7.09	Gruplar içi	374			
	41-45[4]	50	61.84	10.64					
	46-50[5]	74	58.95	9.62	Toplam	379			
	51+[6]	94	62.63	10.21					
Yazma	20-30[1]	72	57.33	7.51	Gruplar arası	5	2.468	**.032***	**1>5**
	31-35[2]	20	56.70	11.16					**3>5**
	36-40[3]	70	58.77	8.39	Gruplar içi	374			**6>5**
	41-45[4]	50	57.16	10.00					
	46-50[5]	74	54.24	9.65	Toplam	379			
	51+[6]	94	58.60	9.06					
EPOÖ Toplam	20-30[1]	72	117.78	14.52	Gruplar arası	5	2.396	**.037***	**3>5**
	31-35[2]	20	115.80	23.02					**6>5**
	36-40[3]	70	121.57	14.90	Gruplar içi	374			
	41-45[4]	50	119.00	19.40					
	46-50[5]	74	113.19	18.49	Toplam	379			
	51+[6]	94	121.23	17.99					

*p<.05

Tablo 5 incelendiğinde; katılımcıların EPOÖ'nün yazma alt boyutu ve ölçeğin toplamında aldıkları puanlar anlam bakımından farklılık tespit edilmiştir (p<.05). Anlamlı farklılığın yazma alt boyutu için 20-30 yaş ile 46-50 yaş, 36-40 yaş ile 46-50 yaş, 51 yaş ve üzeri ile 46-50 yaşları arasında (1>5, 3>5, 6>5), ölçeğin toplam puanları için ise 36-40 yaş ile 46-50 yaş ve 51 yaş ve üzeri ile 46-50 yaş arasında (3>5, 6>5) olduğu belirlenmiştir. Ölçeğin okuma alt boyutunda anlamlı farklılığa rastlanılmamıştır.

Katılımcıların yaş değişkenine göre ilkokul programlarının EPDÖ'den aldıkları puanlara yönelik bulgulara Tablo 6'da yer verilmektedir.

Tablo 6. EPDÖ Yaş Değişkeni ANOVA Testi Bulguları

	Yaş	n	x̄	sd	Varyans Kaynağı	df	F	p	Anlamlı Farklılık
Hedef	20-30[1]	72	37.14	4.73	Gruplar arası	5	1.888	.096	-
	31-35[2]	20	33.30	8.71					
	36-40[3]	70	35.80	5.87	Gruplar içi	374			
	41-45[4]	50	36.36	6.77					
	46-50[5]	74	35.03	7.04	Toplam	379			
	51+[6]	94	34.64	7.56					
İçerik	20-30[1]	72	37.00	5.71	Gruplar arası	5	1.238	.291	-
	31-35[2]	20	34.10	8.23					
	36-40[3]	70	36.37	6.43	Gruplar içi	374			
	41-45[4]	50	36.36	7.55					
	46-50[5]	74	35.35	7.34	Toplam	379			
	51+[6]	94	34.89	6.94					
ÖÖS	20-30[1]	72	34.81	6.22	Gruplar arası	5	1.088	.367	-
	31-35[2]	20	30.60	9.56					
	36-40[3]	70	34.31	7.77	Gruplar içi	374			
	41-45[4]	50	34.52	8.30					

	46-50[5]	74	34.24	8.06	Toplam	379			
	51+[6]	94	33.60	7.36					
ÖD	20-30[1]	72	16.44	3.72	Gruplar arası	5	1.867	.099	-
	31-35[2]	20	14.80	5.02					
	36-40[3]	70	17.60	4.09	Gruplar içi	374			
	41-45[4]	50	17.04	3.91					
	46-50[5]	74	16.92	3.88	Toplam	379			
	51+[6]	94	16.53	3.74					
EPDÖ Toplam	20-30[1]	72	126.11	18.35	Gruplar arası	5	1.375	.233	-
	31-35[2]	20	113.30	29.98					
	36-40[3]	70	124.66	22.35	Gruplar içi	374			
	41-45[4]	50	124.84	24.85					
	46-50[5]	74	121.92	24.81	Toplam	379			
	51+[6]	94	120.11	24.30					

*p<.05

Tablo 6'ya göre ilkokul programlarını değerlendirdiği EPDÖ ölçeğinin alt boyutları veya toplamında elde ettikleri puanlar katılımcıların yaş değişkenine göre incelendiğinde anlamlı farklılığa rastlanılmamıştır.

Katılımcıların kıdem yılı değişkenine göre EPOÖ'den elde ettikleri puanlara yönelik analiz sonuçlarına Tablo 7'de yer verilmektedir.

