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Education Abstract (H. W. Wilson)  
Education Full Text (H.W. Wilson)  
Turkish Education Index (TEI)  
EBSCO host Educational Sources  
ERA Routledge  
The Asian Education Index  
Cite Factor  
Index Copernicus

INDEX

1. A Critical Examination of Turkish EFL Pre-service Teachers' Attitudes to Accent and Identity  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.001>  
Zeynep Gülşah Kani ..... 1137-1154
2. Developing a Scale of Motivation for Online English Language Education  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.002>  
Ömer Faruk İpek - Hakan Tahiri Mutlu ..... 1155-1166
3. Social, Political and Scientific Backgrounds of Learning Theories: An Extended Contrapuntal Lens into Learners' Conceptualizations  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.003>  
Büşra Tombak İlhan - Sertel Altun ..... 1167-1183
4. An Examination of Adaptation Processes of Refugee Children to Preschool in Turkey  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.004>  
Serhat Gündoğdu - Seçil Yıldız ..... 1184-1198
5. The Role of Parental Academic Pressure in Adolescent-Parent Conflict: An Investigation by Gender  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.005>  
Mustafa Pamuk ..... 1199-1209
6. The Relationship Between Attitudes Towards Social Sciences Course and Democratic Attitudes  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.006>  
Bahar Tiryaki - Seda Kerimgil Çelik ..... 1210-1222
7. Views of Science Teachers on the Use of Artificial Intelligence in Education  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.007>  
Erol Asiltürk - Gülen Önal Karakoyun ..... 1223-1234
8. The Relationship Between Empowering Leadership, Self-Efficacy and Organizational Resilience  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.008>  
Ahmet Alper Karagözoğlu - Mukadder Boydak Ozan ..... 1235-1254
9. What Factors Affect Turkish Pre-service Elementary School Teachers Gifted Referral Decisions?  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.009>  
Ömer Erdimez - Francesca Lopez ..... 1255-1278
10. Development of Accountability Behavior Scale for School Administrators: A Validity and Reliability Study  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.010>  
Mustafa Orhan - Tuncay Yavuz Özdemir ..... 1279-1294

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11. SEL in the Deveopmental Context: The Youth Assets as Promoting Factors for the Social-Emotional Learning  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.011>  
Ömer Faruk Kabakçı ..... 1295-1308
12. Examining The Relationship Between Teachers' Emotion Regulation Skills and Classroom Management Competencies  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.012>  
Cüneyt Belenkuyu - Sait Taş ..... 1309-1323
13. Views of Lecturers Working at Vocational School on Distance Education Applications during the Covid-19 Pandemic  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.013>  
Mehmet Nuri Gömleksiz - Emine Kübra Pullu - Sinem Baylaş ..... 1324-1339
14. Exploring the Curriculum Literacy Level of English Language Teachers  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.014>  
Hatice Yıldız - Sema Özdoğan Biçer ..... 1340-1360
15. The Effect of Psychoeducation Programs on Test Anxiety of Secondary Education Students in the Distance Education Process  
(Research Article)  
Doi Number: <https://doi.org/10.15345/iojes.2022.05.015>  
Meltem Türker - Ferhat Bahçeci ..... 1361-1377


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# A Critical Examination of Turkish EFL Pre-service Teachers' Attitudes to Accent and Identity

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 03.01.2022</p> <p>Available online: 09.12.2022</p>	<p>With the escalating importance given to the varieties of English in the world, discussions related to the theory and pedagogy of this research area have also received rigorous attention. With the aim of contributing to this area, this study critically examines the culturist and native-speakerist discourses within 90 Turkish pre-service EFL teachers' accounts of accent and identity. Data collection methods were a questionnaire with both closed-ended and open-ended items and focus group discussions. Findings obtained via the content analysis revealed that most of the pre-service teachers were under the influence of attaining an imagined 'native' self and accent for speaking, while the pre-service teachers who felt the need to retain their own identity and accent comprised about one-fourth of them. Nevertheless, in terms of listening to people speak, their preference for a particular 'native-like' accent was not heavily emphasised, and they prioritised intelligibility and the idea of 'language for communication' over it, while some of them approved of correcting non-mother tongue accents or of tolerating such accents despite not liking them. Lastly, except for one-third of them, they felt the need to make language teachers and students familiar with the varieties of English. Implications and suggestions related to incorporating a non-essentialist and interculturally responsive pedagogy into teacher training and language education programmes are highlighted in line with the discussion of the results and the related literature.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> accent, identity, language teacher education, native speakerism, varieties of English</p>

## Introduction

With the increasing number of English language speakers from bi- or multi-linguacultural backgrounds across geographical boundaries, the use(s) of English language and its role and status in today's world have become a growing area of interest over the last decade (e.g., Jenkins 2007; Jenkins, Cogo, and Dewey 2011;

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Seidlhofer 2011; Kumaravadivelu, 2012; Canagarajah, 2013; Ahn and Kang, 2017; Ambele and Boonsuk, 2020). Within a wide range of research on the use and spread of English often discussed under different paradigms such as “World Englishes”, “English as a Lingua Franca”, and “English as an International Language” (Chan, 2014; Kim 2021; Matsuda, 2012; Wang, 2015), one area of research interests features as accent preferences, attitudes, and identities (e.g., Jenkins 2007; Sung 2013; Walker 2010). Nevertheless, there is a paucity of research on the bi-/multilingual English users’ views of the relationship between accent and identity in various contexts. Hence, the present study investigates how both users of English and pre-service language teachers in the Turkish English-as-a-foreign-language (EFL) context perceive accent, identity, and intelligibility.

Accent is viewed as an immediately tangible element of one’s identity, (Jenkins, 2000; Lippi-Green, 1997; Smit and Dalton, 2000; Sung, 2016a), i.e., an understanding of one’s self-image and position in relation to the world across time and space (Edwards, 2009; Norton, 1997). Keeping a particular accent deliberately is associated with retaining self-respect or seeking the approval of other people (Dalton and Seidlhofer, 1994) as well as with expressing independence and group solidarity (Baratta 2016; Trofimovich and Turuseva, 2015). Accentedness is not inevitably related to intelligibility and comprehensibility but more concerned with attitudes, stereotypes, and beliefs of a listener (Derwing and Munro 1997; Munro and Derwing, 1995; Krautt and Wulff, 2013; Lindemann and Subtirelu, 2013).

The terms native speaker and non-native speaker were considerably problematised after the 1990s, prior to which mainstream linguistic theories traditionally regarded native speakers as the only reliable source of linguistic data (Chomsky, 1965). To recap, the native speaker concept, defined as “one who can lay claim to being a speaker of a language by virtue of place or country of birth or adoption” (Davies, 2006: 144), reflects both myth and reality. In addition to including “naïve naturalness (not being able to help who you are)”, it is more importantly related to groups and identity changeable according to one’s choice (Davies, 2006: 145). Despite its pride of place given by some linguists as “the only true and reliable source of language data” (Ferguson, as cited in *ibid.*), it must be taken with a very large pinch of salt as it provides its own circular definition of itself like (Davies, 2006: 145): “the healthy person in medicine or indeed any state of assumed perfection where the only definition seems to be negative, a lack of malfunction: thus the native speaker would be someone who is not a learner (etc) rather than someone who is something positive”. Therefore, as Davies (*ibid.*) suggests, native-speaker-like behaviours and criteria in the preparation and investigation of learners could be redefined according to one’s choice to be a part of a particular speaker community. Terms regarding one’s identification with a language such as “proficient user” (Paikeday, 1985), “expert speaker” (Rampton, 1990) or “multicompetent and L2 user” (Cook, 1999) have been suggested to recognise a positive image of individuals as speakers of more than one language, instead of labelling them as failed native speakers (For further discussion, see Braine, 1999; Canagarajah, 1999; Davies, 1991, 2003; Faez, 2011; Inbar-Lourie, 2005; Liu, 1999; Medgyes, 1992, 1994; Moussu & Llurda, 2008; Phillipson, 1992; Selvi, 2011; Shakouri & Shakouri, 2014). Alongside the problematisation of the dichotomy of “native” and “non-native” speakers that reveals language ideologies and unequal power relations between first-language (L1) and second-language (L2) users of English, there has been a call for using more inclusive terms as as cited above together with the prioritisation of intelligibility over native-like pronunciation and for acknowledging the right to express their L1 identity through their L1 accent (Cook, 1999; Jenkins, 2000; Kirkpatrick, 2007; Walker, 2010; Jenkins, Cogo, and Dewey, 2011; Si, 2019; Sung, 2013; 2014). From a critical intercultural communication perspective, Holliday (2005; 2008) also draws a detailed account of how non-native speakers are categorised as the “Other” by the dominant group of native speakers, which could be traced back to the oversimplified examples of “culturism”, and more particularly “native-speakerism”, which evokes a stereotypical myth by which the “other” (i.e., the non-native speaker) is considered as “uncritical, static, rigid, with a fixed view of knowledge, intellectually independent, wishing to preserve knowledge, good at memorising, in need of being trained, treated sensitively, understood, involved, given ownership, empowered, finding decision-making difficult, and preferring frontal teaching as



she is exam-oriented" (Holliday, 2005: 21). Hence, the attempts to recognise sociolinguistic rights of L2 users as much as these of L1 speakers have paved the way for examining identity issues of English users in the contexts of intercultural communication (Baker 2011; Virkkula and Nikula 2010). Studies comparatively examining L2 speaker attitudes towards various accents of English and native accents revealed contradictory and mixed findings. Yet, not much is known about the relationship between accent preferences and identities of L2 users of English as the following section about related studies displays.

### **Previous Research on Accent and Identity**

The pioneering studies on accent and identity in relation to English accent varieties were conducted by Jenkins (2007) and Li (2009). The former (Jenkins, 2007) was carried out with 17 EFL teachers from different sociolinguistic contexts regarding their attitudes towards accent preference and identity. There were contradictory results about their feeling of attachment to a particular community. Despite their adherence to their mother tongue as an important part of their identity, they were under the influence of the standard language ideology favouring "native speaker (NS)" accent in that they were willing to sound like a NS to give the impression that they are highly competent and successful in teaching English. The latter study was conducted in Hong Kong by Li (2009), who applied 107 questionnaires and one focus group discussion of 10 participants to understand the perceptions of bilingual speakers of Chinese and English about accent, identity and intelligibility issues. The results showed that 80 % of them were willing to sound like a NS and that the rest preferred to speak with a local accent. The participants were concerned about intelligibility and the maintenance of L1 identity while speaking L2 (English) at the same time.

In more recent studies in Asia-Pacific settings such as Hong Kong, Japan, South Korea, Malaysia (Chan, 2019; Huang and Hashim, 2021; Kim, 2021; Kong and Kang, 2020; Sung, 2014; 2016a; Tokumoto and Shibata, 2011; Tsang, 2020; Wang, 2015) and other international contexts (Carrie and McKenzie, 2018; McInerney, 2020; Nejari, Gerritsen, van Hout, and Planken, 2020; Rezaei, Khosravizadeh and Mottaghi (2019); Tajeddin, Atai, Pashmforoosh, 2020), similar investigations were done with regards to the accent preferences and desired identities of bilingual speakers. Tokumoto and Shibata (2011), who conducted a survey study on the attitudes of Japanese, South Korean and Malaysian university students towards their L1-accented English, revealed the varying degrees of acceptance of 'their' English: the Malaysian students found their accents highly valuable, while the Japanese and Korean groups showed a disapproval of their accents and a tendency towards native-like accents like American or British, with the Japanese having the largest proportion among the groups having negative attitudes. This result was supported by another study in Japan (Ishikawa, 2017), while Sasayama's (2013) study reflected changeable views of Japanese university students according to different aspects in that they showed an equally positive stance to both L1-accented English and American English and favoured L1 accent over the latter for a sense of solidarity and change of power relations. In a more recent study (Kong and Kang, 2020) on Korean secondary school students' views of the identities of proficient speakers and/or teachers of English in Malaysia, it was found that there was a connection between their investment in English and their own sociocultural identities which they saw as interrelated to their accents. Intelligibility, relatability, and comprehensibility were emphasised as the characteristics that "non-native English speaking" teachers had, and "native-English speaking" teachers were not among the ideal teachers or proficient speakers whose accents they wished to imitate.

In Nejari et al.'s (2020) study on German, Spanish and Singaporean speakers' reactions to Dutch-accented English, and standard (British and American) accents, understandability and communication among L2 speakers were highly valued rather than a particular L1 accent. In this sense, they did not attach importance to normative language targets but to successful communication among people embedded in a sociocultural community. In the Persian-speaking context, Tajeddin et al. (2020) found that there was a mismatch between 210 teachers' recognition of varieties of English and their preference for native language norms in classroom

instruction. Moreover, the results of the studies by Sadeghpour and Sharifian (2017) and Moradkhani and Asakereh (2018) were in accordance with the finding that teachers' beliefs were influenced by native speaker norms. Rezaei et al.'s (2019) study on the attitudes of 140 Iranian English language learners also reflected the prevalence of native speaker norms, among which American English and British English took the lead.

Sung (2014) explored the views of 28 undergraduate students in Hong Kong through in-depth semi-structured interviews and found that even if all of them preferred to keep their L1 identity, they opted for either a local accent (15 of them) or a NS accent (13 of them). The choice of a local accent was seen to result from pragmatic reasons such as the inescapability of one's L1 accent rather than from a conscious effort to express a particular identity, while the choice of a NS accent originated from negative connotations attributed to a local accent which was relegated to an inferior status and to a low level of proficiency compared with the NS accent. Even if it is claimed that the preference of the NS accent was not particularly associated with a desire to gain a NS identity but regarded as a sign of constructing "a unique local identity through English" (Li, 2009: 554), it is arguable since their personal pronunciation targets about a high level of English proficiency is directly related to the extent to which they appropriate to a native-like accent, reflecting a positive image or identity as such. Such a belief projects a native speaker fallacy, which is value-laden with a standard language ideology in which the privileged position is given to the NS accent/use of English. It could be also the case that they may have different reasons for their choice of an L2 accent and an L1 identity at the same time, and it is important to reveal whether they are aware of why they prefer what they prefer and whether these preferences consciously change during exchanges for intercultural communication, among their L2 users of English, and with L1 users. The current study aimed to explore these relations deeply through the analysis of participants' purposes of a particular accent at a particular time and space. Such an analysis requires an interdisciplinary perspective including individual (psycholinguistic and cognitive), socio-cultural and socio-political factors influenced by both micro and macro contexts.

Wang (2015) conducted a comprehensive survey research on the attitudes of 1589 Chinese university students and 193 English teachers towards China English. It turned out that a native speakerist ideology over the local variety of English is dominant in the Chinglish context. In another study by Sung (2016b) on L2 speakers' perceptions of accent and identity, there were highly complex results. In line with Jenkins' (2007) study, the local accent preference was related to their desire to retain their lingua-cultural identities over native speaker features. The NS accent preference was caused by their association of the image of a competent L2 speaker of English with a NS. Intelligibility was also among the pragmatic purposes of their preferences. Chan (2019) also conducted a study on bilingual learners of English and Chinese through focus group and individual interviews and showed that the participants held hierarchical attitudes towards English, influenced by the native speakerist ideology. Their choice of language learning targets were attributed to the following factors: "(1) the language's status and instrumental value, (2) the perceived attainability of the target, (3) practical communication needs and (4) the learner's cultural identity" (*ibid.*: 759). Similarly, Wong (2018) and Lai (2020) showed the tendency to prioritise the American and British models among teacher trainees in Hong Kong, unveiling the signs of linguistic neo-imperialism linked to the ideologies of the Centre and the Periphery.

In a large-scale survey research with 1300 secondary-level learners in Hong Kong (Tsang, 2020), the participants were only slightly favourable towards Received Pronunciation (RP) and General American (GA) as standard models presented by teachers, while being slightly against the view that teachers with non-RP/GA accents are inappropriate EFL teachers. They were neutral towards the integration of other L1 accents into listening instruction, albeit being slightly negative towards L2 accents, and their views resonated with their level of proficiency and experience of being exposed to various accents.

Huang and Hashim (2021) examined Chinese university students' views of varieties of English via interviews and diaries and pointed out that they had a conflicting and non-unitary process of identity



reconstruction in the face of changing English in China. Lately, Kim (2021) also investigated the accent attitudes of 107 multilingual postgraduate students of 34 nationalities at leading research universities in Japan through a survey and complementary interviews. She found that three quarters of the participants aspired to native-like pronunciation, while staying indifferent to others' accents and not relating their accents to L1 identity. Among the reasons for such a preference took place "pragmatic considerations such as better intelligibility", and "their context specificities, which entail frequent high-stakes ELF interaction and arrangements for professional entry in the imminent future" (*ibid.*: 1). She observed the prevalence of a linguistic hierarchy that still lingers on. This finding was also favoured in the finding of another language attitude study in France (McInerney, 2020), in which understandability and past experiences were regarded as relevant to their preferences.

In the Turkish context, studies on English users' perceptions about different English accents and its relation to their identity in the Turkish context is an underresearched area. One recent study conducted by Mısır and Gürbüz (2021) concerned Turkish EFL teachers' attitudes towards English accent varieties, their levels of recognition, and choices of English accents through a questionnaire and the verbal-guise technique. The participants expressed that they were mostly familiar with American English and the local accent and that L1 accent varieties were included in their language courses. This was also related to their attribution of a higher status to L1 accents than the others as "the teaching model", which proves that prescriptive language ideologies are also evident in the Turkish EFL context to a great extent. Likewise, Coşkun (2011) pointed out that the unquestioned acceptance of a "native" model is explicit in English language instruction in Turkey. Except for this instructional research design on accent attitudes in Turkey, to the best of my knowledge, there is not a research study with a focus on both attitudes and identities of English language users, or pre-/in-service teachers.

Owing to little research on the issues given above in the Turkish EFL context, the present study focusses on pre-service EFL teachers' current views of accent, intelligibility, and identity- whether they are aware of debates on intelligibility and varieties of English in the field and how they position themselves with regards to their roles as users and would-be teachers of English within the changing context of English usage around the world. With this aim, the following questions are investigated:

1. What are the pre-service EFL teachers' preferred accents in English-speaking contexts?
2. What are the pre-service EFL teachers' attitudes towards accent, intelligibility, and identity in terms of their own L2 performance?
3. What are the pre-service EFL teachers' attitudes to speakers of English as an L1 and L2 in terms of accent and intelligibility?
4. What are the pre-service EFL teachers' attitudes to the incorporation of varieties of English into the language instruction?

As most research studies in the literature lacked the distinctive features, conditions and settings of a particular "group of speakers" instead of drawing on elusive and broad categories such as native-non-native speakers and related assumptions (Moussu & Llurda, 2008), I heed to the call for going beyond the reductionists labels and to the necessity of the use of terms with caution in the literature, and find using bi-/multi-lingual or English as an additional language speakers as appropriate terms to use and aim at exploring their views of identity, intelligibility and accent in the Turkish EFL context from a more inclusive perspective. Furthermore, conducting the research, I adopted a non-essentialist view of culture accepting the distinctive characteristics of groups of people who can move through a complex multiplicity of small cultures which can flow, change, intermingle, cut across and through one another both within and across societies (Holliday et al., 2004: 4).

## **Methodology**

### **Research Design**

Research on the area of language attitudes to accent and identity are based on three approaches, namely “the societal treatment, direct measures, and indirect measures (McKenzie, 2010). The first one includes socially constructed materials such as language policy documents, job advertisements, newspapers, or ethnographic analysis based on observation and field notes. The direct approach as a more popular one in applied linguistics consists of eliciting language attitudes through direct questions about participants’ language choice and evaluation via surveys and/or interviews (Dörnyei, 2007). The indirect one includes participants’ evaluation of a set of speech samples together with a Likert-type scale about different factors such as status, attractiveness etc. through the matched-guise or verbal-guise technique (McKenzie, 2010). In this study, the direct approach was chosen as it is regarded as a feasible way of collecting a large sample size with less reliance on the researcher interpretation of participants’ attitudes based on “performance data” (Chan, 2016).

This study has a case study research design (Creswell and Plano Clarke, 2018; Guetterman and Fetters, 2018) including both quantitative and qualitative instruments as part of a larger project on intercultural communication; however, only the qualitative results will be within the scope of this study.

### **Study Group**

90 pre-service EFL teachers at a western state university in Turkey (female: 57; male: 33; aged from 19 to 26) participated in the study, based on convenience sampling. They had been learning English for 10 to 15 years. 23 % of the participants had acquired knowledge of varieties of English through a teacher training course at the ELT department. More than half of them had little or no experience of communicating with foreigners in English.

### **Data Collection and Analysis**

As data collection instruments, a questionnaire adapted from Li (2009: 112-113) and Jenkins (2003: 37) according to the Turkish EFL context and focus group interviews were used. For instance, there were items including “Chinese speakers of English” in the original questionnaire directed to participants from Hong Kong or mainland China. These descriptions were replaced with items comprising “Turkish speakers of English” whose accents were illustrated from those of proficient Turkish speakers of English such as news reporters in TRT World or from those of proficient EFL speakers in Turkey like ministers or central executive officers. The emphasis was on proficient speakers of English in Turkey due to the discussion bolstering the use of this inclusive term regarding the criteria for the procedures and the product related to English language learners in the literature. Moreover, more inclusive terms like first/second-language (L1- L2) speakers of English or mother-tongue speakers of English were used rather than the highly elusive terms “native” or “non-native” English speakers. Apart from the first part about personal information, there were three closed-ended items in the survey questionnaire with a follow-up question asking for reason for their choice or for brief explanation for their response. These closed-ended ones were followed by open-ended questions about their thoughts on accent, identity, intelligibility, and exposure to varieties of English. These questions will be unfolded in detail in the section of results.

Both closed-ended and open-ended items in the questionnaire displayed the attitudes of the pre-service teachers to specific accent types, while focus group interviews provided further explanation about the reasons for their choice of accents that they stated in the questionnaire and for their views of maintaining intelligibility and retaining L1 identity in English.

A focus group is “a carefully planned and moderated informal discussion where one person’s ideas bounce off another’s creating a chain reaction of informative dialogue” (Anderson and Arsenault, 1998: 200). Therefore, it allowed the pre-service teachers to follow the opinions of each other, (dis)agree and reflect on the issues of accentedness, comprehensibility, intelligibility and identity deeply, giving them the opportunity to exemplify from their previous experiences of communicating with L1 and L2 speakers in different contexts. Overall, both instruments complemented each other, yielding to a richer understanding of the researched issues.

The questionnaires were collected through an online platform, while focus group interviews were conducted at the convenience of the participants, audio-recorded, transcribed and subjected to latent content analysis (Dörnyei, 2007) including coding, recoding, interpreting, and determining themes and sub-themes that inform research aims (Ellis and Barkhuizen, 2005).

During the iterative and evolving process of data analysis, the emerging themes were categorised and re-organised according to similarities and differences among them through the constant comparison method (Merriam, 1998). Also, the researcher shared the analysis of the data from the discussions with the participants so that the meanings elicited could match what the participants intended to express, which contributed to the quality issues such as validity and reliability.

### **Ethical Considerations**

The researcher confirms that ethical approval was obtained from Çanakkale Onsekiz Mart University (Approval Date: 20/05/2021). The participants were involved in the study voluntarily, giving their consents, after being informed about the research objectives. The acronyms of “PST1, PST2...” for pre-service teachers were used throughout the paper for the purposes of anonymity and confidentiality. Ethical guidelines were followed such as getting the approval of the ethics board of the university, obtaining the participants’ approval, and informing them about the procedures of the study.

## **Results**

### **Preferred accents**

Question 1 in the questionnaire asked the participants to choose one of three categories of role model while speaking, which have been adapted from Li (2009: 86). They complemented the rest of the statement “If possible, I would like to speak like \_\_\_\_\_” as (1) Turkish speakers of English (as in TRT World or with the accent that proficient English speakers like Turkish ministers, ambassadors, or central executive officers); (2) first-language speakers of English (as in BBC or CNN); (3) other (please specify- a localised accent?). Of 90 participants, 70 of them (77,7 %) would like to speak English as first-language speakers of English; 13 of them (14,4 %) preferred Turkish proficient speakers of English, and 7 of them (7,7 %) chose other (e.g. Scottish, Irish, Slavic accents, ‘It’s me’ accent).

As for the main reasons behind their preference, many positive attributes associated with “nativeness” as a feature of first-language (FirstL) speakers of English were elicited from their accounts in the questionnaire and from the focus group discussions. Majority of the PSTs attributed several outstanding characteristics such as originality, genuineness, correctness, aesthetic value, kindness, modernity and effectiveness to the accent of certain English-speaking groups positioned as in the ‘inner circle’ (see Table 1).

Among the reasons for preferring a FirstL English accent, “speaking English very well or in the best possible way” got the highest score (24), and they wished to learn English as a foreign language as much proficiently as any other foreign language, associating it with a FirstL speaker of English.

**Table 1.** Reasons for preferring a FirstL speaker of English

Attributes of a FirstL speaker	No. of participants
the best way to speak / the best and the most basic / better than others	24
cool / cute / aesthetically appealing / a kind version / my dream / a challenge I set to myself	
mostly understandable / the clearest English / more understandable and native-like / the standard / the most common	19
correct / natural / more fluent / more accurate- <i>their</i> English / more appropriate / proper / more professional	12
perfect / real / more original / “greater” than others (British accent) / more modernised	11
	1 for each

Of those PSTs whose preferred English accent is a FirstL speaker accent, most of them stated that they preferred BBC and CNN respectively (77,7 %), as they associated speaking like American or British English speakers as in CNN or BBC with a higher level of proficiency and of self-confidence, as opposed to Turkish accented English (14,4 %), which was followed by the “It’s Me” accent (4,4 %), and Scottish, Irish and Slavic accents (3.3 %). However, the PSTs who preferred being a proficient Turkish speaker as in TRT World attributed their preference to not being pretentious, to not being ashamed of what makes them who they are and to considering clarity, fluency and understandability significant rather than a standardised accent.

This overall picture of the PSTs’ reasons for a FirstL accent like American English reflected subtle nuances in the explanations of the PSTs in the focus group interviews. For example, PST4 clarified her preference of American English as follows:

*I prefer the American accent while speaking because it is easier and closer to our national Turkish accent, which is very blunt and sharp. The American accent is a bit softer but sharp enough for us to integrate it with ours compared to British or Australian accents. Most of our teachers we grew up with either spoke American English or English in their Turkish accent because American TV shows are very popular. There are certain words I learned from the British features for example- I cannot pronounce them, so I change them mostly.*

For PST4, it was more about being familiar with the American accent throughout the language learning education and about finding similarities between Turkish accented English and American English. For PST 22, it was associated with being a mirror of the interlocutor in communication and with having a more sociable and talkative character when speaking English rather than his own tongue, Turkish:

*I speak more in American English than I do in Turkish. If I speak with a British accent here, people may make fun of me, but if I speak to my friends abroad, I could do their accents. When I imitate their accents and try to sound like them as much as possible then it becomes more fluent and comprehensible.*

The changing preference of accents in changing contexts has also brought the issue of personality into the fore in this regard. PST4 found this related to putting lots of conscious effort to sound like a speaker with a specific kind of accent and humorously claimed that: “When we are angry, I’m sure all of us will go on with the Turkish accent.”

The PSTs in the focus group mostly agreed on the importance of comprehensibility though they differed in the views of how to realise this. For example, PST63 stated his preference like that: “As long as we are understood by whom we are talking to, it is the best. Mother tongue accent for ex. Saying that, I would like to speak with a British accent as it sounds cool to me, but it’s so difficult so I cannot speak British English.” Some of them had concerns about being comprehensible with a Turkish accent to a British person, for example, while there were others who found Turkish accent close to them as the easiest, the most natural and the most understandable one because it is common among their teachers compared to some other foreign accents.

## Preferred identities

Question 2 in the questionnaire asked the participants to state their preferred identities when speaking English with Turkish/ non-Turkish interlocutors out of three options adapted from Li (2009: 86):

- (1) I want to sound like a Turkish speaker of English, not a mother tongue speaker of English --so long as others can understand me.
- (2) I want to sound like a mother tongue speaker of English (a user of English as a first language).
- (3) Other (please specify).

The percentages of preferred accents did not necessarily overlap with those of PSTs' preferred identities as in Table 2, though the most preferred identity was the same as the most preferred accent, i.e., a FirstL speaker of English (70 PSTs; 77,7 % in Q.1). A total of 60 PSTs (66,6 %) would like to sound like a FirstL speaker while speaking English (Q.2). Interestingly, 13 out of 23 PSTs, who preferred a Turkish speaker identity in Q.2, chose the accent of a proficient Turkish speaker of English in Q.1. The reason for the preference of a FirstL speaker accent and the preference of a Turkish speaker identity at the same time could be these PSTs' assumption that there is not a relationship between one's accent and identity.

**Table 2.** Q.2 Participants' preferred identity when speaking English

My preferred identity when speaking English with Turkish/non-Turkish	No. of participants
I want to sound like a Turkish speaker of English, <u>not</u> a mother tongue speaker of English-- so long as others can understand me.	23 (25,5 %)
I want to sound like a user of English as a first language.	60 (66,6 %)
Other (e.g. Scottish, Irish, Slavic accents, 'It's me.' accent)	7 (7,7 %)
Total	90 (100 %)

When different accounts of accent and identity were scrutinised, there was a tension between speaking English with a FirstL accent and retaining the speaker identity (Turkish) as it was evident in the following comparisons of reasons for their preference of a Turkish identity in Q.2 with reasons for their preference of a FirstL speaker accent in Q.1.

*They may not understand me if I speak like a mother tongue speaker. (Q.1 FirstL accent- it sounds original.) (PST4)*

*I feel more comfortable. (Q.1 FirstL accent- it's the best way to speak to me.) (PST22)*

*It is close to us. (Q.1 FirstL accent- it sounds original.) (PST23)*

In complementary to this closed-ended question, the PSTs were asked to express their thoughts on whether they found retaining their L1 (Turkish) identity in English important, and more than half of them (57,8 %) did not attach importance to retaining their own identity.

PST4 in the focus group had mixed thoughts about the relationship between her Turkish identity and Turkish accented English. Even if she did not see a connection between having a deliberate attempt at preserving her accent and her identity at first, she ended up with an anecdote just about the relationship between accent and identity: *"Sometimes people are racist; people are annoying, then it would be very nice to be able to speak in a Turkish accent- I just wouldn't help it. Yeah to annoy them."* Regarding another question "Do you

prefer another identity in the language you learn?”, she made it explicit that: “No, I would prefer to complete my original identity in that language. To be able to speak at a higher level in a certain language- I now do that.”

Regarding the question of whether they were concerned to be intelligible to mother-tongue or L2 speakers of English and of whether they distinguished between the two groups of listener, more than half of them (61,9 %) do not distinguish between them.

Lastly, 83,7 % of them found it possible to retain their L1 (Turkish) accent and still be intelligible to mother-tongue speakers of English or to L2 speakers of English. Interestingly, majority of the PSTs who gave support to speaking with the ‘native-like’ accent believed that it is possible to retain one’s first language (L1) accent and still be intelligible to speakers of English as a mother-tongue or an additional language. The focus group better clarified their reasons:

*I speak like them with their accent abroad; here I don’t. (PST68)*

*I agree with ... (PST68), and I just want to give an example from our local context. Even though I don’t believe intellectually that- there is no such thing as prior to or higher than our native tongue accents, there is such a thing... For example, you go to Germany. You are with some people speaking with a Turkish accent. You are like them. You meet them, and if you spoke in a very heavy American accent, you would be alienated because you just know each other you are not strangers meeting at a small community, then I’m going to speak with their Turkish accents because that would be genuine, and I will be accepted as I am. (PST4)*

The PSTs in the focus group mostly changed their way of speaking according to the profile of interlocutors they are together as PST4 mentioned:

*With anyone other than me with Turkish people we know each other if we speak in a very heavy foreign accent, it can be patronising. For example, PST23 said that he equates British accent with being better. If I spoke in a very heavy British accent and if people you are very close to have a Turkish accent not caring much, I don’t think it is anything about my proficiency, but it says something about what I think of their choices and about other people as well. I choose to speak in a British accent because I choose to alienate myself from you because I’m better. That’s where it comes up from. We do that if we want to mean that. It is so pretentious to do so on purpose.*

These extracts displayed that their choice of a specific accent was influenced by various factors such as speaker identities, emotions, and attitudes and that the most striking outcome of speaking in a certain way was comprehensibility and sustained communication.

### Views of L2 Speakers

Question 3 as the last closed-ended question was to unveil the participants’ attitudes towards non-mother tongue English accents when listening to others speak. Some typical learner pronunciation patterns were given as an example to contextualise the common phonological features among Turkish speakers such as the “th” sound in the word “think”. Four options were presented in consideration of Li’s (2009: 86) outstanding results:

(1) It’s fine when others speak English with a non-native accent -- so long as I can understand it.

(2) The non-mother tongue accent should be corrected (Which accent should be the norm? BBC/ CNN/ Australian accent/ Canadian accent).

(3) I won’t like it, but I don’t correct it either.

(4) Other (please specify).

In terms of listening to people speak, their preference for a particular ‘native-like’ accent was not heavily emphasised, and most of them (81,1 %) prioritised intelligibility and the idea of language for communication



over it though some of them (18,8 %) approved of correcting non-mother tongue accents or tolerating and not correcting such accents despite not liking them. Their accounts of accent and intelligibility were in line with a pluricentric view of English for communication as a sign of the richness of a language.

### English Varieties in Class

The last open-ended questions asked the PSTs to indicate whether they believed students should be exposed to non-English cultural resources and World Englishes other than American English or British English and why, and majority of them (64,7 %) found it necessary to provide them with a wide range of resources in terms of language awareness.

Secondly, the same question was asked in relation to English language teachers – whether the awareness of such varieties of English is necessary for them as an ELT trainee, and most of them agreed on its necessity. While many (81,9 %) saw it important to be a competent and intellectual teacher who considers the sociolinguistic profile of today's English speakers, some regarded it as a matter of choice after learning it. In the focus groups, PST4 and 22 discussed the matter of (not) choosing a specific accent during a conversation and the importance of awareness during interactions. The choice of a specific accent was also attributed to the goal of being comprehensible in different contexts, which was closely intertwined with being aware of such varieties of English to be able to empathise with speakers of such varieties when necessary.

### Discussion

One of the most outstanding results of this study is the high percentage of EFL pre-service teachers who preferred a English-as-a-first-language (FirstL) speaker-based accent and identity due to the positive features attributed to “nativeness” in the present study. These findings also concur with those of previous studies in which participants' English proficiency was clearly measured against 'NESs', the so-called 'owners' of the language (Luk, 1998; Timmins, 2002; Hu, 2004; Li, 2009; Tsou and Chen, 2014; Sung, 2016a). Especially, in Timmis (2002) and Li (2009), the indication of a choice of a FirstL speaker accent and identity prevailed in similar patterns of response to those of this study (70 out of 90 PSTs, with 77,7 % in Q.1, and 60 out of 90 PSTs, with 66,6 %).

The second result concerning the reasons for preferring a FirstL speaker also corresponds closely to the motivations cited in the previous studies as shown in Table 2. The attributes of a FirstL speaker accent covered a wide range of meanings related to originality, correctness, the standard, aesthetics, and functionality such as understandability (especially valid for general American English). In this sense, most of the PSTs were under the influence of attaining an imagined 'native' self and accent for speaking, while those who felt the need to retain their own identity and accent are comprised of about one-fourth of them. A few of them who preferred speaking like a Turkish speaker of English preferred it as they saw a 'native-like' accent as unachievable. The apparent inconsistency between preferred accents and preferred identities may be accounted for by two main factors (Li, 2009: 93): (1) a concern for being intelligible to others through a 'nativelike' command of English; and (2) a fact of life that most 'NNSs' speak English with a 'non-native' accent. Thir (2016: 515) highlights the effects of “sociocultural factors, biology, personality, and first language background, on speakers' abilities to change their pronunciation”.

Research also suggests that “the more a speaker identifies with a group, the more she may want to sound like a member of that group, but that she may also maintain her L2 accent if she wants to assert her own cultural identity” (Avery & Ehrlich 1992, cited in *ibid.*). In the present study, most of the PSTs did not associate having a 'native-like' accent of English with retaining or not retaining a Turkish identity. Moreover, they mostly did not distinguish between speakers of English as an L1 or L2 while they tried to be intelligible to interlocutors, and they were quite open to accepting a pluricentric profile of English speakers. They also believed in the possibility of retaining L1 accent and being intelligible to other speakers; however, this was not

their actual preference except for one-fourth of them. This could be due to the mismatch between the English taught in ELT classrooms and the English that is used in today's multilingual world, which has been shown by a number of related paradigms (Galloway and Rose, 2014).

With comprehensibility and communication being emphasised the most in their accounts, a change of preference between a Turkish-accented English and a "native-like" English was expressed in line with the context they were involved in. It was evident in the focus group discussions that they had some conflicting or overlapping views regarding the relationship between accent, identity, comprehensibility, revealing that their choice of being attached to a specific accent may vary according to contextual, interpersonal and psycholinguistic factors. Li (2009) also showed that there was a tension between intelligibility and identity among Hong Kong speakers of English when they were in a dialogue with the same nationals as in this study. Some mentioned that they tended not to prefer British accent, for example, being concerned about 'sounding haughty' as in this study articulated by PST4 and PST68. These PSTs found a relation between "being pretentious, patronising, and showing off" and keeping a native-like accent among Turkish speakers of English. This was found closely related to being part of a community sharing the same identity or to getting accepted by it. Jenkins (2000) and Sung (2016a) also pointed out that L2 accents are an expression of identity along the same lines as these results.

Lastly, familiarity in this study has turned out to be an important influence on the formation of attitudes towards accents, as in Jenkins's (2007: 182) study where a Japanese student teacher noted that Japanese people were so accustomed to American English that other accents sounded 'unfamiliar'. It was emphasised that language learners, teachers and pre-service teachers in their case should become familiar with non-mother tongue English accents for the ease of communication in various contexts. The main reason for speaking with a "native-like" accent like American English was also comparable to their reasons for speaking Turkish accented English: intelligibility and sustained communication in the best possible way, including both being proficient and saving the face of the interlocutors pragmatically.

Interestingly, in an exceptional study on the relationship between the perceived accentedness, comprehensibility and intelligibility regarding varieties of Asian English including Hong Kong English, Singapore English and China English (Hansen Edwards, Zampini and Cunningham, 2019), it was found that there was a sharp division between how speech traits were evaluated in contrast to speakers' evaluations of themselves. As supported by the findings in Hansen Edwards (2015) and (2016), varieties of English were acknowledged as identity markers but viewed as a less positive speech trait in the face of Inner Circle or "native speaker" norms. Furthermore, ratings of speaker and speech traits were different from the actual intelligibility of the speech, which suggests that accent beliefs and attitudes are independent from the listener's actual ability to understand what is said (Hansen Edwards et al., 2019). Chan (2013: 54) also showed that there was a lack of correlation between listeners' perceived intelligibility and preferred accents and associated this to "the tension between English pronunciation as economic capital and identity carrier in local people's perception". Another complementary study by Hansen Edwards, Zampini and Cunningham (2018) revealed that shared background increased scores of accentedness and comprehensibility but not intelligibility and that international experience had an impact on higher ratings of intelligibility. In this vein, the impact of different dynamics on the relationship between perceived accents, identity and intelligibility could be investigated in future studies to gain deeper understanding of the factors underlying them in complementary to the studies exploring preferred accents and identities as in the present one.

## Conclusion

In consideration of the sequence of research questions, this study delineated the PSTs' preferred accents in English-speaking contexts, attitudes to accent, intelligibility, and identity in terms of their own L2 performance, attitudes to L2 speakers of English in terms of accent and intelligibility, and attitudes to the incorporation of varieties of English into the language instruction, bringing quantitative and qualitative data together. All in all, the results of this study resonate with those of previous studies (Chan, 2019; Coşkun, 2011; Hu, 2004; Jenkins, 2005, 2007; Kirkpatrick and Xu, 2002; Lai, 2020; Li, 2009; Timmis, 2002; Wong, 2018) in terms of the participants' unquestioned acceptance of the accents and the features of mother-tongue speakers, which imply a native speakerist agenda and a culturist distinction between 'us' and 'them'. This agenda underlying beliefs about accents is delineated as follows: *"Accent—or rather the beliefs and attitudes about accent—works as a gatekeeper and becomes a powerful metaphor in symbolic domination (Bourdieu, 1991) as both the dominant and the subordinated group 'misrecognize' the prestige of so-called unaccented native-speaker speech"* (Taylor, 1994: 25, cited in Golombek and Jordan, 2005: 517).

There are a number of things that could have been done differently considering the limitations; nevertheless, I suggest that the instruments used in this study were the most suitable one as I aimed at collecting cross-sectional data from a large sample of participants due to time constraints. Data could be also obtained from a smaller group of participants in a longitudinal study through in-depth semi-structured interviews over prominent stages of language learning and teaching. Considering the impact of shared background and intercultural experience on awareness-raising among English users in various contexts (Hansen Edwards, et al., 2018), it is highly significant for teachers, and teacher educators to incorporate a non-essentialist and intercultural perspective into teacher training and language education programmes. Further investigation into the relationship between accent, and identity in different ELT contexts would deepen our understanding of more language users' perspectives on varieties of English and elucidate further the interplay between different dynamics in this research area. In this vein, instead of focusing merely on developing intelligibility as the key to establishing legitimacy as an English speaker and teacher, it is time to find ways to *"entertain other means (knowledge of students' L1, personal experience, expertise with the language, access to expert opinions)"* (Golombek and Jordan, 2005: 528).

## REFERENCES

- Ahn, S.-Y., and Kang, H.-S. (2017). South Korean university students' perceptions of different English varieties and their contribution to the learning of English as a foreign language. *Journal of Multilingual and Multicultural Development*, 38(8), 712–725. doi:10.1080/01434632.2016.1242595
- Ambele, E., and Boonsuk, Y. (2020). Voices of learners in Thai ELT classrooms: A wake up call towards teaching English as a lingua franca. *Asian Englishes*, 23, 1-17. doi:10.1080/13488678.2020.1759248
- Anderson, G. and Arsenault, N. (1998). *Fundamentals of educational research*. London: Routledge.
- Baker, W. (2011). Culture and identity through ELF in Asia: Fact or fiction? In A., Archibald, A. Cogo & J. Jenkins (Eds.), *Latest trends in ELF research*, (pp. 32–52). Newcastle upon Tyne: Cambridge Scholars.
- Baratta, A. (2016). Keeping it real or selling out: The effects of accent modification on personal identity. *Pragmatics and Society*, 7(2), 291–319. doi:10.1075/ps.7.2.06bar
- Braine, G. (Ed.). (1999). *Nonnative educators in English language teaching*. Mahwah, NJ: Lawrence Erlbaum.
- Canagarajah, S. A. (1999). Interrogating the “native speaker fallacy”: Non-linguistic roots, non-pedagogical results. In G. Braine (Ed.), *Non-native educators in English language teaching* (pp. 77-92). Mahwah, NJ: Lawrence Erlbaum.
- Canagarajah, S. A. (2013). *Translingual practice: Global Englishes and cosmopolitan relations*. London/New York: Routledge.
- Carrie, E., and McKenzie, R. M. (2018). American or British? L2 speakers' recognition and evaluations of accent features in English. *Journal of Multilingual and Multicultural Development*, 39(4), 313–328. doi:10.1080/01434632.2017.1389946
- Chan, J. Y. H. (2013). Contextual variation and Hong Kong English. *World Englishes*, 32(1), 54–74. doi:10.1111/WENG.12004
- Chan, J. Y. H. (2014). An evaluation of the pronunciation target in Hong Kong's ELT curriculum and materials: Influences from WE and ELF? *Journal of English as a Lingua Franca*, 3(1), 145–170. doi:10.1515/jelf-2014-0006
- Chan, J. Y. H. (2016). A multi-perspective investigation of attitudes towards English accents in Hong Kong: Implications for pronunciation teaching. *TESOL Quarterly*, 50(2), 285–313. doi:10.1002/tesq.218
- Chan, J. Y. H. (2019). The choice of English pronunciation goals: Different views, experiences and concerns of students, teachers and professionals. *Asian Englishes*, 21(3), 264–284. doi:10.1080/13488678.2018.1482436
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Cook, V. J. (1999). Going beyond the native speaker in language teaching. *TESOL Quarterly*, 33(2), 185–209. doi:10.2307/3587717
- Coşkun, A. (2011). Future English teachers' attitudes towards EIL pronunciation. *Journal of English as an International Language*, 6(2), 46–68. <https://files.eric.ed.gov/fulltext/ED527146.pdf>
- Creswell, J., & Plano Clark, V. (2018). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks: Sage.
- Dalton, C. & Seidlhofer, B. (1994). *Pronunciation*. Oxford: Oxford University Press.
- Davies, A. (1991). *The native speaker in applied linguistics*. Edinburgh: Edinburgh University Press.
- Davies, A. (2003). *The native speaker: Myth and reality*. London: Cromwell Press.