Tablo 7. EPOÖ Kıdem Yılı Değişkeni ANOVA Testi Bulguları

	Kıdem Yılı	n	x̄	sd	Varyans Kaynağı	df	F	*p*	Anlamlı Farklılık
Okuma	1-5[1]	64	59.10	10.03	Gruplar arası	6	2.574	**.019***	**3>1**
	6-10[2]	26	61.70	5.86					**3>4**
	11-15[3]	32	65.50	4.94	Gruplar içi	373			**3>6**
	16-20[4]	58	59.55	10.70					**5>1**
	21-25[5]	78	62.82	8.59					**5>4**
	26-30[6]	76	60.24	10.56	Toplam	379			
	30+[7]	46	62.13	9.64					
Yazma	1-5[1]	64	56.00	9.15	Gruplar arası	6	1.962	.070	-
	6-10[2]	26	59.31	5.13					
	11-15[3]	32	61.44	6.61	Gruplar içi	373			
	16-20[4]	58	55.90	10.41					
	21-25[5]	78	57.28	9.02					
	26-30[6]	76	56.37	9.82	Toplam	379			
	30+[7]	46	58.04	8.89					
EPOÖ Toplam	1-5[1]	64	115.09	18.14	Gruplar arası	6	2.376	**.029***	**3>1**
	6-10[2]	26	121.00	9.98					**3>4**
	11-15[3]	32	126.94	10.83	Gruplar içi	373			**3>6**
	16-20[4]	58	115.45	20.50					
	21-25[5]	78	120.10	16.43					
	26-30[6]	76	116.60	18.81	Toplam	379			
	30+[7]	46	120.17	18.28					

*p<.05

Tablo 7'ye göre katılımcıların EPOÖ'nün alt boyutları veya toplamında elde ettikleri puanlar kıdem yılı değişkenine göre incelendiğinde, okuma alt boyutunda ve ölçeğin toplamından elde edilen puanlarında anlamlı farklılık belirlenmiştir (p<.05). Anlamlı farklılığın okuma alt boyutunda 11-15 yıllık kıdeme sahip olan katılımcılar ile 1-5 yıl, 16-20 yıl ve 26-30 yıllık kıdeme sahip olanlar arasında (3>1, 3>4, 3>6) ve 21-25 yıllık kıdeme sahip olan katılımcılar ile 1-5 yıl ve 16-20 yıllık kıdeme sahip olanlar arasında (5>1, 5>4) olduğu tespit edilmiştir. Toplam puanlar için anlamlı farklılığın 11-15 yıllık kıdeme sahip sınıf öğretmenleri ile 1-5 yıl, 16-20 yıl ve 26-30 yıllık kıdeme sahip sınıf öğretmenleri arasında (3>1, 3>4, 3>6) olduğu tespit edilmiştir. Ölçeğin yazma alt boyutunda ise anlamlı farklılık tespit edilmemiştir.

Kıdem yılı değişkenine göre katılımcıların EPDÖ'nün alt boyutları ve toplamında verdikleri puanlara Tablo 8'de yer verilmektedir.

Tablo 8. EPDÖ Kıdem Yılı Değişkeni ANOVA Testi Bulguları

	Kıdem Yılı	n	x̄	sd	Varyans Kaynağı	df	F	*p*	Anlamlı Farklılık
Hedef	1-5[1]	64	37,34	4,81	Gruplar arası	5	3.588	**.002***	**1>2, 1>4, 1>7, 3>2, 3>4, 3>6, 3>7, 5>2**
	6-10[2]	26	32,77	6,59					
	11-15[3]	32	38,31	5,47	Gruplar içi	374			
	16-20[4]	58	34,03	6,78					
	21-25[5]	78	36,23	6,37					
	26-30[6]	76	35,21	7,38	Toplam	379			
	30+[7]	46	34,09	7,86					
İçerik	1-5[1]	64	36,81	6,01	Gruplar arası	5	2.312	**.033***	**1>4, 3>2, 3>4, 3>6, 3>7, 5>4**
	6-10[2]	26	34,54	6,85					
	11-15[3]	32	38,44	6,61	Gruplar içi	374			
	16-20[4]	58	34,24	7,32					
	21-25[5]	78	36,69	6,55					
	26-30[6]	76	35,47	7,05	Toplam	379			
	30+[7]	46	34,30	7,33					
ÖÖS	1-5[1]	64	34,53	6,59	Gruplar arası	5	.986	.435	-
	6-10[2]	26	32,08	8,71					
	11-15[3]	32	35,81	7,87	Gruplar içi	374			
	16-20[4]	58	32,66	8,70					
	21-25[5]	78	34,51	7,46					
	26-30[6]	76	34,13	7,47	Toplam	379			
	30+[7]	46	34,09	7,39					
ÖD	1-5[1]	64	16,69	3,83	Gruplar arası	5	2.793	**.011***	**1>2, 3>1, 3>2, 3>5, 4>2, 5>2, 6>2, 7>2**
	6-10[2]	26	14,23	4,08					
	11-15[3]	32	18,38	4,06	Gruplar içi	374			
	16-20[4]	58	16,90	4,29					
	21-25[5]	78	16,69	3,77					
	26-30[6]	76	16,95	3,91	Toplam	379			
	30+[7]	46	16,83	3,38					
EPDÖ Toplam	1-5[1]	64	126,0	19,53	Gruplar arası	5	2.060	.057	-
	6-10[2]	26	114,38	24,58					
	11-15[3]	32	131,44	22,00	Gruplar içi	374			
	16-20[4]	58	118,48	25,54					
	21-25[5]	78	124,67	22,33					
	26-30[6]	76	122,11	24,53	Toplam	379			
	30+[7]	46	119,70	24,84					