- Davies, A. (2006). The native speaker in applied linguistics. In A. Davies & C. Elder (Eds.), *The handbook of applied linguistics* (pp. 431-450). Oxford: Blackwell.
- Derwing, T. M., and Munro, M. J. (1997). Accent, intelligibility, and comprehensibility: Evidence from four L1s. *Studies in Second Language Acquisition*, 19, 1–16. doi:10.1017/S0272263197001010
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.
- Edwards, J. (2009). *Language and identity: An introduction*. Cambridge: Cambridge University Press.
- Ellis, R., & Barkhuizen, G. (2005). *Analysing learner language*. Oxford University Press.
- Faez, F. (2011). Are you a native speaker of English? Moving beyond a simplistic dichotomy. *Critical Inquiry in Language Studies*, 8(4), 378-399. doi: 10.1080/15427587.2011.615708
- Galloway, N., and Rose, H. (2014). *Introducing Global Englishes*. Abingdon: Routledge.
- Golombek, P., and Jordan, S. (2005). Becoming ‘black lambs’ not ‘parrots’: A poststructuralist orientation to intelligibility and identity. *TESOL Quarterly*, 39(3), 513–533. doi:10.2307/3588492
- Guetterman, T. C., and Fetters, M. D. (2018). Two methodological approaches to the integration of mixed methods and case study designs: A systematic review. *American Behavioral Scientist*, 62(7), 900–918. doi:10.1177/0002764218772641
- Hansen Edwards, J. G. (2015). Hong Kong English: Attitudes, identity, and use. *Asian Englishes*, 17(3), 184–208. doi:10.1080/13488678.2015.1049840
- Hansen Edwards, J. G. (2016). Accent preferences and the use of American English features in Hong Kong: A preliminary study. *Asian Englishes*, 18(3), 197–215. doi:10.1080/13488678.2016.1225482
- Hansen Edwards, J. G., Zampini, M. L., and Cunningham, C. (2018). The accentedness, comprehensibility, and intelligibility of different varieties of Asian English. *World Englishes*, 37(4), 538-557. doi:10.1111/weng.12344
- Hansen Edwards, J. G., Zampini, M. L., and Cunningham, C. (2019). Listener judgments of speaker and speech traits of varieties of Asian English. *Journal of Multilingual and Multicultural Development*, 40(8), 691-706. doi:10.1080/01434632.2018.1549057
- Holliday, A. R. (2005). *The struggle to teach English as an international language*. Oxford: Oxford University Press.
- Holliday, A. R. (2008). Standards of English and politics of inclusion. *Language Teaching*, 41(1), 115-126. doi: 10.1017/S0261444807004776
- Holliday, A. R., Hyde, M. & Kullman, J. (2004). *Intercultural communication: An advanced resource book*. London: Routledge.
- Hu, X. H. (2004). Why China English should stand alongside British, American, and the other ‘world Englishes’. *English Today*, 20(2), 26–33. doi:10.1017/S0266078404002056
- Huang, Y., & Hashim, A. (2021). Accent perceptions and identity conflicts of university students in China. *Changing English, Ahead-of-print*, 1-12. doi:10.1080/1358684X.2021.1997139
- Inbar-Lourie, O. (2005). Mind the gap: Self and perceived native speaker identities of EFL teachers. In E. Llurda (Ed.), *Non-native language teachers: Perceptions, challenges and contributions to the profession* (pp. 265-281). New York, NY: Springer.
- Ishikawa, T. (2017). Japanese university students’ attitudes towards their English and the possibility of ELF awareness. *Journal of English as a Lingua Franca*, 6(2), 237–263. doi:10.1515/jelf-2017-0012

- Jenkins, J. (2000). *The phonology of English as an international language*. Oxford: Oxford University Press.
- Jenkins, J. (2003). *World Englishes: A resource book for students*. London and New York: Routledge.
- Jenkins, J. (2005). Teaching pronunciation for English as a lingua franca: A sociopolitical perspective. In Gnutzmann, C. & Intemann, F. (Eds.), *The globalisation of English and the English language classroom* (pp. 145–158). Tübingen: Gunter Narr.
- Jenkins, J. (2007). *English as a lingua franca: Attitude and identity*. Oxford: Oxford University Press.
- Jenkins, J., Cogo, A., and Dewey, M. (2011). Review of developments in research into English as a lingua franca. *Language Teaching*, 44(3), 281–315. doi:10.1017/S0261444811000115
- Kim, S. (2021). English as a lingua franca in Japan: Multilingual postgraduate students' attitudes towards English accents. *Journal of Multilingual and Multicultural Development*, Ahead-of-print, 1-15. doi:10.1080/01434632.2021.1909053
- Kirkpatrick, A. (2007). *World Englishes: Implications for international communication and English language teaching*. Cambridge: Cambridge University Press.
- Kirkpatrick, A., and Xu, Z. (2002). Chinese pragmatic norms and 'China English'. *World Englishes*, 21(2), 269–280. doi:10.1111/1467-971X.00247
- Kong, M. L. F., and Kang, H. I. (2020). Identity and Accents: Do Students Really Want to Speak Like Native Speakers of English? *RELC Journal*, Ahead-of-print, 1-14. doi:10.1177/0033688220939246
- Krautt, R., and Wulff, S. (2013). Foreign-accented speech perception ratings: a multifactorial case study. *Journal of Multilingual and Multicultural Development*, 34(3), 1-15. doi:10.1080/01434632.2013.767340
- Kumaravadivelu, B. (2012). Individual identity, cultural globalization and teaching English as an international language: The case for an epistemic break. In L. Alsagoff, W. Renandya, G. Hu & S. L. McKay (Eds.), *Teaching English as an international language: Principles and practices* (pp. 9-27). New York: Routledge.
- Lai, M. L. (2020). 'English as a lingua franca': Rhetoric or reality? Attitudes of prospective English Teachers in Postcolonial Hong Kong. *Asian Studies Review*, 44(3), 494–514. doi:10.1080/10357823.2019.1693977
- Li, D. C. S. (2009). Researching non-native speakers' views toward intelligibility and identity: Bridging the gap between moral high grounds and down-to-earth concerns. In F. Sharifian (Ed.), *English as an international language: Perspectives and pedagogical issues* (pp.81-118). Bristol: Multilingual Matters.
- Lindemann, S., and Subtirelu, N. (2013). Reliably biased: The role of listener expectation in the perception of second language speech. *Language Learning*, 63(3), 567-597. doi:10.1111/lang.12014
- Lippi-Green, R. (1997). *English with an accent: Language, ideology and discrimination in the United States*. London: Routledge.
- Liu, J. (1999). From their own perspectives: The impact of non-native ESL professionals on their students. In G. Braine (Ed.), *Non-native educators in English language teaching* (pp. 159-176). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Luk, J. (1998). Hong Kong students' awareness of and reactions to accent differences. *Multilingua*, 17(1), 93–106. doi:10.1515/mult.1998.17.1.93
- Matsuda, A. (2012). *Principles and practices of teaching English as an international language*. Bristol: Multilingual Matters.



- McInerney, E. (2020). Alles was glanzte ich nit umbadingt Guld: reference accents, inner circle Englishes and language attitudes in Alsace. *Journal of Multilingual and Multicultural Development, Ahead-of-print*, 1-21. doi:10.1080/01434632.2020.1804393
- McKenzie, R. M. (2010). *The social psychology of English as a global language: Attitudes, awareness and identity in the Japanese context*. Heidelberg, Germany: Springer.
- Medgyes, P. (1992). Native or nonnative: Who's worth more? *ELT Journal*, 46(4), 340-349. doi: 10.1093/let/46.4.340
- Medgyes, P. (1994). *The non-native teacher*. London: Macmillan.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. Hoboken, NJ: Jossey-Bass.
- Moussu, L. & Llurda, E. (2008). Non-native English-speaking English language teachers: History and research. *Language Teaching*, 41(3), 315–348. doi: 10.1017/S0261444808005028
- Mısır, H., & Gürbüz, N. (2021). 'I like my accent but...': EFL teachers' evaluation of English accent varieties. *Language Awareness, Ahead-of-print*, 1-20. doi:10.1080/09658416.2021.1965153
- Moradkhani, S., and Asakereh, A. (2018). EFL teachers' attitudes toward accent and culture in light of EIL: The case of Iranian public schools and private institutes. *Cogent Education*, 5(1), 1-18. doi:10.1080/2331186X.2018.1489336
- Munro, M. J., and Derwing, T. M. (1995). Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. *Language Learning*, 45, 73–97. doi:10.1111/j.1467-1770.1995.tb00963.x
- Nejjari, W., Gerritsen, M., van Hout, R., and Planken, B. (2020). Where does a 'foreign' accent matter? German, Spanish and Singaporean listeners' reactions to Dutch-accented English, and standard British and American English accents. *PLoS One*, 15(4), 1-35. doi:10.1371/journal.pone.0231089
- Norton, B. (1997). Language, identity, and the ownership of English. *TESOL Quarterly*, 31, 409–429. doi:10.2307/3587831
- Paikeday, T. (1985). *The native speaker is dead!* Toronto: Paikeday Publishing.
- Phillipson, R. (1992). *Linguistic imperialism*. Oxford: Oxford University Press.
- Rampton, M. B. H. (1990). Displacing the 'native speaker': Expertise, affiliation, and inheritance. *ELT Journal*, 44(2), 97–101. doi: 10.1093/eltj/44.2.97
- Rezaei, S., Khosravizadeh, P., & Mottaghi, Z. (2019). Attitudes toward World Englishes among Iranian English language learners. *Asian Englishes*, 21(1), 52–69.
- Sadeghpour, M., & Sharifian, F. (2017). English language teachers' perceptions of World Englishes: The elephants in the room. *Asian Englishes*, 19(3), 242–258. doi:10.1080/13488678.2017.1362782
- Sasayama, S. (2013). Japanese college students' attitudes towards Japan English and American English. *Journal of Multilingual and Multicultural Development*, 34(3), 264–278. doi:10.1080/01434632.2013.767341
- Seidlhofer, B. (2011). *Understanding English as a Lingua Franca*. Oxford: Oxford University Press.
- Selvi, A. F. (2011). The non-native speaker teacher. *ELT Journal*, 65(2), 187-189. Doi: 10.1093/ELT/CCQ092
- Si, J. (2019). The practicality of ELF-informed teaching: Attitudes and perceptions of Chinese Business English teachers. *Journal of English as a Lingua Franca*, 8(2), 269–296. doi:10.1515/jelf-2019-2024
- Shakouri, E. & Shakouri, N. (2014). On the death of native speaker: A revisiting stance. *International Journal of Educational Investigations*, 1(1), 220-226. doi: N/A


- Smit, U., and Dalton, C. (2000). Motivation patterns in advanced EFL pronunciation learners. *International Review of Applied Linguistics*, 38, 229–246. doi:10.1515/iral.2000.38.3-4.229
- Sung, C. C. M. (2013). 'I would like to sound like Heidi Klum': What do non-native speakers say about who they want to sound like? *English Today*, 29(2), 17–21. doi:10.1017/S0266078413000102
- Sung, C. C. M. (2014). Accent and identity: Exploring the perceptions among bilingual speakers of English as a Lingua Franca in Hong Kong. *International Journal of Bilingual Education and Bilingualism*, 17(5), 544–557. doi:10.1080/13670050.2013.837861
- Sung, C. C. M. (2016a). Does accent matter? Investigating the relationship between accent and identity in English as a lingua franca communication. *System*, 60, 55–65. doi:10.1016/j.system.2016.06.002
- Sung, C. C. M. (2016b). Exposure to multiple accents of English in the English Language Teaching classroom: From second language learners' perspectives. *Innovation in Language Learning and Teaching*, 10(3), 190–205. doi:10.1080/17501229.2014.936869
- Tajeddin, Z., Atai, M. R., and Pashmforoosh, R. (2020). Beliefs about English as an International Language (EIL): voices from Persian-speaking English teachers. *Pedagogies: An International Journal*, 15(2), 127–145. doi:10.1080/1554480X.2019.1684923
- Thir, V. (2016). Rethinking pronunciation teaching in teacher education from an ELF perspective. *Vienna English Working Papers (VIEWS)*, 25, 1–29. [https://anglistik.univie.ac.at/fileadmin/user\\_upload/i\\_anglistik/Department/Views/Uploads/VIEWS\\_2016\\_25.3\\_Thir\\_V2.pdf](https://anglistik.univie.ac.at/fileadmin/user_upload/i_anglistik/Department/Views/Uploads/VIEWS_2016_25.3_Thir_V2.pdf)
- Timmis, I. (2002). Native-speaker norms and international English: A classroom view. *ELT Journal*, 56(2), 240–249. doi:10.1093/elt/56.3.240
- Tokumoto, M., and Shibata, M. (2011). Asian varieties of English: Attitudes towards pronunciation. *World Englishes*, 30(3), 392–408. doi:10.1111/j.1467-971X.2011.01710.x
- Trofimovich, P., and Turuseva, L. (2015). Ethnic identity and second language learning. *Annual Review of Applied Linguistics*, 35, 234–252. doi:10.1017/S0267190514000166
- Tsang, A. (2020). Why English accents and pronunciation 'still' matter for teachers Nowadays: A mixed-methods study on learners' perceptions. *Journal of Multilingual and Multicultural Development*, 41(2), 140–156. doi:10.1080/01434632.2019.1600528
- Tsou, W. & Chen, F. (2014). EFL and ELF college students' perceptions toward Englishes. *Journal of English as a lingua franca*, 3(2), 363–386. doi:10.1515/jelf-2014-0021
- Virkkula, T., and Nikula, T. (2010). Identity construction in ELF contexts: A case study of Finnish engineering students working in Germany. *International Journal of Applied Linguistics*, 20, 251–273. doi:10.1111/j.1473-4192.2009.00248.x
- Walker, R. (2010). *Teaching the pronunciation of English as a lingua franca*. Oxford: Oxford University Press.
- Wang, W. (2015). Teaching English as an international language in China: Investigating university teachers' and students' attitudes towards China English. *System*, 53, 60–72. doi:10.1016/j.system.2015.06.008
- Wong, R. (2018). Non-native EFL teachers' perception of English accent in teaching and learning: Any preference? *Theory and Practice in Language Studies*, 8, 177–183. doi:10.17507/TPLS.0802.01

# Developing a Scale of Motivation for Online English Language Education

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 26.01.2022</p> <p>Available online: 28.12.2022</p>	<p>The aim of this study is to develop a four-point Likert-type scale to measure online English language motivation levels of the students studying in an English preparatory department. After the literature review, a 21-item trial form was created and was applied to 235 students. First, factor analysis study was conducted, and it was observed that the scale consisted of five different factors. Then, in line with the expert opinions, the statements indicating attitude were converted into motivation; the revised 21-item scale was applied to 289 students. The data were evaluated by using SPSS and AMOS programs. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to control the construct validity of the scale; Cronbach alpha internal consistency coefficient analysis was used to determine the reliability. As a result of the EFA it was seen that the renewed motivation scale had a three-factor structure. These three structures were named as "Language Skills", "Responsibilities" and "Attitudes". Afterwards, CFA was performed with the help of structural equation modeling, and the obtained fit index values showed good fit. The Cronbach Alpha internal consistency coefficient was obtained as 0.95 in the analysis performed to measure the reliability level of the scale with construct validity. As a result, it is found that the developed "Online EFL Motivation Scale" is a valid and reliable scale.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> EFL, Distance Education, Motivation, Exploratory and Confirmatory Factor Analysis, Validity-Reliability</p>

## Introduction

Due to the Covid-19 pandemic, which negatively affected our whole lives starting from the beginning of 2020, educational institutions had to change their organizational and instructional systems. That is, in many countries, education has started to be given online, and education stakeholders are faced with a very different and brand-new paradigm. This situation also deeply affected English as a foreign language (EFL) education,

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which is accepted as a lingua franca all over the world. This change has also led to a transformation in research habits since after the expansion of online education, research has to concentrate on online education. While online English language education has been given for a while, the importance has increased after the pandemic, and it has become imperative to apply new ways of research and contribute to the literature. One of the research fields that needs adjustment to online education is English as a foreign language (EFL) as classical models and literature may not be sufficient to justify and explain learner motivation in EFL classes in online education.

The importance of motivation in foreign language teaching has been found in many studies and its accuracy has been accepted (Gardner, 1985; Dörnyei, 1994; Lasagabaster, 2017). Although it is accepted how motivation is important and effective in language teaching, it is also necessary to explain how motivation is defined. Looking at the literature, Brown (1994, p. 114) defines motivation as "inner drive, impulse, emotion or desire that moves one to a particular action". On the other hand, Crookes and Schmidt (1991) defined motivation as the level of desire and excitement, continuity of attention and concentration towards the use of materials used in the classroom. When we look at these definitions, it can be implied that motivation is the enthusiasm, desire, and positive attitude of the EFL learner towards language learning. There are several different theories about motivation to learn in the literature. One of them is Gardner's (1985) integrative and instrumental motivation and the other one is intrinsic and extrinsic motivation (Ryan & Deci, 2000; Reiss, 2012). In the former distinction, integrative motivation is a motivation type for language learners to feel closer to their language learning processes, target culture and people living that culture. Instrumental motivation, on the other hand, is the motivation to learn the language by thinking that one can gain a benefit from achieving learning the language regarding their future profession (Cook, 2000). In the second motivation group, if the motivation is intrinsic, the language learner learns the target language because he finds the learner fun and appealing. In extrinsic one, on the other hand, it is a form of motivation that emerges in the event of an external necessity such as a reward or punishment, not because learners really like this language or find it fun to learn (Vansteenkiste et al. 2006). In this research, while writing the scale items, intrinsic motivation literature has been taken into consideration. The items in this scale do not contain any extrinsic or instrumental items.

In recent years, there have been many studies on motivation in EFL classes using the above-mentioned distinctions. Some of them studied the relationship between language skills and motivation, and other investigated the relationship between technology and language learning. For example, Ozturk and Gurbuz (2013) investigated motivational orientations of EFL students. Moreover, Namaziandost et al. (2019a) studied the effect of cooperative learning on oral proficiency of EFL learners. On the other hand, Yu et al. (2019) and Yu et al. (2020) examined the sources of students' motivation to write in two different studies. Kaseem (2018) investigated the relationship between EFL students' speaking proficiency and motivation. In addition, Chen and Hwang (2020) investigated the effect of authentic contexts on their English performance and motivation. On the other hand, Namazidost et al. (2019b) examined the relationship between English reading materials and motivation. On the other hand, there have been a few studies investigating the effect of technology and motivation. For example, Gamlo (2019) investigated the effect of game-based language learning applications on motivation in EFL classrooms. On the other hand, Kaid Muhammed Ali (2019) examined the effect of students' use of WhatsApp as a language learning tool on their language learning motivation. In addition, Hava (2019) analyzed the effect of digital storytelling on students' language learning motivation and EFL education. As a result, it can be implied that there are various aspects of motivation research in classical face-to-face classrooms.

One thing that online learning affects in the field of EFL teaching is students' motivation towards online learning. While there are many studies on student motivation in classical education, there not many specific

studies on motivation towards online EFL education in the literature yet. Gulecoglu and Ozturk (2021) conducted a systematic analysis of motivation in the Turkish context, and in their study, they examined the studies on language learning and motivation between 2010 and 2021. As a result of the study, it was understood that none of the 23 studies were focused on online learning. This result reveals that a specific scale should be developed on online education and EFL motivation.

### **Purpose of the Study**

In order to reveal the motivation levels of EFL students in online education and the factors affecting their motivation, it is thought that there is a need to create a scale which will assess students' online EFL education motivation, rather than adapting the scales used for general and classical education. Thus, an EFL field-specific scale is aimed that can be used in the online education paradigm. For these reasons, in this study, it is aimed to develop a scale that can be used in online EFL context. For this purpose, answers to the following research questions were sought in this study;

1. What are the exploratory factor and reliability analyses results of Online EFL Motivation Scale?
2. What are the confirmatory factor analysis results of Online EFL Motivation Scale?

### **Method**

In this section, we provided information about the participants, settings, preliminary trial phase of the scale and data analysis stages of the "Online EFL Motivation Scale". This study has been conducted under the approval of Bolu Abant İzzet Baysal University, Human Research in Social Sciences, Ethical Committee (Protocol Number: 2021/410; date: 04/11/2021).

### **Participants and Settings**

This study was carried out in the English preparatory department of a state university in Turkey providing intensive English education for more than 30 years. The language education, which was given face-to-face until March 2020, had to change into online education after this date and a new system was established for the institution.

In this study, participants were determined using the convenience sampling method which is commonly appropriate for piloting stages of a research and choose the participants who are eligible to participate (Given, 2008). The online scale was sent to a total of 600 students in the first pilot study, and only 235 students returned the questionnaire. The scale was improved and eight weeks after the piloting stage, it was sent to 600 students again for validity and reliability study, and 289 students answered back.

### **Developing the Scale and Preliminary Trial Phase (Pilot Study)**

In order to measure the motivation levels of the students studying in the English preparatory program in online education, the literature was examined in detail and four-point Likert type items were created to measure the motivation. As a result, a 21-item scale was prepared to measure the level of motivation in online EFL education. Afterwards, the created measurement tool was applied as a pilot application to 235 participants with the online questionnaire method. The factor structure of the developed scale was examined with the help of Explanatory Factor Analysis (EFA) and it was seen that it had a five-factor structure that can be seen in table 1 in the findings section.

### **Data Analysis**

The scale, which was renewed by transforming the statements showing attitude into motivation among the 21 items, was applied to 289 participants with the online questionnaire method and the data obtained were transferred to the SPSS 26 package program from the Excel format. In order to determine the construct validity of the developed "Online EFL Motivation Scale", EFA was performed using principal component analysis

with varimax rotation. In the analysis, factor loads were determined as at least 0.30 (Büyüköztürk, 2006) and the factor structure of the scale was examined and divided into sub-factors. The Cronbach Alpha coefficient was calculated for the sub-dimensions and total reliability of the scale. In order to ensure the validity of the sub-factors obtained as a result of EFA and to test the accuracy of the revealed structure, Confirmatory Factor Analysis (CFA) was performed with the help of the AMOS 24 package program.

## Findings

### Examining the Sub-Dimensions of the Developed Scale (Exploratory Factor Analysis-EFA)

In order to examine the sub-dimensions of the developed scale, firstly, EFA was applied. The results can be seen in table 1 below. Since the KMO coefficient was 0.932 as a result of the Kaiser-Meyer-Olkin (KMO) test, which was used to determine whether the sample size used in the study was sufficient, it can be said that the sample size in the study was quite sufficient. Since the significance value (p-value) obtained as a result of the Bartlett Test (Bartlett Test of Sphericity) was less than 0.05 ( $0.000 < 0.05$ ), the data provided the assumption of multiple normal distribution (Akgül-Çevik, 2003:428, Hair et al.1998:374; Coşkun & Mutlu, 2017) and confirms the feasibility of factor analysis. In other words, since the Bartlett test is significant, it is possible to say that there are high correlations between the variables, so the data set is suitable for factor analysis (Kalaycı, 2010; Karagöz et al., 2019).

**Table 1.** Descriptive statistics of the items of the developed scale and factor analysis results

	VARIABLES	$\bar{X} \pm SD$	Factor Loads	Explained Variance
Language Skills	I like to actively participate in pronunciation sessions of online lessons	3,10±0,76	,810	25,753
	I like to actively participate in the reading sessions of online lessons.	3,11±0,76	,803	
	I like to actively participate in the writing sessions of online lessons.	3,07±0,74	,784	
	I like to actively participate in the listening sessions of online lessons	3,13±0,72	,782	
	I like to actively participate in vocabulary sessions of online lessons.	3,27±0,68	,734	
	I like to actively participate in the speaking sessions of online lessons.	2,94±0,81	,670	
	I like to actively participate in grammar sessions of online lessons.	3,15±0,73	,595	
	I like to speak voluntarily during online lessons	2,93±0,85	,581	
	Outside the class, I study / practice English by myself	3,28±0,68	,383	
	Language Skills Overall Average	3,11±0,57		
Responsibilities	I try not to miss online classes	3,43±0,64	,831	17,731
	I attend English online classes on time	3,35±0,67	,800	
	I try to be online until the end of the lesson	3,54±0,63	,769	
	I do my homework on time	3,19±0,72	,570	
	I am willing to actively participate in online classes	3,02±0,84	,511	
	I prefer to watch the lecture from the record instead of online.	1,84±0,88	,503	
	I get upset when I miss an online lesson	3,02±0,82	-,408	
	Responsibilities Overall Average	3,06±0,45		
Attitudes	I believe that I can reach to the level I want in online education.	2,52±0,96	,798	15,925
	I enjoy online lessons	2,67±0,95	,774	
	I prefer face-to-face or hybrid rather than online lessons	3,30±0,98	-,770	
	I am willing to learn English online	2,69±1,02	,765	
	Sometimes I get bored during online class	2,90±0,87	-,549	
	Attitudes Overall Average	2,81±0,40		
Evaluation Criteria	Kaiser-Meyer-Olkin Measure of Sampling Adequacy: ,932			
	Barlett's Test of Sphericity; Approx. Chi-Square: 3435,329 - Sig. : 0,000			
	Extraction Method: Principal Components - Rotation Method: Varimax			
	Total Explained Variance: 59,408			
	Cronbach's Alpha: 0,866			
	Overall Average of the Scale: 3,02±0,42			



Exploratory factor analysis was applied to the developed 21-item motivation scale and a 3-factor structure was obtained. The variance explained by the first factor was 25.753%, the variance explained by the second factor was 17.731%, and the variance explained by the third factor was 15.925%. The total variance explained is 59.408%. The total variance explained is sufficient as it exceeds 50%. In order for a factor to be very stable, it must have at least 3 items (Velicer & Fava, 1998). Therefore, the ratio of the number of items to the number of factors (n:p) has gained importance. According to Cattell (1978), this ratio should be between 3 and 6 (Act. MacCallum et al. 1999). Gorsuch (2008) stated that this ratio should be at least 5.

In order for confirmatory factor analysis to be applied, at least three variables must be present that measure each latent variable. For this reason, attention was paid to have at least three variables under any factor. In addition, the factor weight should be  $\pm 0,30$  and above (Kalaycı, 2010). As a result of the analyzes obtained, it is seen that the scale is suitable for confirmatory factor analysis with the help of structural equation modeling.

### **Naming the factors**

Since the main reason for conducting EFA is to reduce a large number of variables to a smaller number of factors, these factors should be named. This naming process is done according to the common characteristics of the variables in the factor (Nakip 2006: 435). Items belonging to three factors obtained from EFA, and appropriate names for these items were given. The first factor consisting of 9 items was named "Language Skills", the second factor consisting of 7 items was named "Responsibilities" and the third factor consisting of 5 items was named "Attitudes". Reliability analysis of the 21-item scale directed to the participants was performed, and the internal consistency coefficient (Cronbach's Alpha coefficient) was obtained as 0.866. Since the Cronbach Alpha value is greater than 0.80, it can be said that the scale is a highly reliable scale (Kalaycı, 2010).

When the average scores of the answers to the motivation scale and its sub-dimensions are examined, it is seen that the Language Skills sub-dimension has the highest average and the Attitudes sub-dimension has the lowest average. While the item with the highest average among the statements was "I try to be online until the end of the lesson", the item with the lowest average was obtained as "I prefer to watch the lesson online instead of online". On average, the participants responded as "I agree" to the statements. When the average value of each item is examined, it can be said that the motivation levels of the students in distance education are high, and they show interest in online courses.

### **Confirmatory Factor Analysis (CFA) of the Developed Scale**

CFA was performed to ensure the validity of the sub-factors obtained as a result of EFA and to test the accuracy of the structure revealed. The diagram of the model fit obtained can be seen in figure 1 below:

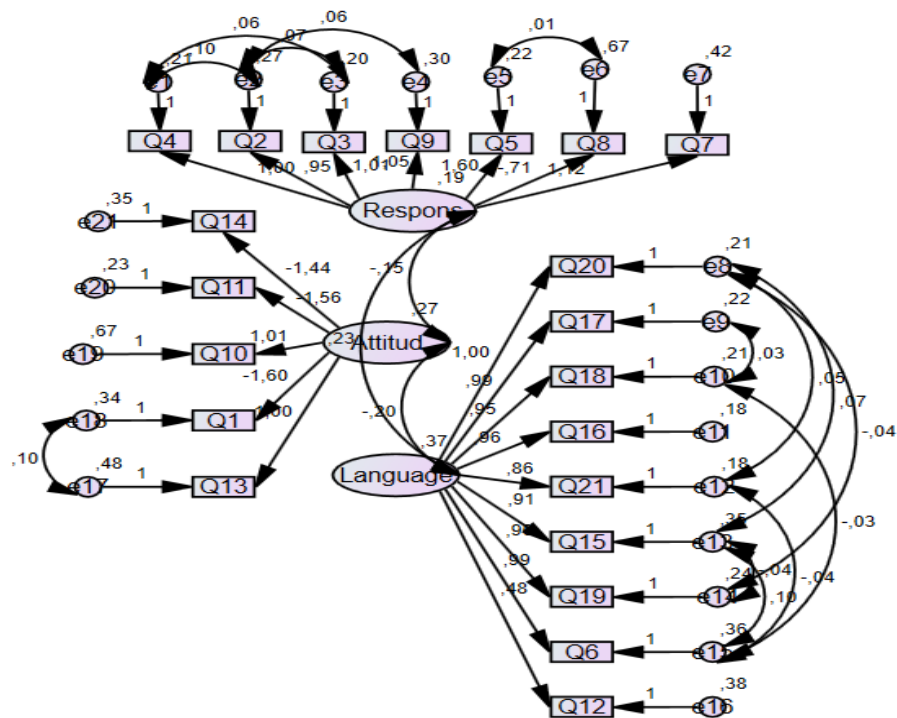


Figure 1. Model fit

The fit values related to the created model are given below.

Table 2. CMIN, RMR, GFI, Baseline Comparisons, RMSEA

Model	Default model	Saturated model	Independence model
NPAR	59	231	21
CMIN	331,4	,000	3531,38
DF	172	0	210
P	,000		,000
CMIN/DF	1,927		16,816
RMR	0,036	,000	0,25
GFI	0,907	1,000	0,223
AGFI	0,876		0,145
PGFI	0,676		0,203
NFI	0,906	1,000	,000
RFI	0,885		,000
IFI	0,953	1,000	,000
TLI	0,941		,000
CFI	0,952	1,000	,000
RMSEA	0,057		0,234
LO 90	0,047		0,228
HI 90	0,066		0,241
PCLOSE	0,112		,000

When the table given above is examined, the obtained fit values show that the model fit is achieved. There is no limitation on the values to be looked at in model fit. The reported values may vary according to the values that the researcher wants to draw attention to.

Default model:

CMIN/DF=1,927<3

RMR=0,036<0,05

0,90≤IFI=0,953

0,90≤TLI=0,941

0,90≤CFI=0,952

RMSEA=0,057<0,05

SRMR=0,036<0,05

The fit values examined show that the data fit the model well.

**Table 3.** Regression Weights: (Group number 1 - Default model)

			Estimate	Standardized Estimate	S.E.	C.R.	P
Q4	<-- -	Responsibility	1,000	,690			
Q2	<-- -	Responsibility	,945	,621	,076	12,455	***
Q3	<-- -	Responsibility	1,013	,708	,079	12,896	***
Q9	<-- -	Responsibility	1,047	,641	,107	9,823	***
Q5	<-- -	Responsibility	1,597	,832	,130	12,258	***
Q8	<-- -	Responsibility	-,708	-,354	,130	-5,441	***
Q7	<-- -	Responsibility	1,124	,604	,121	9,293	***
Q20	<-- -	Lang. Skills	1,000	,796			
Q17	<-- -	Lang. Skills	,989	,787	,068	14,525	***
Q18	<-- -	Lang. Skills	,952	,787	,066	14,441	***
Q16	<-- -	Lang. Skills	,962	,807	,064	15,084	***
Q21	<-- -	Lang. Skills	,863	,774	,053	16,399	***
Q15	<-- -	Lang. Skills	,909	,683	,066	13,795	***
Q19	<-- -	Lang. Skills	,902	,747	,071	12,733	***
Q6	<-- -	Lang. Skills	,987	,707	,078	12,650	***
Q12	<-- -	Lang. Skills	,475	,422	,067	7,143	***
Q13	<-- -	Attitudes	1,000	,605			
Q1	<-- -	Attitudes	-1,597	-,822	,166	-9,598	***

		Estimate	Standardized Estimate	S.E.	C.R.	P
Q10	<-- Attitudes	1,014	,546	,130	7,805	***
Q11	<-- Attitudes	-1,564	-,864	,147	-10,630	***
Q14	<-- Attitudes	-1,441	-,787	,142	-	***
					10,124	

Regression values show the power of observed variables to predict latent variables, that is, factor loadings. Factor loadings are important as the "p" values for each binary relationship above are less than 0.001. The significant p values indicate that the items were loaded correctly on the factors. In addition, the fact that the standardized regression coefficients are 0.537 and larger indicates that the power to predict the latent variables, that is, the factor loadings of each item is high.

**Table 4.** Covariances and Correlations: (Group number 1 - Default model)

			Covariances Estimate	Correlations Estimate	S.E.	C.R.	P
Responsibility	<--> Language		,226	,849	,028	8,038	***
Responsibility	<--> Attitude		-,151	-,658	,024	-6,371	***
Language	<--> Attitude		-,200	-,630	,030	-6,626	***
e13	<--> e15		,102	,289	,024	4,307	***
e1	<--> e2		,103	,426	,017	5,951	***
e13	<--> e14		-,044	-,152	,018	-2,444	,015
e17	<--> e18		,099	,248	,029	3,364	***
e12	<--> e15		-,035	-,138	,015	-2,304	,021
e9	<--> e10		,030	,140	,016	1,920	,055
e8	<--> e13		,065	,239	,017	3,801	***
e8	<--> e12		,047	,237	,014	3,266	,001
e2	<--> e4		,060	,208	,017	3,602	***
e5	<--> e6		,014	,037	,028	,511	,610
e2	<--> e3		,069	,295	,016	4,269	***
e1	<--> e3		,059	,291	,015	3,940	***
e8	<--> e14		-,037	-,164	,015	-2,513	,012
e10	<--> e15		-,029	-,108	,017	-1,744	,081

**Table 5.** Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Responsibilities	,193	,030	6,316	***
Language Skills	,368	,047	7,880	***
Attitudes	,275	,052	5,303	***
e1	,212	,020	10,380	***
e2	,275	,025	10,998	***
e3	,196	,019	10,226	***
e4	,303	,028	10,864	***
e5	,218	,027	8,093	***
e6	,674	,058	11,668	***
e7	,424	,038	11,071	***
e8	,213	,021	9,932	***

	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
e9	,220	,022	10,240	***
e10	,205	,020	10,095	***
e11	,182	,018	10,219	***
e12	,183	,018	10,292	***
e13	,347	,032	10,977	***
e14	,238	,022	10,615	***
e15	,358	,033	10,786	***
e16	,383	,032	11,798	***
e17	,476	,044	10,866	***
e18	,336	,039	8,569	***
e19	,667	,058	11,437	***
e20	,228	,029	7,759	***
e21	,351	,036	9,756	***

In addition, since the p values of the covariance, correlation and variance values above were also less than 0.01, it was determined that all covariance, correlation, and variance values were statistically significant.

### Discussion and Conclusion

In this study, in order to determine the motivation levels of the students studying in the English preparatory program where online education is provided, a 21-item scale was developed, and the validity and reliability of the scale were ensured. After the EFA, the first factor consisting of nine items was named "Language Skills", the second factor consisting of seven items was called "Responsibilities" and the third factor consisting of five items was named "Attitudes".

The "Online EFL Motivation Scale" is a tool measurement consisting of three sub-dimensions developed to assess the motivation levels of students studying in the English preparatory program in online education they received. The Language Skill dimension measures the language skill levels of students. There are nine items in this sub-dimension. The high score that can be obtained from this sub-dimension indicates that the language skill level is high. Responsibilities dimension measures the level of responsibility of students towards their online EFL lessons. There are 7 items in this sub-dimension. The high score that can be obtained from this sub-dimension indicates a high level of responsibility. Finally, the Attitudes dimension measures students' attitude levels. There are 5 items in this sub-dimension. The high score that can be obtained from this sub-dimension indicates that the general attitude levels of the students towards online EFL education are high. The high Alpha coefficient of the scale indicates that the items in the scale are consistent with each other. EFA and CFA results also confirmed the validity of the scale. As a result, based on the validity and reliability studies, it can be said that this scale is applicable in measuring the motivation levels of the students studying in the English preparatory program in the online education they received.

In the literature, there are many different scales used to measure students' motivation. For instance, Ozturk and Gurbuz (2013) used "The Motivation and Attitude Questionnaire" developed by Dornyei (1990). In this questionnaire there are 30 items 5-point Likert-type questions, 21 of which measure integrative and nine of which measure instrumental motivation. Agawa and Takeuchi (2016) developed a scale to measure the motivation of Japanese EFL students. Expert judgement, EFA and CFA were used to develop this scale. As a result, they came up with a scale consisting of intrinsic, identified, external and amotivation factors. In another study, Warden and Lin (2000) developed a scale consisting of 32 expressions and instrumental, integrative, and required factors established the scale they developed to determine motivation types. Mori and Gobel (2006) also developed a scale consisting of 30 items and factors of imperativeness, intrinsic value,

negative value and attainment value emerged. Another motivation scale is Pintrich et al. (1991)'s questionnaire and consists of 25 items and six factors called extrinsic goal orientation, intrinsic goal oriented, task value, control beliefs about learning, self-efficacy and expectations of success. On the other hand, Dwaik and Shehadeh (2010) developed a scale consisting of 27 items and factors were named as integrative, instrumental and required and used it in their own context.

When the motivation scales mentioned above are examined, there are some differences and similarities with this study. First of all, the mentioned motivation scales are intended to measure the motivation type of the language learner. In this study, however, it is not designed to assess whether the students have instrumental or integrative motivation, or whether they have extrinsic or intrinsic motivation. Since the questions are intrinsic motivation questions, they only consist of statements measuring this type of motivation. Another difference is that while the above-mentioned scales measure the types of motivation against classical face-to-face education, the questions in this study aim to measure students' positions in online EFL education. On the other hand, the similarity between the scales found in the literature and this study is the number of expressions and factor structures. While the number of expressions in the scales in the literature is between 20-30, the number of expressions in this study is 21 which shows another similarity among these scales. Although the factors are named differently in these scales, item contents have similar meanings in terms of intrinsic motivation.

To conclude, from the date that education was given through distance learning, EFL motivation studies have been carried out either by adapting general education questionnaires to the field or by qualitative research method study designs which can be more flexible. This situation led to the need to develop a specific data collection tool to measure motivation towards online EFL education. Therefore, this study aimed to develop a scale to close this gap. At the end of the study, an "Online EFL Motivation Scale" consisting of 3 factor structures and 21 expressions was developed and it is aimed to contribute to the literature. Distance education has to be one of the issues that should be emphasized in Turkey as well as in the world, especially during pandemic period. Inevitably, distance education should be applied to students in a beneficial way. In this context, first of all, it is expected that the educators will be equipped with distance education pedagogy and the physical conditions should be provided in the most appropriate way. Moreover, it is thought that the scale can also be used in research that covers all activities carried out with distance education. For the future studies, since this scale is prepared with a focus on assessing intrinsic motivation, scale development studies on extrinsic motivation can be conducted. By using these developed scales, we can determine the motivation levels of EFL students towards the online course and give an idea to both the program developers and the teachers in terms of the implementation of online education.



## REFERENCES


- Agawa, T. & Takeuchi, O. (2016). A new questionnaire to assess Japanese EFL learners' motivation: Development and validation. *ARELE: Annual Review of English Language Education in Japan*, 27(1), 1-16.
- Akgül A. & Çevik O. (2003). *İstatistiksel Analiz Teknikleri*. Ankara: Emek Ofset.
- Brown, H. D. (1994). *Principles of language learning and teaching*. London: Prentice Hall Regents.
- Büyüköztürk, Ş. (2006). *Sosyal Bilimler İçin Veri Analizi: İstatistik, Araştırma Deseni SPSS Uygulamaları ve Yorum*. Ankara: PegemA Yayıncılık.
- Chen, M. R. A., & Hwang, G. J. (2020). Effects of experiencing authentic contexts on English speaking performances, anxiety and motivation of EFL students with different cognitive styles. *Interactive Learning Environments*, 1-21.
- Cook, V. (2000). *Linguistics and second language acquisition*. Beijing: Foreign Language Teaching and Research Press and Macmillan Publishers Ltd.
- Coskun, A., & Mutlu, H. T. (2017). Investigating High School Students' Use of Extramural English: A Scale Development Study. *Online Submission*, 6(1), 571-590.
- Crookes, G. & R. W. Schmidt. (1991). Motivation: reopening the research agenda. *Language Learning* 41(4), 469-512.
- Dörnyei, Z. (1990). Conceptualising motivation in foreign language learning. *Language Learning*, 40, 45-78.
- Dwaik, R. & Shehadeh, A. (2010). Motivation types among EFL college students: Insights from the Palestinian context. *An-Najah University Journal of Research (Humanities)*, 24(1), 333-360.
- Gamlo, N. (2019). The Impact of Mobile Game-Based Language Learning Apps on EFL Learners' Motivation. *English Language Teaching* 12, no. 4: 49-56.
- Gardner, R. C. (1985). *Social Psychology and Second Language Learning*. Baltimore, MD: Edward Arnold.
- Given, L. (2008). *Convenience Sample*. *The SAGE Encyclopedia of Qualitative Research Methods*. SAGE Publications. doi:10.4135/9781412963909.n68
- Gorsuch, R. L. (2008). *Factor analysis (Second Edition)*. New York: Psychology Press.
- Güleçoğlu, G. Y. & Öztürk, G. (2021). Research Perspectives on English as a Foreign Language (EFL) Learning Motivation in Turkish Context: A Systematic Review of Studies between 2010 and 2021. *Language Teaching and Educational Research*, 4(2), 161-180.
- Hava, K. (2019). Exploring the role of digital storytelling in student motivation and satisfaction in EFL education. *Computer Assisted Language Learning*, 1-21.
- Hair J. F., Tatham R. L., Anderson R. E. & Black W. (1998). *Multivariate Data Analysis*. New York: PrenticeHall.
- Kaid Mohammed Ali, J. & Rashad Ali Bin-Hady, W. (2019). A study of EFL students' attitudes, motivation and anxiety towards WhatsApp as a language learning tool. *Arab World English Journal (AWEJ) Special Issue on CALL*, (5).
- Kassem, M. A. M. (2018). Improving EFL Students' Speaking Proficiency and Motivation: A Hybrid Problem-based Learning Approach. *Theory & Practice in Language Studies*, 8(7).
- Kalaycı, Ş. (2010). *SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri*. Ankara: Asil Yayınları.