*p<.05

Tablo 8'e göre ilkokul programlarının EPDÖ'nün alt boyutları veya toplamında elde ettikleri puanlar katılımcıların kıdem yılı değişkenine göre incelendiğinde, hedef, içerik, ölçme ve değerlendirme alt boyutlarında anlamlı farklılık belirlenmiştir (p<.05). Anlamlı farklılığın hedef alt boyutunda 1-5 yıllık kıdeme sahip katılımcılar ile 6-10 yıl, 16-20 yıl ve 30 yıl ve üzeri kıdeme sahip katılımcılar arasında (1>2, 1>4, 1>7), 11-15 yıllık kıdeme sahip katılımcılar ile 6-10 yıl, 16-20 yıl, 26-30 yıl ve 30 yıl ve üzeri kıdeme sahip katılımcılar arasında (3>2, 3>4, 3>6, 3>7), 21-25 yıllık kıdeme sahip katılımcılar ile 11-15 yıllık kıdeme sahip katılımcılar arasında (5>2) olduğu belirlenmiştir. İçerik alt boyutunda 1-5 yıllık kıdeme sahip katılımcılar ile 16-20 yıllık kıdeme sahip katılımcılar arasında (1>4), 11-15 yıllık kıdeme sahip katılımcılar ile 6-10 yıl, 16-20 yıl ,26-30 yıl ve 30 yıl ve üzeri kıdeme sahip olan katılımcılar arasında (3>2, 3>4, 3>6, 3>7) ve 21-25 yıllık kıdeme sahip katılımcılar ile 16-20 yıllık kıdeme sahip katılımcılar arasında (5>4) olduğu tespit edilmiştir. Ölçme değerlendirme alt boyutunda ise anlamlı farklılığın 1-5 yıllık kıdeme sahip katılımcılar ile 6-10 yıllık kıdeme sahip katılımcılar arasında (1>2), 11-15 yıllık kıdeme sahip katılımcılar ile 1-5 yıl, 6-10 yıl ve 21-25 yıllık kıdeme sahip katılımcılar arasında (3>1, 3>2, 3>5), 16-20 yıllık kıdeme sahip katılımcılar ile 6-10 yıllık katılımcılar arasında (4>2), 21-25 yıllık kıdeme sahip katılımcılar ile 6-10 yıllık kıdeme sahip katılımcılar arasında (5>2), 26-30 yıllık kıdeme sahip katılımcılar ile 6-10 yıllık kıdeme sahip katılımcılar arasında (6>2), 30 yıl ve üzeri yıllık kıdeme sahip katılımcılar ile 6-10 yıllık kıdeme sahip katılımcılar arasında (7>2) anlamlı farklılık tespit edilmiştir. EPDÖ'nün öğrenme-öğretme süreci alt boyutu ve ölçeğin toplam puanları arasında kıdem değişkenine göre anlamlı farklılığa rastlanılmamıştır.

Katılımcıların mezun oldukları fakülte değişkenine göre EPOÖ'den elde ettikleri puanlara yönelik analiz sonuçlarına Tablo 9'da yer verilmektedir.

Tablo 9. EPOÖ Fakülte Değişkeni ANOVA Testi Bulguları

	Mezun Olunan Fakülte	n	x̄	sd	Varyans kaynağı	df	F	*p*	Anlamlı Farklılık
Okuma	Eğitim[1]	304	61.19	9.28	Gruplar arası	2	5.572	**.004***	**1>2, 3>1, 3>2**
	Fen-Edebiyat[2]	32	57.25	11.59	Gruplar içi	377			
	Diğer Fakülteler[3]	44	64.50	8.07	Toplam	379			
Yazma	Eğitim[1]	304	57.14	9.02	Gruplar arası	2	2.405	.092	-
	Fen-Edebiyat[2]	32	55.06	9.65	Gruplar içi	377			
	Diğer Fakülteler[3]	44	59.59	9.19	Toplam	379			
EPOÖ Toplam	Eğitim[1]	304	118.34	17.45	Gruplar arası	2	4.281	**.015***	**3>1, 3>2**
	Fen-Edebiyat[2]	32	112.31	18.36	Gruplar içi	377			
	Diğer Fakülteler[3]	44	124.09	16.80	Toplam	379			

*p<.05

Tablo 9'a göre katılımcıların EPOÖ'nün alt boyutları veya toplamında elde ettikleri puanlar fakülte değişkenine göre incelendiğinde, okuma alt boyutu ve ölçeğin toplamından elde edilen puanlarında anlamlı farklılık belirlenmiştir (p<.05). Anlamlı farklılığın okuma alt boyutunda eğitim fakültesi mezunları ile fen-edebiyat fakültesi mezunları arasında (1>2) ve diğer fakülte mezunları ile eğitim fakültesi mezunları ve fen-edebiyat fakültesi arasında olduğu belirlenmiştir (3>1, 3>2). Toplam puanlar için anlamlı farklılığın diğer fakülte mezunları ile eğitim fakültesi ve fen-edebiyat fakültesi mezunları arasında olduğu tespit edilmiştir. Ölçeğin yazma alt boyutunda ise anlamlı farklılık tespit edilmemiştir.

İlkokul programlarının EPDÖ'nün alt boyutları ve toplamında katılımcıların fakülte yılı değişkenine göre aldığı puanlara Tablo 10'da yer verilmektedir.

Tablo 10. EPDÖ Fakülte Değişkeni ANOVA Testi Bulguları

	Mezun Olunan Fakülte	n	x̄	sd	Varyans kaynağı	df	F	*p*	Anlamlı Farklılık
Hedef	Eğitim[1]	304	36.07	6.28	Gruplar arası	2	5.704	**.001***	**1>2, 3>2**
	Fen-Edebiyat[2]	32	31.69	6.74	Gruplar içi	377			
	Diğer Fakülteler[3]	44	34.82	8.42	Toplam	379			
İçerik	Eğitim[1]	304	36.21	6.77	Gruplar arası	2	4.633	**.010***	**1>2, 3>2**
	Fen-Edebiyat[2]	32	32.38	5.60	Gruplar içi	377			
	Diğer Fakülteler[3]	44	35.50	7.83	Toplam	379			
ÖÖS	Eğitim[1]	304	3432	7.60	Gruplar arası	2	1.806	.166	-
	Fen-Edebiyat[2]	32	31.63	6.59	Gruplar içi	377			
	Diğer Fakülteler[3]	44	33.95	8.49	Toplam	379			
ÖD	Eğitim[1]	304	16.89	3.95	Gruplar arası	2	3.890	**.021***	**1>2, 3>2**
	Fen-Edebiyat[2]	32	14.94	3.26	Gruplar içi	377			
	Diğer Fakülteler[3]	44	17.18	4.18	Toplam	379			
EPDÖ Toplam	Eğitim[1]	304	124.06	22.80	Gruplar arası	2	4.757	**.009***	**1>2, 3>2**
	Fen-Edebiyat[2]	32	110.75	21.21	Gruplar içi	377			
	Diğer Fakülteler[3]	44	122.00	27.56	Toplam	379			

*p<.05

Tablo 10'a göre ilkokul programlarının EPDÖ'nün alt boyutları veya toplamında aldığı puanlar katılımcıların fakülte değişkenine göre incelendiğinde, hedef, içerik, ölçme değerlendirme alt boyutu ve ölçeğin toplamından anlamlı farklılık belirlenmiştir (p<.05). Anlamlı farklılığın hedef, içerik, ölçme değerlendirme alt boyutlarında ve ölçeğin toplam puanlarında eğitim fakültesi mezunları ile fen-edebiyat fakültesi mezunları arasında ve diğer fakülte mezunları ile fen-edebiyat fakültesi mezunları arasında olduğu belirlenmiştir (1>2, 3>2). Ölçeğin öğretme öğrenme süreci alt boyutunda ise anlamlı farklılık tespit edilmemiştir.