- Karagöz, Y., Mutlu, H. T., Sağır, S., & Celil, M. (2019). Kargo Şirketi Seçimini Etkileyen Faktörlerin Belirlenmesine Yönelik Ölçek Geliştirilmesi: Sivas Örneği. *Ekonomik ve Sosyal Araştırmalar Dergisi*, 15(2), 235-247.
- Lasagabaster, D. (2017). Language learning motivation and language attitudes in multilingual Spain from an international perspective. *The Modern Language Journal*, 101(3), 583-596.
- MacCallum, R. C., Widaman, K. F., Zhang, S. & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods*, 4, 84-99.
- Mori, S., & Gobel, P. (2006). Motivation and gender in the Japanese EFL classroom. *System*, 34(2), 194-210.
- Namaziandost, E., Neisi, L., Kheryadi & Nasri, M. (2019a). Enhancing oral proficiency through cooperative learning among intermediate EFL learners: English learning motivation in focus. *Cogent Education*, 6(1), 1683933.
- Namaziandost, E., Esfahani, F. R. & Ahmadi, S. (2019b). Varying levels of difficulty in L2 reading materials in the EFL classroom: Impact on comprehension and motivation. *Cogent Education*, 6(1), 1615740.
- Nakip, M. (2006). *Pazarlama Araştırmaları: Teknikler ve SPSS destekli uygulamalar*. Ankara: Seçkin Yayıncılık.
- Öztürk, G. & Gürbüz, N. (2013). Motivational Orientations of Turkish EFL Students: The Case at a State University. *Dil ve Edebiyat Eğitimi Dergisi*, 2(8), 62-77.
- Pintrich, P.R., Smith, D.A.F., Garcia, T. & McKeachie, W.J. (1991). *A manual for the use of the motivated strategies learning questionnaire (MSLQ)*. Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning
- Reiss, S. (2012). Intrinsic and extrinsic motivation. *Teaching of Psychology*, 39(2), 152-156.
- Ryan, R. M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, pp. 54-67.
- Vansteenkiste, M., Lens, W. & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in selfdetermination theory: Another look at the quality of academic motivation. *Educational Psychologist*, 41(1), 19-31.
- Velicer, W. F. & Fava, J. L. (1998). Effects of variable and subject sampling on factor pattern recovery. *Psychological Methods*, 3(2), 231-251.
- Warden, C. A. & Lin, H. J. (2000). Existence of integrative motivation in an Asian EFL setting. *Foreign language annals*, 33(5), 535-545.
- Yu, S., Zhou, N., Zheng, Y., Zhang, L., Cao, H. & Li, X. (2019). Evaluating student motivation and engagement in the Chinese EFL writing context. *Studies in Educational Evaluation*, 62(1), 129-141.
- Yu, S., Jiang, L. & Zhou, N. (2020). Investigating what feedback practices contribute to students' writing motivation and engagement in Chinese EFL context: A large scale study. *Assessing Writing*, 44, 100451.

# Social, Political and Scientific Backgrounds of Learning Theories: An Extended Contrapuntal Lens into Learners' Conceptualizations

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 26.05.2022</p> <p>Available online: 18.11.2022</p>	<p>From Plato to contemporary educators of Learning Sciences today, the aim of hard work is to reveal the nature of learning, how man learns, and how it could be perfected. As a result, different learning theories were created with cumulative effects of society, politics, and scientific developments. This paper outlines the crossroad of the conceptualizations of these learning theories and their social, political, and scientific contexts. The study was designed as a phenomenological study through which PhD students' conceptualizations of learning theories were aimed to be understood. The reflection papers they wrote on seven learning theories (Behaviorism, Connectionism, Operant Conditioning, Affective Learning, Social Learning Theory, and Constructivism) were analyzed through a contrapuntal lens to understand the sociology of learning theories. The reflection papers as a data source reflected the close ties of learning theories and their social, political, and scientific background. Students discussed each learning theory with their original concepts and timely backgrounds. The data obtained from student reflection papers outlined how learning theories are conceptualized within their own social, political, and scientific contexts.</p>
	<p>© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> learning theories, contrapuntal lens, PhD students, higher education, sociology</p>

## Introduction

From Plato to contemporary educators today, much of the hard work has aimed to reveal the nature of learning, how man learns, and how it could be perfected. Different explanations, connections, and theories have been developed to explain how learning takes place. In the past few decades, Learning Sciences have taken over this significant inquiry with an emphasis on social context, design, and collaboration (International

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Society of the Learning Sciences, n.d.). Computer-assisted designs (Guzdial & Turns, 2000; Rummel & Spada, 2005; Yannier et al., 2022) and collaborative learning environments (Rienties & Tempelaar, 2018; DeLiema, Enyedy & Danish, 2019) have gained popularity and significance in both learning designs and academic studies. They have an effective role in educational policies. However, design-based studies are criticized for focusing on narratives and lacking certain grounds of scientific veracity (Shavelson et al., 2003). Also, they mostly focus on academic achievements and take a reductionist point of view on learning. Thus, a closer and more theoretical look into the learning needs to be made, and theories of learning are explained thoroughly, especially with their social, political, and scientific backgrounds.

Education has closer ties with sociology than any other branch that science has (Durkheim, 2016, 104), which makes learning theories social theories as well. “Theories of learning need to be understood, not only within their socio-political context but as sociopolitical contexts” (Philip & Sengupta, 2020, p.3). However, learning theories are taught in higher education without their sociological grounds. This paper asserts that teaching-learning theories with their sociological backgrounds increase the efficiency of teaching in higher education. The study focuses on “Learning Theories and Practice” course, where learning theories were discussed with their social, political, scientific and daily connections each week. The papers outlined that learning has close ties with society, culture, politics and science, and realizing these ties increases the efficiency of learning.

In this paper, the scientific inquiry of Philip and Sengupta is aimed to be furthered and broadened. They outlined how social, political and historical movements are interwoven in computing education and profession. In fact, social and political movements are cross-related with scientific developments. Thus, this study has taken the contrapuntal lens they used into the five main learning theories and discussed how they were conceptualized in relation with social, political and scientific movements in PhD students’ reflection papers.

### **The Link between Society, Science and Theories of Learning**

Learning is a social, cultural, political and scientific act realized in certain contexts. Thus, learning sciences have been developed under the effect of time and society. The characteristics of time, the progresses in other branches of science, and the politics have been effective on how man understood learning (Gutiérrez, 2016; Lave, 1996; McDermott & Varenne, 1995). Learning theories need to be understood not only in relation to the social and political contexts they emerged, but within the world these social, political and scientific contexts created (Philip & Sengupta, 2020). However, social and political context of learning seem to be reserved by sociology papers mostly focusing on inequalities reproduced by those contexts, suppression systems or criticism to capitalist education system. The close ties of social, political, and scientific contexts with learning theories are mostly missed out except for a few studies (Philip & Sengupta, 2020; Sawyer, 2014), which is addressed as a sociology of learning sciences in this paper.

The inefficient number of studies about the sociology of learning sciences resulted in diverse but not coherent, many but not deep research in learning sciences (Gorard & Taylor, 2004, p.130; Sarab & Squire, 2004; Brown, 1992). Design-based studies have been criticized for their methodology (Kelly, 2004), singularity point of view (Bell, 2004), and credibility. Learning is a context-mattered process and we must be more aware of the contextual characteristics of learning theories.

To further crystallize the close ties between the sociology of learning sciences and theories, the atmosphere of Pavlov’s behavioristic experiments could be exemplified. Pavlov’s orientation from church education to physiology happened at the same time when the scientific reformation of Enlightenment began. When he met Claude Bernard and came into science, the religious grounds of information were broken (Pavlov, 1942, p.12). The laboratory he used for his experiments was built with the grant Alfred Nobel received

for inventing dynamite. His Conditioning Theory was introduced after he received the Nobel Prize from Oscar II, the king of Sweden. Scientific developments and political relations had a significant role in his theory development.

A little time after Pavlov, learning was still a notion under the microscope of laboratories. It was constructed and conceptualized as a physical reaction. Watson, the father of Behaviorism, started rat experiments to understand “complex associations” of the nerves (Watson, 1903, p.5). Just in line with modernism, learning was formalized with disciplinary methods, strict rules, repetitions, the indistinguishability of individuals, and no room for creativity. Pavlov and Watson addressed the learners as “organisms” (Senemoglu, 2000) and omitted the cognitive, psychological, sociological, and historical roots of human learning. Their approach to ‘learners’ was in line with the timely scientific concerns. At the time, positive science and calculable approaches to it were accepted.

However, the 20th century was not only the time of positivism. Mind and cognition gained significance with Hegel. While post-modernity was shaking the walls of positivism, a path to cognition was being paved by Thorndike. Thorndike (1898) introduced background information and implied differences among learners. Another difference he brought into behaviorism was the sensations of rewards/punishments rather than actions. It was a movement from the materialistic zone to a more cognitive one. Vygotsky continued the paradigm shift and introduced constructivism. He brought a new breath into the field: communication and human relationships. His emphasis on society for building knowledge resembles Durkheim’s: “products of collective thought” (Durkheim, 1995, p.9). Both Durkheim and Vygotsky theorized knowledge as “the outcome of men and women acting on the world” (Young, 2007, p.44). With the development of sociology, learners transformed from organisms to social beings. The emphasis on society continued with Bruner’s Social Learning Theory. Learning became a concern of the environment (Pritchard, 2009).

For Affective Learning Theory, the development of psychology as a science formed the basis. With the third force in psychology (Bugental, 1964), feelings and perceptions gained attention. Various scholars highlighted the psychological domain and feelings. Maslow put the affective domain among human need hierarchy (Maslow, 1943), Kohlberg introduced the term “moral education” (Kohlberg, 1971), and Koffka implied the difference between reality and perception. He introduced deduction as a method of learning (Koffka, 2013). Individuality, sensations, and flexibility were introduced in the field of learning. These developments helped to understand the reflexivity of modernity (Giddens, 2020, p. 53). To him, the basic ground of modernity, logic, caused paradoxes. Removing all traditional and dogma traces from rational thinking leads to more questions. Those questions cannot be answered by logic, which creates a paradox.

The paradoxes of modernity are not solved completely but handled with the new paradigm: postmodernism. Postmodernism was realized in literature (Hays, 1942), architecture (Jencks, 1984), religion, and science. Starting with Nietzsche, Heidegger, and Kierkegaard, the theory of postmodernism was developed and popularized in the world by the 1980s. The field of education got its share and a new theory was developed with roots in Rousseau: constructivism. The definition of true, knowledge and learning were transformed into an individualistic way. The mechanisms of authority and hierarchy for age and status were broken. In 2006, this new paradigm in education affected Turkish educational policies, and constructivism was adopted as the official method of learning (Ministry of National Education [MoNE], 2005).

The timeline of learning theories reflects the social, political, and scientific contexts of the time. Foucault (2009) points out that scientific developments emerge within historical and social development and accumulation. Different conceptualizations of learning created and emerged with the constructs of the time, popular scientific methods, social agenda, and political movements (Althusser, 2014/1971; Apple, 1990, p.27; Williams, 1961). Man perceives the world from the glasses of context (Einstein, 1945) and the world is created with contextual tools (Marx & Engels, 2019). This contrapuntal ties of learning with society, politics, and

science need a closer and more critical look. What Philip and Sengupta (2020) started in their study was a sound step into these ties. However, their study was on a theoretical level and this brings to mind one question: “Do learners carry these ties in their conceptualizations of learning theories, or these ties are present only on the theoretical level?”. In this study, their research is broadened with the domain of science and supported by the perspectives of learners.

## **Methodology**

### **Research Design**

This study was designed at the end of the PhD course “Learning Theories and Practice” given at Yildiz Teknik University, in the 2017-2018 academic year. The course objective was to cover the main learning theories (Behaviorism, Connectionism, Operant Conditioning, Affective Learning, Social Learning Theory and Constructivism). Each week, one learning theory was presented by one PhD student, and all students were required to write reflection papers for the following week about the theory presented. Reflection papers needed to include deep thoughts on the learning theory, reflections, and associations of the learning theory in daily life, movies, commercials, books, etc. At the end of the lesson, one of the researchers noticed the evolution of associations in reflection papers from surface-level, behavioristic patterns into complex, multimodal, and elaborated examples. She proposed the instructor for analyzing the reflection papers critically and this is how the study emerged. Students of the course were asked for permission, their grant was taken and reflection papers were analyzed critically. After a long phase of revisions, Philip and Sengupta’s study was confronted and the contrapuntal lens they used was facilitated. Edward Said (1979) used a contrapuntal analysis to depict how imperialism and orientalism happened together rather than viewing them as reason and result or cause and effect. Later, Philip and Sengupta (2020) used a contrapuntal lens to understand imperialism and computing education. Their methodology was utilized to make a more sound meaning of the close ties between the conceptualizations of learning theories and social, political, and scientific developments.

This study was designed as a qualitative, phenomenological study to investigate the learning theories perceptions of a group of PhD students. The qualitative paradigm is defined to be relying on human perception, or understanding (Stake, 2010). A phenomenological study seeks to understand several individuals’ experiences or conceptualizations (Creswell, 2007). The aim of phenomenological research is to find common concepts or conceptions among different experiences. In this study, participants were asked to reflect upon learning theories from their daily lives. In other words, they were required to find out their experiences for each learning theory. The study tries to understand their experiences about learning theories. To understand how PhD students conceptualized learning theories, their documents were analyzed through a contrapuntal lens suggested by Philip and Segupta (2020). The contrapuntal lens enabled researchers to understand students’ conceptualizations of learning theories with their contextual backgrounds.

### **Participants**

Participants of this study are seven students who participated in the “Learning Theories and Practice” PhD course. They were selected through purposive sampling encouraged for qualitative inquiry utilizing participants to be of a certain kind (Yin, 2011). They were between the ages 24 and 28, and all of them were graduates of the Curriculum and Instruction master program. Three of the participants were male adults while four of them were females. They were coded with “S” for “Student”, a number and “M/F” for “Male / Female”. For example, S2M meant “Student number 2, Male”. The researchers also participated in the lesson as a student and instructors. However, the study was not initiated when the course started. Thus, the data of the study, reflection papers, were created freely. Not knowing their papers would be used in a study has increased the validity of the research by diminishing the effect of observation. Berg (2000) argues that reality is affected by

the actions of participants when they know they were observed for a certain aim. Thus, it is believed that the participants were not affected by the study/researcher as they did not know their work would be studied.

### **Data Collection**

The data of this study is composed of discussion papers of PhD students taking a course on learning theories and practice. Each week, one learning theory was explained and discussed in the classroom; and students were required to write a discussion paper about the learning theory of the week. All discussion papers were shared with the group online, and the instructor of the course gave feedback on each one before the next class. Also, the instructor gave feedback on the discussion papers in the classroom, which encouraged students to improve themselves. Before starting the study, the researcher asked for permission from the participants to use their papers as data, and started the study after they granted permission. All papers for each learning theory were analyzed without any elimination.

### **Data Analysis**

The data of this study were analyzed with the content analysis technique, which is a technique to understand and determine certain characteristics of communication in a systematic and objective way (Berg, 2000). All discussion papers were read again and again by both researchers individually to derive codes first. Then, the papers were read repeatedly to draw themes and the codes and themes were shared with an expert for expert opinion.

## **Results and Discussion**

Reflection papers of PhD students outlined a timeline of learning theories from behavior-level, animal characteristics to a deeper and inclusive-of-daily-life concept. The codes for Behavioristic learning theories were related to wildness and basic humane skills like eating while Constructivist theory was associated with world problems, activism, and so on. The way PhD students reflected on each learning theory changed in accordance with timely movements.

### **Learning Theories Reflected with Social, Scientific, and Political Developments**

#### **Classical Conditioning: positive science, violence, and rehab**

The 19th century was a time of rapid social change, urbanization, and industrialization. The slavery system was just abolished, and society had witnessed violence for a long time. The rights of women, colored people, and the peasantry were political issues of the time. Interestingly, the most frequent theme of PhD students' reflection papers was violence (Table 1). They associated the theory with "attacks, deaths, fear, violence, hunger, etc." Humans and animals learned and unlearned physical injuries, violent attacks, imprisonment, and death by classical conditioning. S1M explained how the character Puff learned to change his behaviors with conditioning: "It was tried to change Puff's behaviors with electric shock – conditional stimulus – and behavior change was observed as a result". All participants except for one (S6F) used violent examples and used Classical Conditioning as a rehab. Classical Conditioning has been used as a method of teaching violence (Carnagey & Anderson, 2003; Sapolsky, Molitor & Luque, 2003; Griffiths & Shuckford, 1989) as well as a rehab method for violence (Wagner, Skowronski, Milner, Crouch & Ammar, 2019; Karakurt, Patel, Whiting & Koyutürk, 2017; Wirtz & Harrell, 1987). Although there are no references to violence in Pavlov, the social grounds of the theory are vivid in students' reflection papers.

**Table 1.** Classical Conditioning

Themes	Learning theory concepts	Learning process	Learning outcome	Visible platform	Learner's identity	Violence
Codes	(1) conditioning, stimulus, learning, generalizing, Pavlov, electric shock, sequence, learner helplessness	(6) teaching, applying, helping, associating, observed behavior, remembering, recording	(3) change in behavior, habit creation, stop the behavior, and performance, forget, success, leave	(4) advertisement, movie, laboratory, media, school, research, book	(5) organisms, blacks, babies, children, customers	(2) attack, kill, fear, death, violent, save, hunger

Students' reflection papers also mirror the scientific development of the time. In the 19th century, positive science was established and justified as: "One can affirm nothing that science denies, deny nothing that science affirms, and establish nothing that does not directly or indirectly rest on principles taken from science." (Comte, 2000, p.28). Positive science declared "there can be no real knowledge but that based on observed facts" (Comte, 2000, p.29). Educational sciences, naturally, were based on observation and formulations. Likewise, PhD students reflected on learning outcomes often. It was one of the most frequent themes in classical conditioning papers. S7F wrote the story of a dog's learning aggression with a conditioning method and noted "The dog changed behavior with the sequence of black skin-beating repetition". Also, S1M explained the theory with behavior change experiments in the laboratory: "Puff finds a violent person and they start doing some behavior change experiments in the laboratory" Behavior change is a term Pavlov (1960) himself used a lot in his book, so it could be stated that participants internalized the theory. It is noteworthy that the outcomes of learning are brought forward more than any other procedure of the learning process. Also, learner identity as the least frequent theme reflects the universality principle of positivism. Positivism acknowledges "a universal order" (Sutton, 2002, p.24) and regards humans "as a kind of animal, same for everyone" (Sutton, 2002, p.34). Classical Conditioning is also tested frequently on animals (Gormezano, Kehoe, & Marshall, 1983; Gormezano, Schneiderman, Deaux, & Fuentes, 1962), which is in alignment with obscured learner identity. Two centuries later, the basic principles of positivism are vivid in PhD students' reflections.

Participants stressed the visible platforms where Classical Conditioning can be observed as advertisements, movies, laboratories, media, and schools. Advertisements use Classical Conditioning for directing behavior (Folkyord et al., 2016; Stuart, Shimp, & Engle, 1987; Gorn, 1982) and this social ground of Conditioning is reflected by the students. They mentioned advertisements and movies as the most frequent places enacting Classical Conditioning. Advertisements use product-sensation repetition and aim to increase their sales. They repeatedly display the chain on televisions, billboards, social media, and the Internet. It seems as a fair way of persuading people. Also, one of the students (nickname) used political ties and explained the theory as the official learning theory to create citizens: "The minister expressed the importance of character education between the ages 0-6 and stated that Classical Conditioning would teach them required behaviors". Classical Conditioning could control children's eating habits and tastes (Moens et al., 2014). As the massive control mechanism, the student related the theory to politics.

### Beyond Conditioning: Accountability and Evacuation

Connectionism and Operant Conditioning were the next theories to be discussed in the lesson. Although they are different theories, discussion papers did not display many variances (Table 2). Operant Conditioning was most frequently explained with learning outcomes, just as Classical Conditioning. The similarity between the two theories in basic principles (Blackman, 2017; Schwartz, & Gamzu, 1977) was reflected in students' discussion papers. Positivism was still the authority in science with valuable studies of Russel and Whitehead



(Solomon & Higgins, 2013). They were eager to prove the power of logic and accountability. Science was centered on these two phenomena, which affected educational accountability by behaviors. In a similar way, S4M regarded behavior change as proof of learning and wrote “you can understand when your dog has learned from the reactions it gives to the clicker”. S4M’s reflection on the theory involved animals as learners, just as in Classical Conditioning. Learners were identified as mechanical items like animals (Eftekhar et al., 2018; Redon et al., 2019; Eaton, Libey & Fetz, 2017), organisms (Prsa, Galiñanes & Huber, 2017; Vorster & Born, 2017), people, and citizens.

**Table 2.** Connectionism and Operant Conditioning

Themes	Learning theory concepts	Learning process	Learning outcome	Visible platform	Learner’s identity	Reward and punishment	Violence	Example term
<b>Connectionism Codes</b>	stimulus, connectivism, learning, connection, Thorndike, little steps, attention-getting, the law of effect	(6) observation, being visible, applying, repetition, condition	(1) reaction, conditioning, behavior, possibility increase or decrease, accepting, learning to fear, success, correct,	(3) movie, book, life, advertisement, society	(4) organism, student characteristics, abilities	(3) reward, pleasure, punishment, treat, the effect of punishment	(5) discipline problems, beating, violence, fear, pain, desperation	-
<b>Operant Conditioning Codes</b>	(4) learning, Skinner, stimulus, behaviorism, operant, psychology, learning theory, formula	(3) repetition, directing, increase in possibility, association, work, frequency of the behavior, control, time, pace, robotization	(1) operant conditioning, reaction, shaping behavior, result, diminished behavior, positive and negative behavior, terminal behavior	(7) experiment, environment, books, school	(5) animal, human, organism, alive, citizen, roles, student, anatomy	(2) reward, punishment, reinforcement, star, food, positive and negative reinforcement, outer reward, applause	(8) violence, badness in people, harm	(6) power, party, clicker, sky, mask, earth

The lecturer criticized discussion papers for Connectionism and Operant Conditioning for lacking a coherent theme. Students wrote about the basic rules, principles, and examples of reward and punishment; however, most of the papers lacked a uniform ground, a coherent story, or a tale. The papers were evacuated of local time and space, which is also criticized by Giddens (2020). Modernity has deleted the local time and space and replaced them with the modern, artificial ones. The discussion papers of PhD students reflect the social time and space features of modernity, in alignment with the characteristics of the era.