Araştırmada kullanılan ölçeklerin alt boyutları ve birbirleriyle olan korelasyonlarına ilişkin yapılan analiz bulgularına Tablo 11'de yer verilmektedir.

Tablo 11. EPOÖ ve EPDÖ Ölçeklerine İlişkin Pearson Korelasyon Bulguları

	1	2	3	4	5	6	7	8
[1]EPOÖ Top.	1.00	**.948****	**.944****	.406**	.382**	.415**	.342**	.357**
[2]Okuma		1.00	**.791****	.424**	.398**	.427**	.360**	.371**
[3]Yazma			1.00	.343**	.323*	.358**	.286**	.303*
[4]EPDÖ Top.				1.00	**.944****	**.954****	**.937****	**.907****
[5]Hedef					1.00	**.872****	**.826****	**.825****
[6]İçerik						1.00	**.855****	**.811****
[7]ÖÖS							1.00	**.843****
[8]ÖD								1.00

Tablo 11 incelendiğinde; öncelikle katılımcıların EPDÖ'nün amaç boyutundaki becerilerinin EPOÖ'den ne ölçüde etkilendiğini değerlendirmek için kurulan regresyon modeli istatistiksel olarak anlamlıdır ($F=64.409$; $p<0.05$). Öğretmenlerin EPOÖ düzeyleri arttıkça, EPDÖ'nün amaç boyutundaki becerileri de artmaktadır ($\beta=0.145$; $t=8.026$; $p<0.05$). Katılımcıların program okuryazarlığı, EPDÖ'nün amaç alt boyutundaki değerlendirme becerilerinin yaklaşık %15'ini açıklamaktadır.

İkinci olarak, katılımcıların EPDÖ'nün içerik boyutundaki becerilerinin EPOÖ'den ne ölçüde etkilendiğini inceleyen regresyon modeli de anlamlıdır ($F=78.706$; $p<0.05$). Öğretmenlerin EPOÖ düzeyleri arttıkça, EPDÖ'nün içerik boyutundaki becerileri olumlu yönde etkilenmektedir ($\beta=0.162$; $t=8.872$; $p<0.05$). Katılımcıların program okuryazarlığı, EPDÖ'nün içerik alt boyutundaki değerlendirme becerilerinin yaklaşık %17'sini açıklamaktadır.

Üçüncüsü, öğretmenlerin EPDÖ'nün öğretim-öğrenme süreci boyutundaki becerilerinin EPOÖ tarafından önemli ölçüde etkilendiği regresyon modelidir ($F=50.158$; $p<0.05$). Öğretmenlerin EPOÖ puanları arttıkça, EPDÖ'nün öğretim-öğrenme süreci boyutundaki becerileri de olumlu yönde etkilenmektedir ($\beta=0.149$; $t=1.082$; $p<0.05$). Ancak, katılımcıların program okuryazarlığı, EPDÖ'nün öğretim-öğrenme süreci alt boyutundaki değerlendirme becerilerinin yaklaşık %12'sini öngörmektedir.

Son olarak, kurulan modele göre, katılımcıların EPDÖ'nün değerlendirme boyutundaki becerilerinin EPOÖ tarafından etkilenme düzeyi istatistiksel olarak anlamlıdır ($F=55.214$; $p<0.05$). Katılımcıların EPOÖ puanları arttıkça EPDÖ'nün değerlendirme boyutundaki becerileri olumlu yönde etkilenmektedir ($\beta=0,080$; $t=7,431$; $p<0,05$). Katılımcıların program okuryazarlığı EPDÖ'nün değerlendirme alt boyutundaki becerilerinin yaklaşık %13'ünü açıklamaktadır.

Sonuçlar, Tartışma ve Öneriler

Bu çalışmanın amacı, sınıf öğretmenlerinin program okuryazarlığının program değerlendirme düzeylerini nasıl yordadığını belirlemektir. Ayrıca, sınıf öğretmenlerinin cinsiyet, yaş, kıdem yılı ve mezun oldukları fakülte türü gibi değişkenlere göre ilgili ölçeklerde aldıkları puanları incelemektedir. Araştırma verilerinin analizinden elde edilen bulgular bu bölümde tartışılmakta ve literatürdeki diğer çalışmalarla birlikte değerlendirilmektedir. Elde edilen sonuçlar çerçevesinde gelecekteki araştırmacılara, sınıf öğretmenlerine, öğretmen adaylarına, sınıf öğretmenliği bölümlerinde eğitim veren akademisyenlere ve eğitim politikası yapıcılarına önerilerde bulunulmaktadır.

Araştırma kapsamında sınıf öğretmenlerinin program okuryazarlık düzeylerinin yüksek kabul edilen değer aralığında ($81,72 > 70$) olduğu görülmektedir (Şimşek ve Yıldırım, 2013). Bu bulgu literatür tarafından da desteklenmektedir (Çetinkaya ve Tabak, 2019; Erdem ve Eğmir, 2018; Esen-Aygün, 2019; Gündoğan, Şan ve Uyar, 2023; Karakuyu, 2023). Ancak Süer ve Demirkol'un (2023) nitel araştırma bulguları, sınıf öğretmenlerine programda yer alan eğitim felsefesi, amaçları, değerleri ve yeterlikleri konusunda daha fazla desteğe ihtiyaç duyulduğunu göstermektedir. Araştırmaya katılanlara uygulanan Eğitim Programları Değerlendirme Ölçeği sonuçlarına göre, ilkokul programları tatmin edici düzeydedir ($70,11 > 70$). Literatürde sınıf öğretmenlerinin programa ilişkin değerlendirmelerini ölçen eşdeğer sonuçlar bulunmaktadır (Bal vd., 2021). Eğitimin programlar aracılığıyla şekillendirilmesine atfedilen önem göz önüne alındığında, bu araştırma oldukça önemli görülmektedir. Ayrıca, bu araştırmada kullanılan iki ölçeğin güvenilirlik değerleri yüksektir (Tablo 3). Bu bulgu, araştırmanın doğru yorumlama için ön koşulu karşıladığını göstermektedir (Creswell, 2013).

Katılımcıların program okuryazarlığı ölçeğinden aldıkları puanlar arasında cinsiyet değişkenine göre anlamlı bir fark bulunmamıştır. Çalışmada elde edilen bu sonuçlar literatürdeki sonuçlarla karşılaştırıldığında Aslan (2019) ve Erdamar ve Akpunar (2020) tarafından yapılan çalışmalarla tutarlı olduğu görülmektedir. Öte yandan Esen-Aygün (2019), Süğümlü (2022) ve Gündoğan, Şan ve Uyar (2023) tarafından yapılan çalışmalarda ölçeğin tüm alt boyutlarında anlamlı fark bulunmuştur. Erdem ve Eğmir (2018) tarafından yapılan çalışmada

yalnızca yazma alt boyutunda anlamlı fark olduğu belirlenmiştir. Yapılan çalışmalarda farklı sonuçların elde edilmesindeki sebebin örneklem farklılığından kaynaklı olduğu düşünülmektedir. Bu çalışmada katılımcıların program değerlendirme ölçeğinin öğretme-öğrenme süreci ve ölçme-değerlendirme alt boyutlarında erkek katılımcılar lehine anlamlı fark belirlenmiştir. Alak ve Nalçacı (2012) tarafından yapılan çalışmada cinsiyetin anlamlı bir fark yaratmadığı sonucuna ulaşılmıştır. Özenç ve Çakar (2015) tarafından yapılan çalışmada ölçeğin ölçme-değerlendirme alt boyutunda kadın katılımcılar lehine anlamlı bir fark olduğu sonucuna ulaşılmıştır. Bu sonucun fakültelerde program değerlendirmeye ilişkin derslerin çok fazla olmamasının etkili olduğu düşünülmektedir. Eğitim fakültelerinin birçoğunda program değerlendirmeye ilişkin dersler bulunmamaktadır. Bu ders sadece bazı programlarda lisansüstü derslerde yer almaktadır. Bu durum öğretmenlerin sorumlu oldukları programa yönelik değerlendirme yapma yeterliliklerini olumsuz yönde etkilemektedir.