### Feelings to Understand, Feelings to Hide

Heidegger asserts people “accord” themselves to the world not with isolated information, but with “moods” (Solomon & Higgins, p.344). To him, humans are not only “thinking animals” but “holistic” beings involving moods and feelings (p.344). They live and understand the world according to their moods, which is a common theme in discussion papers. Students mentioned how people’s lives and perceptions changed with effective learning (Table 3). S2M narrated the story of Danny, who was treated violently by Uncle Bart. But when Sam treated Danny with love and respect, the world of Danny changed into a positive one. “We need to ask this question here: What was the magic transforming Danny from dog feelings to a human one? This was,

for sure, the love and respect shown to him.” (S3M). Feelings gained attention in philosophy, science, and literature. Anderson criticizes imagined nations for being artificial, made up, and invented (2020, p.24). The citizens of these Enlightenment nations do not have bonds with and feelings for each other. Anderson criticized the robotic, unfelt conceptualization of humans politically and historically. The need for an affective domain was vivid in his work. Similarly, one of the students discussed wars and outlined “love” as the bond uniting people: “One of the rarest universal things is love. Wherever you go, love rules there.” (S4M). As Anderson (2020) stressed the function of language as “transmitting culture” (p.47), S4M emphasized the language of love (“A smile full of love carries the same message in every language”).

**Table 3.** Affective Learning

Themes	Learning theory concepts	Learning process	Learning outcome	Visible platform	Feelings	Assessment
<b>Codes</b>	(4) affective learning, emotional quality, psychologist, connections	(6) need, physiological need, social adaptation	(3) adaptation, empathy, academic success, the effect of love on success, realizing oneself, self-discipline	(2) hidden curriculum, values education, character education, morals education, interpersonal relationship, peace education, democracy education	(1) love, value, belonging, trust, happiness, respect	(5) intellectual quality, measurability of intellect, assessment with observation, difficulty in assessment

Political echoes of Affective Learning in education are mostly vivid in hidden curricula. Valance (1983) asserts hidden curriculum serves the “inculcation of values” (p.9). Similarly, the students referred to visible platforms of the theory as the second most frequent theme. They noted visible platforms as “hidden curriculum, values education, moral education, character education”. The words of Giroux and Penna (1983) “The belief that schooling can be defined as the sum of its official course offerings is a naive one” (p.100), and S3M’s “As it can easily be understood, the official curriculum is closer to teaching, the hidden curriculum is closer to education” seem likewise. Students outlined affective learning as a sociopolitical issue, implied to students, hidden in the curriculum. School is already called as a “sociopolitical institution” (Giroux & Penna, 1983, p.106). Human relations, political orders, and curriculum build schools as sociopolitical environments.

### **Social Learning: Daily Life (Sociology) and Social Justice as an Issue**

Social Learning Theory was the most vividly associated theory with real life in PhD students’ reflection papers. The most frequent theme of the theory was visible platform as television, family, environmental effect, culture, society, etc. The development of the theory coincides with the development of sociological explanations of daily life. In 1955, Parsons (1955) highlighted the effect of interactions in building and rebuilding a character as: “The main framework of this structure, we will attempt to show, consists of internalized social objects systematically related to each other. The process of differentiation of these objects, as subsystems of the personality, makes it necessary to establish new subsystem boundaries and new relations as of relative strength and of integration” (pp. 41, 42). In 1956, Erving Goffman (1956) explained the effect of daily interactions in determining who we are: “When an individual plays a part he implicitly requests his observers to take seriously the impression that is fostered before them” (p. 10). He emphasized the effects of appearance, manner, and expression in daily life. The sociological explanations of daily life and one of the tendencies of sociology focusing on daily life with empirical data (Mills, 1959/2000) are apparent in students’ discussion papers (Table 4). They outlined social interactions as moods of learning. S2M wrote, “Because children take the ones they interact with as models”. This sentence of S3M resembles Goffman’s of Parson’s

explanations of interactionist roles in daily life: “So, the individual chooses, interprets, evaluates situational knowledge and turns it into behavior source.” Students’ discussions reflected the sociological development of the time and focused mostly on daily life.

**Table 4.** Social Learning

Themes	Learning theory concepts	Learning process	Learning outcome	Visible platform	Learner's identity	Violence	Feelings	Role Model	Learning environment
<b>Codes</b>	(3) observation, models, learning by observation, Bandura, paying attention, mentors in education, effect, social learning	(9) observation, trying	(4) respect for rights, being accepted, learning fairness, learning happiness, socializing, learning behavior, learning shame,	(1) mentor, television, family, environm ent, culture, society, TV series, morals, fashion, Internet, social media, movies, advertise ments,	(6) children, women, positions, peers, people, son	(5) pressure, violence, child brides, crying, being mocked, shouting, cheating in exams, bad habits, bad models	(7) like, pride, intimacy, feelings, affection, trust	(2) imitating, taking as models, role models, behavioral models, resemble, more than imitation, doing the same	(8) reliable environm ent, environm ent

Students used codes such as “respect for rights, being accepted, learning fairness, learning happiness, socializing”, etc. to describe the outcomes of Social Learning. These codes reflect the political issues of the 1970s when women’s rights, fairness, and social justice were hot topics. S5F used women’s rights as the main theme of her discussion paper and stated “Use the Social Learning Theory of Bandura. Use this theory, all aspects of social life, and all role models for social benefits. This way you can see women as value, human, individual, and as free. This way, perhaps, you can prevent all the bad for women and provide a fair life chance.” Similarly, S7F expressed that unfairness is spread via social learning with the words: “Modelling could be defined as taking characters in movies or TV series, behaving and displaying gender discriminations as like they do. This is the main principle of social learning theory. We learn unfair behaviors or roles by social learning.” S4M highlighted social injustice as teaching: “Jack looks down on people, believes in bullying and has a tendency for bad....Kids paint their faces and have fun, go hunting and kill pigs”. Kids learnt violent behavior from Jack, which is one of the themes drawn from the papers (theme: violence). Learning social justice with social learning theory (Jessup-Anger et al., 2019) is a frequent issue discussed in the papers. PhD students reflected on the social conditions of the time when the theory was developed in their papers and depicted unfair conditions in terms of gender and society.

### Conveying the Critical Look: Constructivism

While postmodernism was threatening the power relations built by modernism, the power of the teacher, curriculum, and state in education were questioned, too. Reflecting the artistic work of authority in education, S3M correlated the theory with the movie *Dead Poets Society*. In his paper, S3M criticized the behaviorist authority of the teacher and the strict curriculum: “The movie criticizes the way of teaching and reveals that we need to say goodbye to the disciplinary education system and remove the boundaries. One of the scenes in the movie show ‘books cannot answer everything.’ It is not true to base the whole education on a single belief”. In harmony with Freire, one of the most prominent critics of banking models of education (2018/1990, p. 59), S3M discusses that education should give voice and freedom to students. The 2000s

witnessed multi-ness. People have realized there could be various trues, facts, beliefs, religions, genders, etc. They all be recognized and accepted, as S7F reflected the same requirements for education and quoted from Malaguzzi:

“The child  
is made of one hundred.  
The child has  
a hundred languages  
a hundred hands  
a hundred thoughts  
a hundred ways of thinking  
of playing, of speaking.”.

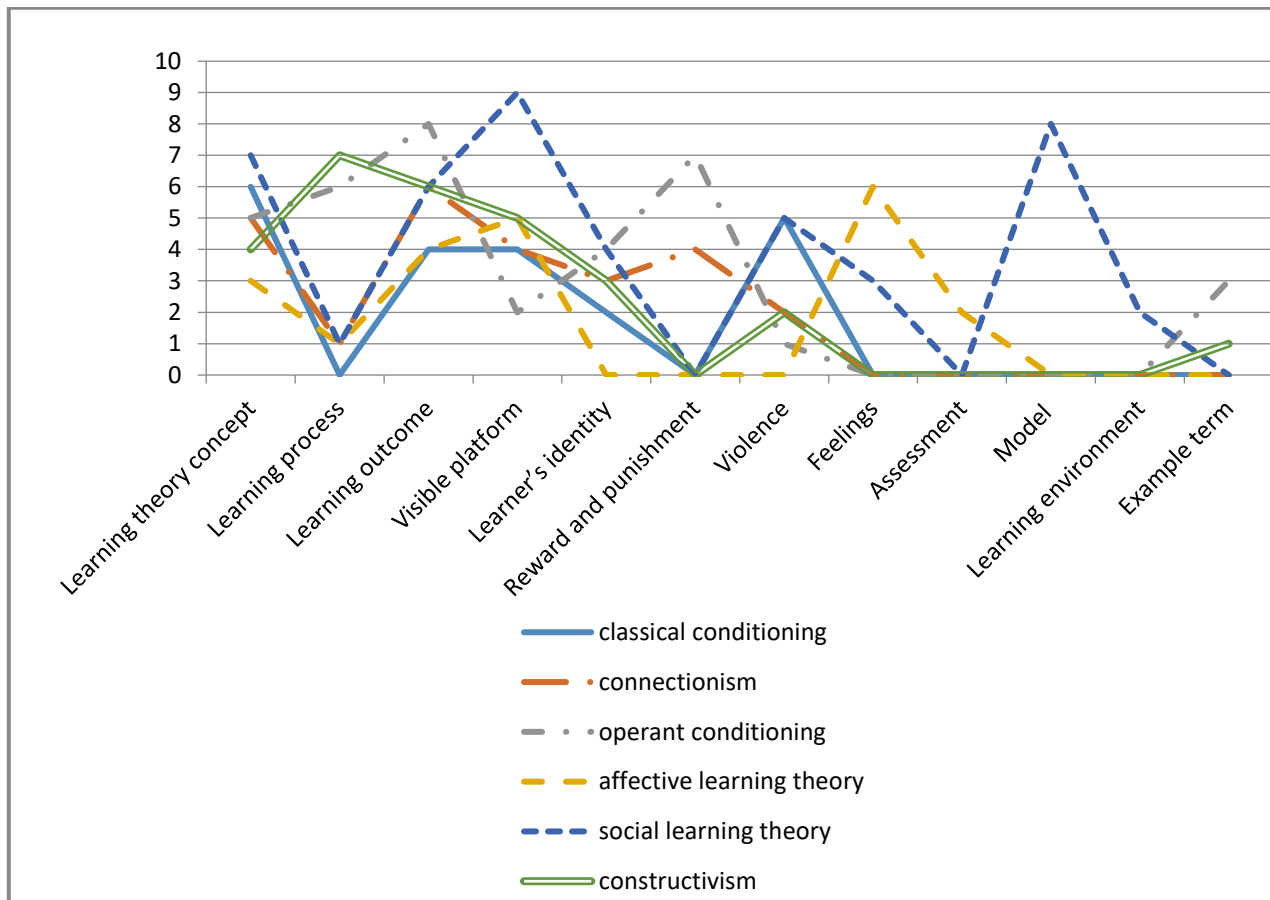
While discussing Constructivism, the students' language was mostly critical (Table 5). They explained the theory by emphasizing negative practices critically as S6F questioned: “As teachers, do we support our students' learning? As parents, how many opportunities do we give our children to learn? Or are we being impatient and doing the work for them? Do we support their questioning and producing? Or do we hinder their learning? We must all ask these questions and criticize ourselves.” Although Constructivist Learning proposes positive values such as democracy, social justice, equality, freedom, and voice, all students raised their arguments on negative or counter examples. S1M explained the main principles of the theory by contrast: “Constructivism is based on two main principles: 1. Knowledge is not gained passively. It is constructed by the learner. 2. Interpretation of knowledge helps adaptation and regulation of experiences, not discovering metaphysical reality.” (S1M). These explanations reflect the language of Glasserfeld. In his article about Constructivism, he contrasted traditional knowledge theories with Constructivism (1981/1984). Both postmodernism as an ideology and Constructivism as a learning theory was developed as anti-theses, and the students reflected the atmosphere of these theories. They grounded their arguments on the blame of other practices. This tone kept criticizing today's practices, too. Most of these criticisms were political as in S5F's paper: “While the world is aiming to raise activists and reformists to change the world, we are stigmatizing students with numbers and sit them in front of the boards, which are changed from black to white as a sign of development.” The modern perception of students and classroom arrangements are criticized for not being Constructivist. Also, S6F criticized the pre-constructivist role of teacher and students: “To me, teachers have always been the people who teach, ask questions, test, and evaluate. And students have been listening, raising their hands to speak, and studying hard to get high marks from the lessons. Although the MonE adopted Constructivism in 2005, this change has stayed in the books of the curriculum”. This critical look into educational politics and real practices is alike Foucault's criticism on hierarchy (1995, p.170, 171), Althusser's criticisms on authority (2014/1971, p.145), and Freire's criticisms of the banking education system (2018/1990, p. 59), and teachers (2001/1998, p.141).

**Table 5.** Constructivism

Themes	Learning theory concepts	Learning process	Learning outcome	Visible platform	Learner's identity	Violence	Example term
Codes	(4) Constructivism, education, learning, learning theory, information theory, cognitive approach	(1) meaning, student- centered, information, help, explore, reconstructing, mind, active process, cooperation, flexibility	(2) constructing knowledge, understanding self, learning to learn, social effect, permanence, performance, creativity, change, internalize, question	(3) school, philosophy, movies, life, vocabulary learning, Kant, culture, Vico, Vygotsky, memories	(5) free, individual, differences, activist, friends, children's characteristics, active students	(6) seperation , failure, pressure, angry	(7) trash, place number, assessm ent system

### Conclusive Statements: Learning Theories and Their Contextual Reflections

Learning sciences is a broad field with numerous possibilities for design, computer-enhanced learning, and implementation. Different learning theories and their various applications make the field a large area of implementation. However, the theoretical level of these implementation seems to be ignored in the field in recent years. This study started in two steps. The first one was with the reflection papers of PhD students taking the course "Learning Theories and Practice." Their papers were reflective of both learning theories and their social, political, and scientific contexts. The second step was taken when Philip and Sengupta's (2020) invitation for further studies on the implicitness of social contexts in learning theories. The researchers analyzed the reflection papers with a critical contrapuntal lens and the close ties of learning theories and their contextual backgrounds were distinguished (Figure 1).

**Figure 1.** Theories in Change

The papers on Behaviorism reflected wildness and animal learning. Students mentioned violence, taming, and biological motives frequently in their papers. This attitude of theirs was in line with Pavlov and Watson's laboratory experiments, approach to learning, and the time's social, political, and scientific contexts. In the 1900s when Behaviorism was developed as a theory, the effects of modernism were still valid. "Distanciation of time and space" (Giddens, 2020, p.25) decontextualized learning and learners, and this tendency was apparent in students' reflection papers.

While learning theories were changing each week in the course, PhD students included background information, personal traits, environmental concerns, social relationships, and individualism into their papers. The evolution of their papers were reflective of the changing process of learning theories and their contextual backgrounds. Students not only discussed the theory itself but presented a world when the theory itself was created. Their papers consolidate the idea that "theories of learning are implicit theories of society" (Philip & Sengupta, 2020, p.2). With the data of student conceptualizations, it is explicitly clear that learning theories are not only lone techniques to swallow information but glasses from which one would see the whole world.

## REFERENCES

- Akers, R. L., & Lee, G. (1996). A longitudinal test of social learning theory: Adolescent smoking. *Journal of Drug Issues*, 26(2), 317-343.
- Althusser, L. (2014). *On the Reproduction of Capitalism: Ideology and Ideological State Apparatuses*. Verso (originally published as Althusser, L. (1971). *Lenin and Philosophy and Other Essays*, trans. Brester, B. New Left Books).
- Anderson, B. (2020). *Imagined Communities*. Trans. İskender Savaşır. Metis Publishing.
- Arslan, A., Orhan, S., & Kırbaş, A. (2010). Türkçe dersinde yapılandırmacı öğrenme yaklaşımının uygulanmasına ilişkin yönetici görüşleri. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 14(1), 85-100.
- Bailenson, J. N., Yee, N., Blascovich, J., Beall, A. C., Lundblad, N., & Jin, M. (2008). The use of immersive virtual reality in the learning sciences: Digital transformations of teachers, students, and social context. *The Journal of the Learning Sciences*, 17(1), 102-141.
- Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research*, Illinois: Rand McNally & Company.
- Bandura, A. (1978). Social learning theory of aggression. *Journal of communication*, 28(3), 12-29.
- Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *The journal of the learning sciences*, 13(1), 1-14.
- Bechtel, W., & Abrahamsen, A. (1991). *Connectionism and the mind: An introduction to parallel processing in networks*. Cambridge, MA: Basil Blackwell.
- Blackman, D. E. (2017). *Operant conditioning: an experimental analysis of behaviour*. London: Routledge.
- Borges, J. C., Ferreira, T. C., de Oliveira, M. S. B., Macini, N., & Caldana, A. C. F. (2017). Hidden curriculum in student organizations: Learning, practice, socialization and responsible management in a business school. *The International Journal of Management Education*, 15(2), 153-161.
- Boyd, B. L., Dooley, K. E., & Felton, S. (2006). Measuring learning in the affective domain using reflective writing about a virtual international agriculture experience. *Journal of agricultural education*, 47(3), 24-32.
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The journal of the learning sciences*, 2(2), 141-178.
- Buerkel-Rothfuss, N. L., Greenberg, B. S., Atkin, C. K., & Neuendorf, K. (1982). Learning about the family from television. *Journal of communication*, 32(3), 191-201.
- Bugental, J. F. (1964). The third force in psychology. *Journal of humanistic psychology*, 4(1), 19-26.
- Buissink-Smith, N., Mann, S., & Shephard, K. (2011). How do we measure affective learning in higher education?. *Journal of Education for Sustainable Development*, 5(1), 101-114.
- Carew, T. J., Hawkins, R. D., & Kandel, E. R. (1983). Differential classical conditioning of a defensive withdrawal reflex in *Aplysia californica*. *Science*, 219(4583), 397-400.
- Carnagey, N. L., & Anderson, C. A. (2003). Theory in the study of media violence: The general aggression model. *Media violence and children*, 87-106.
- Chan, K., & McNeal, J. U. (2006). Chinese children's understanding of commercial communications: A comparison of cognitive development and social learning models. *Journal of Economic Psychology*, 27(1), 36-56.
- Comte, A. (2000). *The Positive Philosophy of Augiste Comte*. Trans. Harriet Martineau. Batoche Books.
- Cooper, R. M., & Zubek, J. P. (1958). Effects of enriched and restricted early environments on the learning ability of bright and dull rats. *Canadian Journal of Psychology/Revue canadienne de psychologie*, 12(3), 159-164.
- Coussi-Korbel, S., & Fragaszy, D. M. (1995). On the relation between social dynamics and social learning. *Animal behaviour*, 50(6), 1441-1453.

- Cowan, W.M.; Harter, D.H.; Kandel, E.R. (2000). "The emergence of modern neuroscience: Some implications for neurology and psychiatry". *Annual Review of Neuroscience*. 23: 345–346. doi:10.1146/annurev.neuro.23.1.343. PMID 10845068.
- Cubukcu, Z. (2012). The effect of hidden curriculum on character education process of primary school students. *Educational Sciences: Theory and Practice*, 12(2), 1526-1534.
- Çiftçi, S., Sünbül, A., & Köksal, O. (2013). Sınıf öğretmenlerinin yapılandırmacı yaklaşıma göre düzenlenmiş mevcut programa ilişkin yaklaşımlarının ve uygulamalarının değerlendirilmesi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 9(1), 281-295.
- Davidson, Thomas. (1900). *Aristotle and the ancient education ideals*. New York: Charles Scribner's.
- DeLiema, D., Enyedy, N., & Danish, J. A. (2019). Roles, rules, and keys: How different play configurations shape collaborative science inquiry. *Journal of the Learning Sciences*, 28(4-5), 513-555.
- Dhanushkodi, A., Bindu, B., Raju, T. R., & Kutty, B. M. (2007). Exposure to enriched environment improves spatial learning performances and enhances cell density but not choline acetyltransferase activity in the hippocampus of ventral subicular-lesioned rats. *Behavioral neuroscience*, 121(3), 491-500.
- Durkheim, E. (1995). *The Elementary Forms of Religious Life*. Trans. Fields, K. E. The Free Press.
- Eaton, R. W., Libey, T., & Fetzi, E. E. (2017). Operant conditioning of neural activity in freely behaving monkeys with intracranial reinforcement. *Journal of neurophysiology*, 117(3), 1112-1125.
- Jencks, C. (1984). *Postmodern Architecture*. London.
- Eftekhari, A., Norton, J. J., McDonough, C. M., & Wolpaw, J. R. (2018). Retraining reflexes: clinical translation of spinal reflex operant conditioning. *Neurotherapeutics*, 15(3), 669-683.
- Einstein, A. (1945). A generalization of the relativistic theory of gravitation. *Annals of Mathematics*, 578-584.
- Fidan, N. K., & Duman, T. (2014). Sınıf öğretmenlerinin yapılandırmacı yaklaşımın gerektirdiği niteliklere sahip olma düzeyleri. *Eğitim ve Bilim*, 39(174).
- Flusberg, S. J., & McClelland, J. L. (2014). Connectionism and the emergence of mind. *The Oxford handbook of cognitive science*, 1, 1-22.
- Folkvord, F., Anschutz, D. J., Boyland, E., Kelly, B., & Buijzen, M. (2016). Food advertising and eating behavior in children. *Current Opinion in Behavioral Sciences*, 9, 26-31.
- Thorndike, E. L. (1898). Animal intelligence: An experimental study of the associative processes in animals. *The Psychological Review: Monograph Supplements*, 2(4), i.
- Foshee, V. A., Bauman, K. E., & Linder, G. F. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and the Family*, 61(2), 331-342.
- Foucault, M. (1995). *Discipline and Punish: The Birth of the Prison*. Trans. Sheridan, A. Vintage Books (originally published as *Surveiller et Punir: Naissance de la prison*).
- Francescani, C. (1982). MARC: An affective curriculum for emotionally disturbed adolescents. *Teaching Exceptional Children*, 14(6), 217-222.
- Freire, P. (2001). *Pedagogy of Freedom*. Rowman & Littlefield Publishers (originally published in 1998).
- Freire, P. (2018, 1990). *Ezilenlerin Pedagojisi (Pedagogy of the Oppressed)*. Trans. Hattatoğlu, D. & Özbek, E. Ayrıntı Publishing.
- Giddens, A. (2020). *Modernliğin Sonuçları*, 9<sup>th</sup> press. Ayrıntı Publishing
- Giddens, A. (2020). *The Consequences of Modernity*. Trans. Ersin Kuşdil. Ayrıntı Publishing.
- Giroux, H. Penna, A. (1983). "Social Education in the Classroom: The Dynamics of the Hidden Curriculum". In *The Hidden Curriculum and Moral Education: Deception or Discovery?*. Eds. Giroux, H. Purpel, D. (1983). McCutchan Publishing Corporation.
- Goffman, E. (1956). *The Presentation of Self in Daily Life*. University of Edinburgh.