Araştırmaya katılan öğretmenlerin program okuryazarlıklarının yaş değişkenine göre ölçeğin toplam puanında ve yazma alt boyutunda anlamlı bir farklılık gösterdiği belirlenmiştir. 46-50 yaş aralığındaki katılımcıların ölçeğin yazma alt boyutunda 20-30, 36-40 ve 51 ve üzeri yaş aralığındaki katılımcılardan daha yüksek puan aldığı görülmüştür. Ölçeğin toplam puanı açısından bakıldığında ise 36-40 ve 51 ve üzeri yaş aralığındaki katılımcıların daha yüksek puan aldığı belirlenmiştir. Araştırmanın bu bulgularının literatür tarafından desteklenmediği görülmektedir. Erdem ve Eğmir (2018) ile Gündoğan vd. (2023) tarafından yapılan çalışmalarda anlamlı bir farklılık saptanmamıştır. Yapılan literatür taramasında program değerlendirme araştırmaları kapsamında yaş değişkenini inceleyen çalışmalara rastlanmamıştır. Sınıf öğretmenlerinin program okuryazarlıklarının kıdem yıllarına göre ölçeğin toplam puanında ve okuma alt boyutunda farklılaştığı sonucuna ulaşılmıştır. Kıdemi 1-5, 16-20, 26-30 yıl olan öğretmenlerin program okuryazarlığı puan ortalamalarının düşük olduğu, kıdemi 11-15 ve 21-25 yıl olan öğretmenlerin ise yüksek olduğu belirlenmiştir. Literatürde farklı sonuçlar ortaya koyan çalışmalar da mevcuttur. Süğümlü (2022) tarafından Türkçe öğretmenlerinin mesleki deneyimi ve program okuryazarlığı becerilerini belirleme amacıyla yaptığı çalışmada anlamlı bir fark bulunamamıştır. Benzer sonuca Sağ ve Sezer (2012) tarafından da ulaşılmıştır, aynı çalışmada dikkat çeken bir diğer bulgu ise sınıf öğretmenlerinin program okuryazarlık düzeylerinin kıdem yılı arttıkça azalmasıdır. Burada deneyim ile program okuryazarlığı arasında negatif bir ilişki olduğu yorumu yapılmıştır. Bu bulgudan hareketle mevcut programların içeriklerinin yeni mezun öğretmenler tarafından daha kolay anlaşılabildiği, ancak daha erken mezun öğretmenler tarafından anlaşılamadığı yorumu yapılabilir.

İlköğretim programlarına katılan öğretmenlerin kıdem değişkenine göre eğitim programı değerlendirme ölçeğinden aldıkları puanlarda, ölçeğin hedef alt boyutunda gruplar arasında fark bulunmuştur. Kıdem grupları arasındaki farkın 1-5 ve 11-15 yıl kıdeme sahip katılımcılar lehine olduğu görülmüştür. İçerik ve ölçme-değerlendirme alt boyutlarında da durum değişmemiş ancak her üç alt boyutta da puanlar 6-10 yıl kıdeme sahip öğretmenlerin aleyhinedir. Bu çalışmada öğretme-öğrenme süreci ile ölçekteki toplam puanlar arasında anlamlı bir fark bulunmazken Bal vd. (2021), Bulut (2008) ve Süğümlü (2022) tarafından yapılan önceki araştırmalarda öğretmenlerin deneyim düzeyleri ile çıktıları arasında pozitif bir ilişki olduğu belirtilmiştir. Ancak, Alak ve Nalçacı (2012) ve Orbeyi ve Güven (2008) tarafından yapılan diğer araştırmalarda deneyim yılına göre anlamlı bir fark bulunamamıştır.

Sınıf öğretmenlerinin okuryazarlık ölçeğinden aldıkları puanlar mezun olunan fakülteye göre değerlendirildiğinde; fen-edebiyat fakültesi mezunları ile eğitim fakültesi mezunları arasında anlamlı fark bulunmuştur. Özellikle, eğitim fakültesinden mezun olanlar ölçeğin okuma alt boyutunda daha yüksek puan almışlardır. Ölçeğin yazma alt boyutunda anlamlı bir fark bulunamamıştır. Bu bulgulara göre katılımcıların mezun oldukları üniversitelerin program okuryazarlıklarını etkilediği sonucuna varılmıştır. Esen-Aygün (2019) yaptığı çalışmada, eğitim fakültesi mezunlarının ölçeğin toplamında ve alt boyutlarında karşılaştırılan tüm fakülte mezunlarından daha yüksek puan aldığını belirlemiştir. Benzer bulgu Erdem ve Eğmir (2018) tarafından da yapılan çalışmada elde edilmiştir. Burada genel olarak beklenen sonuç eğitim fakültesi mezunlarının daha yüksek puan alması olmakla birlikte, bu çalışma literatürdeki diğer çalışmalarla çelişmektedir. Bu çalışmada il merkezinde görev yapan sınıf öğretmenlerinin üçte birinden fazlasına ulaşılmıştır. Bu durum gerçekten önemli bir grupla çalışıldığını ortaya koymaktadır. Farklılığın nedeninin çalışmalarda ulaşılan örneklemin üniversite öğrencilerinden oluşması olduğu düşünülmektedir. Katılımcıların eğitim programlarını değerlendirme düzeylerinin mezun olunan fakülte değişkenine göre anlamlı farklılık gösterdiği belirlenmiştir. Eğitim fakültesinden mezun olan öğretmenlerin puanlarının, fen-edebiyat fakültesinden mezun olan öğretmenlere göre ve eğitim grubu diğer gruplarla karşılaştırıldığında anlamlı düzeyde yüksek olduğu belirlenmiştir. Bu bulgu, konu ile ilgili mevcut literatürle tutarsız görünmektedir. Bal vd. (2021), Orbeyi ve Güven (2008) çalışmalarında mezun olunan fakülte türüne göre bir fark bulamamışlardır. Bu çalışma diğer çalışmalarla birlikte değerlendirildiğinde eğitim fakültelerinde sınıf öğretmenlerine verilen program okuryazarlığı ve program değerlendirme konusundaki derslerin yetersizliğinin etkili olduğu yorumu yapılabilir. İlgili konuda eğitim almayan öğretmen adaylarının bilgi ve uygulama becerileri genel olarak farklı alanlardan atanan diğer öğretmenlerle benzerlik göstermektedir. Bu konuda yapılan bir çalışmada okullarda bu yeterliliklerin benzer düzeyde kazanıldığı veya kazanılmadığı düşünülmektedir.

Araştırma sonucunda katılımcıların program okuryazarlığının program değerlendirme ölçeğinin tüm alt boyutlarını pozitif yönde yordadığı görülmektedir. Bu sonuca göre öğretmenlerin program okuryazarlığı düzeyleri arttıkça program değerlendirmenin tüm alt boyutlarındaki beceri düzeylerinin paralel olarak arttığı söylenebilir. Literatürde program okuryazarlığı ile program değerlendirmesi arasındaki ilişkiyi inceleyen bir çalışmaya rastlanmamıştır. Ancak çalışmalarda program okuryazarlığının program geliştirme ve değerlendirmesine ışık tutacağı belirtilmektedir (Akınoğlu ve Doğan, 2012). Aynı zamanda program okuryazarlığı programların değerlendirilmesi için ön koşul olarak kabul edilmektedir. Küçüktepe ve Kerimoğlu (2021) düşük program okuryazarlığına sahip öğretmenlerin programı doğru değerlendiremeyeceğini belirterek araştırmamızın sonucunu desteklemektedir.

Sonuçlar

Bu çalışmanın sonuçları genel olarak değerlendirildiğinde, sınıf öğretmenlerinin program okuryazarlığının yüksek düzeyde olduğu ve bu bağlamda ilkokul programını ortalamanın üzerinde olarak ifade ettikleri görülmektedir. Çalışmanın en dikkat çekici sonuçlarından biri yaş ve kıdem değişkenleri açısından bulunan farklılıklardır. Belirli bir sırayla artış veya azalış bulunmamıştır. Bir diğer önemli bulgu ise sınıf öğretmenlerinin program okuryazarlığı arttıkça program hakkındaki düşüncelerini olumlu yönde yordadığı tespit edilmiştir. Program okuryazarlık düzeyi yüksek olan öğretmenlerin derslerde işledikleri programı daha gerçekçi değerlendirdikleri düşünülebilir.

Öneriler

Sonuçlara dayanarak aşağıdaki maddeleri önerebiliriz:

- Sınıf öğretmenlerinin program okuryazarlığı becerilerinin yüksek düzeyde olduğu belirlenmiştir. Ancak bu sonuçlar öğretmenlerin kendilerini yeterli olarak algıladıkları şeklinde de yorumlanabilir. Bu sonucun gerçeği yansıtması için program okuryazarlığı konusunda uygulamalı etkinliklerle farklı bir çalışma yapılması önerilmektedir.

- Program okuryazarlığı ve bir programı pratikte değerlendirebilme yeteneği bir öğretmenin sahip olması gereken önemli yeterliliklerdir. Eğitim fakültesi mezunlarının burada avantajlı bir konumda olması beklenirken farklı sonuçlarla karşılaşılmıştır. Bu nedenle eğitim fakültelerinde bu yeterlilik alanlarıyla ilgili derslerin içerikleri kontrol edilmelidir. Bu derslerin çoğu fakültede verilmediği düşünüldüğünde bunun çok önemli bir eksiklik olduğu söylenebilir. Bunun sonuçlarının doğru bir şekilde incelenmesi ve eğitim fakültelerinin programlarının güncellenmesi önerilmektedir.

- Öğretmenlerin program becerileri yaşa ve deneyim yıllarına göre değişmektedir. Bu nedenle sınıf öğretmenleri arasında akran eğitimini önerebiliriz. Seferoğlu (2001), akran eğitiminin öğretmenlik meslek grubu içinde dayanışmayı ve gelişimi artırdığını belirtmektedir. Bu nedenle, akran eğitiminin program okuryazarlığını ve değerlendirme becerilerini geliştirmesi beklenmektedir.

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