- Gutiérrez, K. D. (2016). 2011 AERA Presidential Address: Designing Resilient Ecologies: Social Design Experiments and a New Social Imagination. *Educational Researcher*, 45(3), 187–196. <https://doi.org/10.3102/0013189X16645430>.
- Lave, J. (1996). Teaching, as learning, in practice. *Mind, culture, and activity*, 3(3), 149-164.
- McDermott, R., & Varenne, H. (1995). Culture as disability. *Anthropology & Education Quarterly*, 26(3), 324-348.
- Gormezano, I., Kehoe, E. J., & Marshall, B. S. (1983). Twenty years of classical conditioning research with the rabbit. *Progress in psychobiology and physiological psychology*, 10, 197-275.
- Gormezano, I., Schneiderman, N., Deaux, E., & Fuentes, I. (1962). Nictitating membrane: Classical conditioning and extinction in the albino rabbit. *Science*, 138(3536), 33-34.
- Gorn, G. J. (1982). The effects of music in advertising on choice behavior: A classical conditioning approach. *The Journal of Marketing*, 94-101.
- Greenberg, B. S. (1981). Smoking, drugging and drinking in top rated TV series. *Journal of Drug Education*, 11(3), 227-234.
- Griffiths, M. D., & Shuckford, G. L. (1989). Desensitization to television violence: A new model. *New ideas in psychology*, 7(1), 85-89.
- Gutiérrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational researcher*, 32(5), 19-25.
- Guzdial, M., & Turns, J. (2000). Effective discussion through a computer-mediated anchored forum. *The journal of the learning sciences*, 9(4), 437-469.
- Hebb, D. O. (2005). *The organization of behavior: A neuropsychological theory*. London: Chapman & Hall.
- Hebb, D. O. (2013). *The Organization Of Behavior A Neuropsychological Theory*. London: Chapman And Hall Limited.
- Jessup-Anger, J., Armstrong, M., Kerrick, E. & Siddiqui, N. (2019). Exploring students' perceptions of their experiences in a social justice living-learning community, *Journal of Student Affairs Research and Practice*, 56(2) 194-206, DOI: 10.1080/19496591.2018.1506794
- Karakurt, G., Patel, V., Whiting, K., & Koyutürk, M. (2017). Mining electronic health records data: Domestic violence and adverse health effects. *Journal of family violence*, 32(1), 79-87.
- Kelly, A. (2004). Design research in education: Yes, but is it methodological?. *The journal of the learning sciences*, 13(1), 115-128.
- Koffka, K. (2013). *Principles of Gestalt psychology* (Vol. 44). Routledge.
- Kohlberg, L. (1971). Stages of moral development. *Moral education*, 1, 23-92.
- Lindström, I., Öhlund, C., Eek, C., Wallin, L., Peterson, L. E., Fordyce, W. E., & Nachemson, A. L. (1992). The effect of graded activity on patients with subacute low back pain: a randomized prospective clinical study with an operant-conditioning behavioral approach. *Physical Therapy*, 72(4), 279-290.
- Lowry, P. B., Zhang, J., Wang, C., & Siponen, M. (2016). Why do adults engage in cyberbullying on social media? An integration of online disinhibition and deindividuation effects with the social structure and social learning model. *Information Systems Research*, 27(4), 962-986.
- Mallpress, D. E., Fawcett, T. W., McNamara, J. M., & Houston, A. I. (2012). Comparing pleasure and pain: The fundamental mathematical equivalence of reward gain and shock reduction under variable interval schedules. *Journal of the experimental analysis of behavior*, 98(3), 355-367.
- Marx, K., & Engels, F. (2019). The communist manifesto. In *Ideals and Ideologies* (pp. 243-255). Routledge.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, 50(4), 370.
- McMahon, S., Stacey, M., Harwood, V., Labib, N., Wong, A., & Daniels-Mayes, S. (2021). Exploring students' metaphors for learning in Western Sydney schools. *Critical Studies in Education*, 1-18.
- Mills, C.W. (with Gitlin, T.) (2000). *The Sociological Imagination*. (Fourteenth Anniversary ed.). Oxford University Press. (Original work published in 1959).


- Moens, E., Verbeken, S., Vandeweghe, L., Vervoort, L., Goossens, L., & Braet, C. (2014). How can classical conditioning learning procedures support the taste development in toddlers (REWARD): rationale, design and methods. In *Habeat'Improving infant and child eating habits, encouraging fruit and vegetable intake: Translating evidence into practical recommendations'*.
- MoNE (Ministry of National Education). (2005). İlköğretim 1-5. Sınıf Programları Tanıtım El Kitabı. Ankara: MEB, Talim Ve Terbiye Kurulu Başkanlığı, Devlet Kitapları Müdürlüğü Publishing House.
- Noble, G. (1983). Social learning from everyday television. *Learning from television: Psychological and educational research*, 1-30.
- Obrist, P. A., Black, A. H., Brener, J., & DiCara, L. V. (2017). Operant autonomic conditioning: The analysis of response mechanisms. In *Cardiovascular Psychophysiology* (pp. 229-250). London: Routledge.
- Parsons, T. (1955). *Family, Socialization and Interaction Process*. The Free Press.
- Patterson, G. R. (1975). *Families: Applications of social learning to family life*. Champaign, IL: Research Press.
- Pavlov, I. P. (1942). *Lectures on Conditioned Reflexes, Volume I*. International Publishers.
- Pavlov, I. P. (1960). *Conditioned reflex: An investigation of the physiological activity of the cerebral cortex*. Oxford: Daver Publications.
- Philip, T. (2019). Principled improvisation to support novice teacher learning. *Teachers College Record*, 121(6), 1-32.
- Philip, T. M., & Gupta, A. (2020). Emerging perspectives on the co-construction of power and learning in the learning sciences, mathematics education, and science education. *Review of Research in Education*, 44(1), 195-217.
- Pınar, M. A. (2013). *Fen ve Teknoloji Öğretmenlerinin Yapılandırmacı Yaklaşımın Sınıf İçi Uygulamalarına Yönelik Görüşleri (Diyarbakır İli Örneği)* [Unpublished master's thesis]. Muş Alparslan University.
- Prsa, M., Galiñanes, G. L., & Huber, D. (2017). Rapid integration of artificial sensory feedback during operant conditioning of motor cortex neurons. *Neuron*, 93(4), 929-939.
- Purkis, H. M., & Lipp, O. V. (2001). Does affective learning exist in the absence of contingency awareness?. *Learning and Motivation*, 32(1), 84-99.
- Raymond Williams, *The Long Revolution* (London: Chatto & Windus, 1961), pp. 119–20. [11]
- Redon, B., Hurel, I., Marsicano, G., & Chaouloff, F. (2019). An operant conditioning task to assess the choice between wheel running and palatable food in mice, *Bio-Protocol*, 9(19), 1-18.
- Rendell, L., Boyd, R., Cownden, D., Enquist, M., Eriksson, K., Feldman, M. W., ... & Laland, K. N. (2010). Why copy others? Insights from the social learning strategies tournament. *Science*, 328(5975), 208-213.
- Rienties, B., & Tempelaar, D. (2018). Turning groups inside out: A social network perspective. *Journal of the Learning Sciences*, 27(4), 550-579.
- Robinson, J. P., & Levy, M. R. (1986). *The main source: Learning from television news* (Vol. 17). London: Sage Publications, Inc.
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. *Health education quarterly*, 15(2), 175-183.
- Rummel, N., & Spada, H. (2005). Learning to collaborate: An instructional approach to promoting collaborative problem solving in computer-mediated settings. *The journal of the Learning Sciences*, 14(2), 201-241.
- Said, E. (1979). *Orientalism*. Penguin Books.
- Sapolsky, B. S., Molitor, F., & Luque, S. (2003). Sex and violence in slasher films: Re-examining the assumptions. *Journalism & Mass Communication Quarterly*, 80(1), 28-38.
- Sawyer, R. K. (2014). The future of learning: Grounding educational innovation in the learning sciences. *The Cambridge handbook of the learning sciences*, 726-746.


- Schwartz, B., & Gamzu, E. (1977). Pavlovian control of operant behavior: An analysis of autoshaping and its implications for operant conditioning. In W. K. Honig, & J. E. R. Staddon (Ed.), *A Handbook of operant behavior*. 76-108.
- Senemoglu, N. (2000). *Gelisim öğrenme ve öğretimi*. Ankara: Gazi Kitabevi.
- Shavelson, R. J., Phillips, D. C., Towne, L., & Feuer, M. J. (2003). On the science of education design studies. *Educational researcher*, 32(1), 25-28.
- Shephard, K. (2008). Higher education for sustainability: seeking affective learning outcomes. *International journal of sustainability in Higher Education*.
- Smolensky, P. (1988). On the proper treatment of connectionism. *Behavioral and brain sciences*, 11(1), 1-23.
- Solomon R.C. & Higgins, K. M. (2013). *A Short History of Philosophy*. Trans. Mustafa Topal. İletişim Publishing.
- Stiff-Williams, H. R. (2010). Widening the lens to teach character education alongside standards curriculum. *The clearing house*, 83(4), 115-120.
- Stuart, E. W., Shimp, T. A., & Engle, R. W. (1987). Classical conditioning of consumer attitudes: Four experiments in an advertising context. *Journal of consumer research*, 14(3), 334-349.
- Sutton, M. (2002). *Nationalism, Positivism, and Catholicism: The Politics of Charles Murras and French Catholics 1890-1914*. Cambridge University Press.
- Valance, E. (1983). "Hiding the Hidden Curriculum: An Interpretation of the Language of Justification in Nineteenth-Century Educational Reform". In *The Hidden Curriculum and Moral Education: Deception or Discovery?*. Eds. Giroux, H. Purpel, D. (1983). McCutchan Publishing Corporation.
- Vassaf, G. (2020). *Medeniyet, Kültür, Sanat: Uçmaktade Yazıları 3*. İletişim Publishing.
- Veenman, M. V. J., & Elshout, J. J. (1995). Differential effects of instructional support on learning in simulation environments. *Instructional Science*, 22, 363-383.
- Von Glasersfeld, E. (1981/1984). An introduction to radical constructivism. *The Invented Reality*. pp. 17-40 (originally published in *Die Erfundene Wirklichkeit*, a volume edited by P. Watzlawick (Munich: Piper, 1981, pp. 16-38)
- Von Glasersfeld, E. (1991). An exposition of constructivism: Why some like it radical. In *Facets of systems science* (pp. 229-238). Springer US.
- Vorster, A. P., & Born, J. (2017). Sleep supports inhibitory operant conditioning memory in Aplysia. *Learning & Memory*, 24(6), 252-256.
- Wagner, M. F., Skowronski, J. J., Milner, J. S., Crouch, J. L., & Ammar, J. (2019). Exploring Positive Classical Conditioning Procedure Effects on Evaluations of Children, Thoughts About Children, and Behaviors Toward Children: Two Experiments. *Psychological Reports*, 0033294119894231.
- Watson, J. B. (1903). *Animal education*. Chicago University Press.
- Whiten, A. (2000). Primate culture and social learning. *Cognitive Science*, 24(3), 477-508.
- Wolf, M., Risley, T., & Mees, H. (1963). Application of operant conditioning procedures to the behaviour problems of an autistic child. *Behaviour Research and Therapy*, 1(2), 305-312.
- Yager, R. E. (1991). The constructivist learning model. *The science teacher*, 58(6), 52.
- Yannier, N., Crowley, K., Do, Y., Hudson, S. E., & Koedinger, K. R. (2022). Intelligent science exhibits: Transforming hands-on exhibits into mixed-reality learning experiences. *Journal of the Learning Sciences*, 1-34.
- Yermolayeva, Y., & Rakison, D. H. (2014). Connectionist modeling of developmental changes in infancy: Approaches, challenges, and contributions. *Psychological bulletin*, 140(1), 224.
- Zimmerman, B. J., & Phillips, C. Y. (2000). Affective learning: Stimulus to critical thinking and caring practice. *Journal of Nursing Education*, 39(9), 422-425.

# An Examination of Adaptation Processes of Refugee Children to Preschool in Turkey

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 06.06.2022</p> <p>Available online: 28.10.2022</p>	<p>The present study aims to examine the adaptation processes of refugee children to preschool in Turkey. The study was conducted with a qualitative study design. The study group consisted of 22 preschool teachers selected by criterion sampling method. All of the teachers who participated in the study were female. Data were collected with an interview form consisting of semi-structured questions. The researchers collected data by conducting face-to-face interviews with the participants. The data were analyzed by both researchers using content analysis, a data analysis method used in qualitative research. The findings of the study showed that, regarding the adaptation of refugee children to school, preschool teachers used the strategies of providing individual attention, using activities and increasing their interaction with Turkish children. In this process, teachers experienced various difficulties with families and children. Among the most important of these were language and communication problems. Teachers preferred to talk to stakeholders and provide individual attention to children in order to solve the problems. Teachers made suggestions regarding language teaching and adaptation in order to facilitate the adaptation process of refugee children to school.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> Adaptation to school, Immigration, Preschool, Refugee children</p>

## Introduction

Migration is defined as the movement of individuals to a different location from their place of residence due to economic, political and cultural reasons (Tuğluk & Avcı, 2018). The fact that various reasons cause people to leave their country makes the refugee problem a serious issue around the world. Refugees experience many difficulties in social, economic and cultural aspects (Aydoğdu, 2020) and children are the group most affected by migration [United Nations International Children's Emergency Fund (UNICEF, 2020)].

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It is known that refugee children are likely to encounter difficulties in various areas such as social life, education and health, and they may need support from various sources (Hart, 2009). Education is one of the primary needs for refugee children (Moinolnolki & Han, 2017). Refugee children may face even greater problems in the years to come if they receive inadequate education or if they are not given an access to education at all (Er & Bayındır, 2015). It is also considered important to provide education to refugee children in terms of facilitating their adaptation to the society they live in (Kia Keating & Ellis, 2007; Thommessen & Todd, 2018).

The number of refugee children in Turkey is increasing day by day and schools play a crucial role in their adaptation to the country, as well as in meeting their educational needs. However, refugee children may experience difficulties in these schools because they do not speak Turkish, because of their families' indifferent attitudes (Aydoğdu, 2020), because they encounter a different education system, because they are in a different cultural structure, and because they have difficulty interacting with foreign peers and teachers. These difficulties have a serious impact on the adaptation process of children to school. In order to overcome these difficulties, some legal arrangements have been made in Turkey. With the Ministry of National Education's circular numbered 2014/21 on 'Education and Training Services for Foreigners', temporary education centers were established and children were provided with compulsory Turkish lessons in these centers (UNICEF, 2019). In 2016, the 'Project for Supporting the Integration of Syrian Children into the Turkish Education System (PIKTES)' was implemented by the Ministry of National Education in order to contribute to the access of children under temporary protection to education in Turkey (PIKTES, 2016). As of the 2016-2017 academic year, all children receiving pre-school education have been required to enroll in public schools. In order to facilitate this compulsory transition, Turkish lessons offered to children of all age groups in temporary education centers and Public Education Centers have been strengthened and educational materials for all children have been adapted to their age. In addition, Ministry of National Education (MoNE) started to implement early childhood education programs in 26 provinces in the summer period of 2018-2019 in order for Syrian children to benefit from the opportunities of pre-school education (UNICEF, 2019).

In addition to these regulations, teachers, families and peers play an active role in the adaptation process of children to school. A positive relationship between the teacher and the child is considered as a factor that facilitates the adaptation of children to school (Birch & Ladd, 1998). Moreover, teachers' professional and personal competencies have a significant impact on children's adaptation to school. Adaptation problems are less common in the classrooms of teachers who have a friendly and warm attitude towards children, in addition to the necessary professional knowledge and skills (Gülay Ogelman & Ertan, 2013). The importance of teachers in the education process of refugee children is also emphasized in a study by Rose (2019). Teachers who implement quality education practices by considering the individual and cultural characteristics of refugee children support the development of children and facilitate their adaptation to school. However, due to the fact that refugee children do not know Turkish, teachers are not willing to accept these children into their classes (Başal, Kaplan, Korkmaz, & Emir, 2019).

Another factor that plays an important role in the adaptation process of refugee children to school is their families. Families play an active role in shaping the experiences of refugee children, therefore, the support they provide to the education process, or lack thereof, is an important factor that affects the adaptation process. On the other hand, the communication between refugee families and the school is negatively affected because they do not speak Turkish and cannot express themselves adequately and they are exposed to cultural exclusion; all of which interferes with the child's adaptation to school (Chen, Chang, He, & Liu, 2005; Dağlar, Melhuis, & Barnes, 2011; Paat, 2013).

Peers are of great importance in the adaptation process of children to school. In the study conducted by Chen et al. (2005), it was stated that children who have positive social interactions with their peers adapt to

school more easily. Similarly, peer influence is critical in facilitating (or hindering) cultural adaptation as well. Good interaction between refugee children and their peers from different cultures contributes to their cultural adaptation (Olsen, 2000). Neitzel, Drennan and Fouts (2019) states that refugee children are more frequently rejected by their peers, exhibit more individualistic behaviors, and have difficulty interacting with their peers compared to non-refugee children.

The increase in the total number of refugees in Turkey has led to an increase in the number of refugee children in educational institutions, which was also observed in preschool classes. It is important for refugee children to receive education in the preschool period, which is a critical period in development. A high level of adaptation to school is necessary for children to have an efficient education. In this context, the practices of teachers regarding the adaptation of refugee children to school are important. Previous studies on refugee preschool children have focused on adaptation to school and psychological state (Bozkurt Polat, Özbey, Türkmen, & Köyceğiz Gözeler, 2020; Karaman & Bulut, 2018; Karoly & Gonzalez, 2011; Kiremit, Akpınar, & Tüfekçi, 2018; Kirova, 2010; Lunneblad, 2017; Marsh, 2017; Neitzel et al., 2019; Thommessen & Todd, 2018; Yalçın & Simsar, 2020), peer culture (Yanık Özger & Akansel, 2019), difficulties faced in the process (Avcı, 2019; Aydın & Kurtulmuş, 2018; Mercan Uzun & Bütün, 2016) and family dimension (Dağlar et al., 2011; Sohn & Wang, 2006). However, there is no holistic study in the literature which focuses on the practices of preschool teachers for the adaptation process of refugee children to school, the problems faced by teachers and their strategies to solve these problems, and their recommendations for a better adaptation process of refugee children. Accordingly, in order to address the said gap in the literature we suggest that a study investigating the adaptation process of refugee children to school in line with the opinions of preschool teachers is required. The present study aims to investigate the practices of preschool teachers in the classrooms with refugee children for the adaptation process, the problems faced by the teachers, the strategies they use to solve these problems, and their recommendations. For this purpose, answers to the following questions were sought within the scope of the study:

1. What practices do preschool teachers utilize for the adaptation of refugee preschool children to school?
2. What problems do preschool teachers face during the adaptation process of refugee preschool children to school?
3. Which strategies do preschool teachers use to solve the problems they face during the adaptation process of refugee preschool children to school?
4. What are the recommendations of preschool teachers to facilitate the adaptation process of refugee preschool children to school?

## **Methodology**

### **Research Model**

The present study aimed to examine the adaptation process of refugee preschool children in Turkey to school. The study was conducted with a case study design, which is one of the qualitative research approaches. Qualitative research allows the perception of experiences or phenomena and the development of interpretations of these, in addition to making the data collection process more flexible (Creswell, 2009; Merriam, 2013). Case studies refer to providing in-depth descriptions and analysis of a limited system (Merriam, 2013). Accordingly, the adaptation processes of refugee preschool children to school were investigated in this study.

## Research Participant

The present study was conducted with 22 preschool teachers working in the kindergartens of primary and secondary schools in a city center located in the middle section of Turkey. All participants voluntarily participated in the study. Criterion sampling, one of the purposive sampling methods, was used to form the study group. Yıldırım and Şimşek (2013) state that 'purposive sampling' refers to the investigation of all cases that meet a predetermined set of criteria. The criterion for the present study was determined as "the presence of a refugee child in the classroom". Table 1 shows demographic information about the participants.

**Table 1.** Demographic information about the participants

Sex	N	%
Female	22	100
Male	0	0
Age		
31-35	3	13.6
36-40	11	50.0
41-45	4	18.2
46 and above	4	18.2
Professional experience		
7-11	3	13.6
12-16	8	36.4
17-21	6	27.3
22 and above	5	22.7
Education		
Bachelor's Degree	21	95.5
Master's Degree	1	4.5
Number of refugee children in the class		
1-3	9	40.9
4-6	3	13.6
7-9	7	31.8
10 and above	3	13.6

As it can be seen in Table 1, all of the teachers are female. The majority of teachers are in the 36-40 age range and have 12-16 years of professional experience. Only one teacher has a Master's degree and all the remaining teachers have a Bachelor's degree. The maximum number of refugee children in teachers' classrooms is between 1-3.

## Data Collection Tools

An interview form consisting of semi-structured interview questions developed by the researchers was used for the data collection. Interview form includes questions about demographic information of teachers and four open-ended questions regarding the adaptation process of refugee children to school. The researchers reviewed the relevant literature prior to the preparation of the interview questions. The prepared open-ended questions were submitted to the expert opinion of two academicians in the field of preschool education. The interviews were conducted face to face with the participants by both researchers. The interviews were held in a suitable environment at the school where the teachers work. Each interview session lasted approximately 30 minutes. At the beginning of the interviews, the teachers were informed about the purpose and content of the study. The data obtained from the interviews were recorded.

## Data Analysis

The data collected in the study were analyzed in depth by both researchers using the content analysis method, and completely novel themes and codes were discovered (Yıldırım & Şimşek, 2013). Inductive method was implemented in the content analysis. Induction is a process that involves dividing data into units and creating themes in order to discover hidden information (Corbin & Strauss, 2008) and to make the themes more visible (Glesne, 2013; Yıldırım & Şimşek, 2013). Thus, codes were generated directly from the data and themes were created. Themes to form the findings of the study were created by examining the relationships between these themes and revealing the similarities and differences between them. Frequency and percentage calculations were used to report the themes that emerged. It was ensured that the themes were as descriptive as possible and direct quotations from the interviews were included. Codes T1, T2... were used to represent the teachers in the analyzes and results.

## Validity and Reliability

Some precautions were taken for the validity and reliability of the study. Participant information, stages of the research, data collection tools and data analysis process are explained in detail. Direct quotations were used in the findings and the details of the process were presented with descriptions. During the data analysis process, codes and themes were created by both researchers and the consistency between the coders was examined. The reliability of the data analysis was calculated using Miles and Huberman's (1994) Percentage of Dispute =  $[\text{Negotiations} / (\text{Agreement} + \text{Disputes}) \times 100]$  formula and the percentage of agreement was found to be 95%.

## Ethical Considerations Ethics Committee Approval:

In this study, all rules stated to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the actions stated under the title "Actions Against Scientific Research and Publication Ethics", which is the second part of the directive, have not been carried out.

Ethical review board name: Nevşehir Hacı Bektaş Veli University

Ethics Committee Date of ethics review decision: 28.03.2022

Ethics assessment document issue number: 2022.03.92

## Finding

The present study was conducted to examine the adaptation processes of refugee preschool children in Turkey to school. The findings obtained in the study are presented under four main titles: Practices that preschool teachers utilize for the adaptation of refugee children to school, problems faced by refugee children in the process of adaptation to school, the solution of the problems that refugee children face in the process of adaptation to school and teachers' recommendations on facilitating the adaptation process of refugee children to school.

## Practices that Preschool Teachers Utilize for the Adaptation of Refugee Children to School

The themes and codes that emerged regarding the practices that preschool teachers utilize for the adaptation of refugee children to school are presented in Table 2.

**Table 2.** The themes and codes that preschool teachers utilize for the adaptation of refugee children to school

Theme	Code	f	%
Practices for refugee children		22	100
	Providing individual attention to refugee children	18	82
	Using activities	12	55



	Increasing their interaction with Turkish children	12	55
Practices for refugee families		8	36
	Communicate	4	18
	Cooperate	4	18

As it can be seen in Table 2, the practices that teachers utilize for the adaptation of refugee children to school are grouped under two themes: practices for refugee children and practices for refugee families. All of the teachers utilized practices for refugee children, while eight teachers utilized practices for refugee families. Teachers' practices for children consist of the themes of providing individual attention to refugee children, using activities and increasing their interaction with Turkish children. Some of the teachers' verbal statements are as follows: "By providing individual attention (T8)", "By organizing fun activities (T15)" and "By using practices to improve their interaction with their Turkish peers (T12)". The practices of teachers towards refugee families were grouped into two themes as communication and cooperation. Some of the teachers' verbal statements are as follows: "By suggesting that families watch Turkish TV channels/cartoons at home (T21)", "By inviting families into the classroom (T15)".

### Problems Faced by Refugee Children in the Process of Adaptation to School

The themes and codes that emerged regarding the problems that refugee children face in the adaptation process to school are presented in Table 3.

**Table 3.** Themes and codes that emerged regarding the problems that refugee children face in the adaptation process to school

Theme	Code	f	%
Problems related to refugee family		21	95
	Language and communication	20	91
	Negative attitude and behavior	13	59
	Financial status	9	41
	Cultural differences	4	18
Problems related to refugee child		20	91
	Language and communication	17	77
	Adaptation	9	41
	Personal characteristics	8	36
	Behavior	6	27
Problems related to Turkish family			
	Exclusion of refugee children	5	22
	Anxiety	3	14
Problems related to Turkish children			
	Exclusion of refugee children	5	22
Problems related to classroom structure			
	Number of refugee children	2	9
	Number of refugee children of the same nationality	1	5

As shown in Table 3, the problems that refugee children face in the adaptation process to school are discussed in five themes: problems that are related to refugee family, refugee child, Turkish family, Turkish child and problems related to classroom structure. The theme of problems that are related to refugee family consists of language and communication, negative attitude and behavior, financial status and cultural differences. The theme of problems that are related to refugee child consists of language and communication, adaptation, personal characteristics and behavior. The theme of problems that are related to Turkish family consists of exclusion of refugee children and anxiety. The theme of problems related to Turkish children is not divided into themes and consists of the exclusion of refugee children. The theme of problems related to the

class structure consists of the number of refugee children and the number of refugee children of the same nationality. Some of the teachers' verbal statements are as follows: "Families with foreign nationality do not participate in the activities. (T4)", "The fact that children and families do not know Turkish is a big problem. (T1)", "Turkish families do not want foreign children in the classroom. (T8)", "Turkish children do not include foreign children in their games. (T4)", "The high number of foreign children in the classroom. (T7)".

### The Solution of the Problems that Refugee Children Face in the Process of Adaptation to School

The codes that emerged regarding the solution of the problems that refugee children face in the adaptation process to school are presented in Table 4.

**Table 4.** Codes that emerged regarding the solution of the problems those refugee children face during the adaptation process to school

Code	f	%
Talking/explaining	17	77
Providing individual attention to the refugee children	17	77
Increasing their interactions with Turkish peers	11	50
Providing translation support	9	41
Using activities	6	27
Using technological tools/devices	5	23
Providing financial resources	5	23
Being a model	2	9

As it is shown in Table 4, the solutions to the problems faced by refugee children in the adaptation process to school were examined in eight codes: talking/explaining, providing individual attention to the refugee children, increasing their interactions with Turkish peers, providing translation support, using activities, using technological tools/devices, providing financial resources and being a model. Teachers mostly preferred talking and providing individual attention to the refugee child in order to solve the problems that refugee children face during the adaptation process to school. Depending on the cause of the problem, the teachers tried to find solutions to the problems by talking with the refugee family, the refugee child, the Turkish family and the Turkish child. It has been seen that the teachers sought solutions by talking to refugee families for problems caused by negative attitude and behavior, financial status and cultural differences, and by talking to refugee children for adaptation problems and problems related to personal characteristics and behavior. Teachers preferred to talk with Turkish families about problems caused by exclusion of refugee children and anxiety, and with Turkish children about problems caused by exclusion of refugee children. Strategies of providing individual attention to the refugee children and increasing their interaction with Turkish peers have been the preferred strategies for language and communication problems, adaptation problems, problems related to personal characteristics, and behavior problems. Strategies of providing translation support and using technological tools/devices have been used to solve language and communication-related problems. Teachers preferred using activities for problems related to language and communication, personal characteristics and behavior. It has been seen that the strategy of providing financial resources has been used to solve the financial status-related problems of refugee families. Some of the teachers' verbal statements are as follows: "I'm trying to solve the problems caused by cultural differences by talking with the family. (T2)", "I try to solve the language problem by explaining things to children in a way they can understand. (T10)", "I make them spend more time with Turkish children (T17)", "I get support from siblings who speak Turkish. (T7)", "I'm trying to solve it by using activities about Turkish language. (T13)", "I communicate with them on WhatsApp. (T21)", "I provide financial support myself for financial problems. (T22)".

### Teachers' Recommendations on Facilitating the Adaptation Process of Refugee Children to School

The themes and codes that emerged regarding the recommendations of teachers to facilitate the adaptation process of refugee children to school are presented in Table 5.

**Table 5.** Themes and codes that emerged regarding teachers' recommendations to facilitate the adaptation process of refugee children to school

Theme	Code	f	%
Recommendations for Refugee Families		18	82
	Learning and improving Turkish	14	64
	Adapting	7	32
	Providing financial support	4	18
	Raising awareness on education	3	14
Recommendations For Refugee Children		13	59
	Learning and improving Turkish	11	50
	Adapting	3	14
Recommendations for Turkish/refugee child number balance	Turkish/refugee child number balance	6	27
Recommends for informing teachers	Informing the teacher	2	9
Recommendations for counselling services	Functionality of counselling services	2	9

As it can be seen in Table 5, teachers' recommendations on facilitating the adaptation process of refugee children to school were investigated in five themes: recommendations for refugee families, for refugee children, for classroom structure, for teachers and for counselling services. Recommendations for refugee families was examined in four codes as learning and improving Turkish, adaptation, financial needs and raising awareness on education. Recommendations for children are discussed in two codes as recommendations for learning and improving Turkish and for adaptation. Recommendations on classroom structure, teachers and counseling services are not divided into different codes and are presented under the same name. Some of the teachers' verbal statements are as follows: "Families of foreign nationality should be provided with training/courses to learn the rules of Turkey. (T14)", "There is a need for applications to ensure that children know Turkish before they start school. (T2).", "A balanced distribution of Turkish and foreign children in the classrooms should be ensured. (T3)", "Teachers should be informed about children/families. (T11)", "Counseling services should be more effective. (T4)"

### Discussion and Conclusion

The present study aimed to examine the adaptation processes of refugee preschool children to school in Turkey. It was found that preschool teachers utilize various practices for refugee children and refugee families in order to facilitate the adaptation of refugee children to school. Practices for refugee children included providing individual attention, using activities, and increasing their interaction with Turkish children. Refugee children may need individual attention because they are a minority group in the classroom with different characteristics compared to their Turkish peers. Performing the practices by considering the individual and cultural characteristics of refugee children will facilitate their adaptation to school (Dilek & Demiral, 2021). In this regard, it is a proper practice for the teacher to provide individual attention to these children. In preschool education, activities have an important function in the adaptation process of children to school. Previous studies have also shown the importance of activities in processes of adapting to school (Bağçeli Kahraman, 2018; Bağçeli Kahraman, Şen, Alataş, & Tütüncü, 2018; Green, 2011; Marsh, 2017). Teachers' attempts to increase the interaction between refugee children and Turkish children can be considered as an application that facilitates refugee children's adaptation to school, because peers play an active role in children's the adaptation to school process (Chen et al., 2005). A study by Neitzel et al. (2019) emphasized the importance of communication and cooperation between refugee children and their peers

during the adaptation process. Some studies conducted with refugee families have focused on communication and cooperation. For instance, In the study of Dilek and Demiral (2021), it was found that a cooperation established between the school and the families of refugee children in preschool facilitates the adaptation of children. The support of the family is of great importance for the adaptation process of children to school, as it is for all stages of preschool education, because the supportive behaviors of families help children to adapt to school more easily (Chen et al., 2005; Dağlar et al., 2011).

Statistics on refugee children in Turkey show that these children have a wide variety of languages and cultural characteristics. This wide range of diversity leads to certain problems in the adaptation process of refugee children to school. The language and communication problem is the biggest problem faced by both refugee families and refugee children, as supported by the previous studies (Kirova, 2010; Szente, Hoot, & Taylor, 2006; Yalçın & Simsar, 2020; Yanık Özger & Akansel, 2019). The fact that refugee families and children do not know Turkish causes problems in their communication with their teachers and peers, and which in turn negatively affects their adaptation process to school. To solve these difficulties, MoNE established temporary education centers and provided compulsory Turkish lessons to refugee children (UNICEF, 2019). The fact that parents and teachers have different cultural backgrounds in terms of language, religion, national value and country can also cause them to be reluctant to efficiently communicate (Sohn & Wang, 2006). In addition, language problems experienced by children cause them to be unable to communicate with their peers and not participate in classroom activities, which leads to behavior and adaptation problems (Avcı, 2019). The negative attitude and behavior exhibited by refugee families also affects children's adaptation processes to school. Previous studies (Bağçeli et al., 2018; Yanık Özger & Akansel, 2019) emphasized that the families play an important role in the adaptation processes of children to school. In line with the results of this study, the fact that refugee families do not find it necessary to learn Turkish and think that they are in Turkey temporarily, that families do not show enough interest in their children and that only the school is responsible for their children's education makes it difficult for their children to adapt to school (Rah, Choi, & Nguyễn, 2009; Yanık Özger & Akansel, 2019). The negative financial conditions experienced by refugee families also impede the adaptation process of children to school. There are studies in the literature showing that the financial difficulties experienced by refugee families have a negative impact on the education of their children (Karoly & Gonzalez, 2011; Kirova, 2010; Uyan Semerci & Erdoğan, 2018; Yalçın & Simsar, 2020). Although the 'Immigration and Emergency Department' (MoNE, 2016) was established to meet the educational needs of refugee children, the financial inadequacy of refugee families is still seen as a problem. The limited financial income of the families makes it difficult for them to purchase the necessary materials for school, which prevents children from receiving an efficient education. Cultural differences of refugee families also make it difficult for children to adapt to school. Cultural differences, especially in food and clothing, make it difficult for children to experience a comfortable adaptation process. It has been stated by several studies that cultural difference has an effect on children's educational processes (Karoly & Gonzalez, 2011; Kirova, 2010; Yanık Özger & Akansel, 2019). The results of the present study also showed that the personal characteristics of refugee children and their problematic behaviors in adaptation and behavior negatively affect this process. This finding is supported by previous evidence in the literature (Bağçeli et al., 2018; Türker Üçüncü & Aktan Acar, 2021; Mercan Uzun & Bütün, 2016; Başal et al., 2019; Karoly & Gonzalez, 2011). For example, it has been found that refugee children who have problems in adaptation to school experience introversion in addition to behavior and adaptation problems (Bağçeli et al., 2018; Polat Uluocak, 2009). One of the findings of the study is that exclusion is a problem that refugee children face in the process of adaptation to school. It has been seen that refugee children are exposed to exclusion by both Turkish families and Turkish children. This result is in line with previous studies (Entzinger & Biezeveld, 2003; Mercan Uzun & Bütün, 2016; Lunneblad, 2017; Yanık Özger & Akansel, 2019; Yalçın & Simsar, 2020). Exclusion is considered a factor preventing adaptation to school (Guo, Maitra, & Guo, 2019; Kağnıcı, 2017). Language, culture and clothing of children can lead them to

experience exclusion. (McBrien, 2005). Turkish families contribute greatly to the exclusion of refugee children because they generally have a negative view of refugees and reflect this notion -directly or indirectly- on their children (Yanık Özger & Akansel, 2019). In addition, families generally prefer to send their children to another school because they do not want their children to receive education in schools with a high number of refugee children (Entzinger & Biezeveld, 2003).

Teachers mostly preferred to talk with stakeholders and provide individual attention to the refugee children to solve the problems that arise during the adaptation process of refugee children to school. Face-to-face communication between parents and teachers is a crucial component of a healthy communication between school and families (Sohn & Wang, 2006). Talking, which is one of the methods teachers prefer to solve problems, is also seen as an effective tool for human relations. Teachers having a sincere communication with refugee children has an important role in making them a part of the classroom. In addition, teachers have a great role in providing refugee children with an environment where they can feel safe and enabling them to be responsive to the adaptation process to a new society and school (Thommessen & Todd, 2018). Communication problems that arise due to the fact that refugee children do not know the language of the country require the teacher to make additional efforts to communicate with children, such as using signs or body language (Kirova, 2010). This finding was observed in the present study as well, and the individual effort of the teacher has come to the prominence. Peer groups are a social support tool (Thommessen & Todd, 2018), which is an important component of the adaptation process of refugee children. The social relations of refugee children with local children and the attitudes and behaviors of local children towards refugee children have an impact on the language learning process of refugee children (Olsen, 2000). The exclusion of refugee children can be prevented by if teachers support the interaction between children and guide them to cooperate (Sheridan, 2007). This statement is supported by the results of the present study. In addition, it is seen that refugee children are willing to communicate with their native classmates, that is, it can be said that an attempt to establish communication between children is necessary (Neitzel et al., 2019). It was found that teachers use translation support to overcome language and communication problems. Similarly, it was seen that teachers received the most help from foreign students who spoke Turkish to solve language and communication problems (Tosun, Yorulmaz, Tekin, & Yıldız, 2019). In addition, providing translation support increases parent-teacher interaction, family participation and improves children's participation in education (Block, Cross, Riggs, & Gibbs, 2014). According to our findings, teachers sought solutions to the problems faced by refugee children during the adaptation process. Teachers play an important role in the education of refugee children (Rose, 2019), and they contribute to the language development and social adaptation of refugee children through the music, musical games or dance activities (Marsh, 2017). Participating in school activities more often contributes to the further development of children's language skills (Sheridan, 2007). In this context, the results of this study support previous studies. In addition, it is expected that teachers will help children solve the problems they face during the adaptation process by using activities. The use of the Internet and technological tools provides opportunities to encourage collaboration between teachers and parents (Hernandez & Leung, 2004). The results of this study also show that teachers try to solve various problems by using technological tools, which includes sending a voice message on WhatsApp for the person who speaks Turkish in the family to listen and translate, or for the family to send the message to a Turkish-speaking acquaintance and reply.

Teachers mostly made suggestions for refugee families and refugee children in order to facilitate the adaptation process of refugee children to school. The results of the study showed that most of the recommendations for refugee families and their children are related to language problems. The language skills of parents in refugee families have significant effects on their children's language acquisition. Children and parents who do not speak the language of the country they migrated to have difficulties in communicating with teachers and other children (Hernandez, Takanishi, & Marotz, 2009). Limited language proficiency is

seen as the most important obstacle for families to establish effective cooperation with teachers. In the study of Soyulu, Kaysılı, and Sever (2020), it was seen that the main issue that teachers focus on in terms of solving the problems faced by refugee students in education is the language proficiency. Family support and a positive attitude by teacher are among the factors that accelerate language development (Yanık Özger & Akansel, 2019). Second in the list of teachers' recommendations for refugee families and children are recommendations for adaptation. Being relocated in a different country due to migration creates various challenges for families and their children. The adaptation process is one of these difficulties. In addition, the adaptation process becomes more difficult when refugee families continue to repeat their own cultural habits (Mevorach, 2008). In general, teachers think that refugee children should start school after completing a serious linguistic and cultural orientation program, in other words, a preparatory school.

In conclusion, teachers play a major role in the adaptation process of refugee preschool children to school. Teachers mostly preferred the strategy of providing individual attention for the adaptation of refugee children to school. In the adaptation process of refugee children to school, teachers experienced problems that arose from refugee families and refugee children, which were mostly related to language and communication. This led to the teachers having difficulties in communicating with both children and their families. To solve these problems, teachers used the strategies of talking and providing individual attention. In order to ensure that the adaptation process of refugee children to school is more functional, teachers have made some recommendations regarding the language/communication and adaptation skills of both refugee families and refugee children.

Within the framework of the results obtained in this study, we offer the following recommendations:

Translation support may be provided to facilitate the adaptation processes of refugee children to school.

The curriculum may include more activities such as games, drama and music, which have a major impact on the language learning process of refugee children.

The content of the adaptation programs applied in the first week of school can be rearranged by taking refugee children into account.

Awareness regarding refugee children can be raised by informing teachers about the importance of teacher's attitude, behavior and relationship with the child in the adaptation process of refugee children to school.

Training on multicultural classroom structure can be provided to teachers, refugee families and Turkish families.

Language training can be provided for refugee children and their families.

Future studies with the same research topic can be conducted with preschool children.

## REFERENCES

- Avcı, F. (2019). Okul öncesi eğitim kurumlarına devam eden mülteci öğrencilerin sınıf ortamında karşılaştıkları sorunlara ilişkin öğretmen görüşleri. *Language Teaching and Educational Research*, 2(1), 57-80.
- Aydın, S., & Kurtulmuş, Z. (2018). Okul öncesi öğretmenlerinin göçmen çocukların eğitim sorunları hakkındaki görüşlerinin incelenmesi. *Türkiye Sosyal Araştırmalar Dergisi*, 22, 23-250.
- Aydoğdu, F. (2020). Göçmen çocuklar. H. G. Ogelman, (Ed.), *Dezavantajlı çocuklar içinde* (s. 205-225). Ankara: Eğiten Kitap.
- Bağçeli Kahraman, P. (2018). Okul öncesi dönem çocuklarının okula uyum sürecine ilişkin anaokulu öğretmenlerinin ve annelerinin görüşleri. *Erken Çocukluk Çalışmaları Dergisi*, 2(1), 3-20.
- Bağçeli Karaman, P., Şen, T., Alataş, S., & Tütüncü, B. (2018). Okul öncesi dönemde okula uyum sürecine ilişkin öğretmen görüşleri. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 18(2), 681-701.
- Başal, H. A., Kaplan, E., Korkmaz, M., & Emir, H. H. (2019). Suriyeli göçmen aile ve çocuklarının Türk eğitim sistemine ve Türk kültürüne uyumu. H. Asutay, E., Jable, Y. E. Demirali ve Ç. Karaoğlu-Bircan (Eds.), *Çocuk ve gençlik yazınında çokkültürcülük içinde*. (s. 144-153). Edirne: Trakya Üniversitesi Yayınları.
- Birch, S. H., & Ladd, G. W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology*, 34(5), 934-946
- Block, K., Cross, S., Riggs, E., & Gibb, L. (2014). Supporting schools to create an inclusive environment for refugee students, *International Journal of Inclusive Education*, 18(12), 1337-1355. <https://doi.org/10.1080/13603116.2014.899636>
- Bozkurt Polat, E., Özbey, S., Türkmen, S., & Köyceğiz Gözeler, M. (2020). 60-72 aylık göçmen Afgan çocuklara uygulanan sosyal uyum ve beceri programının etkisinin incelenmesi. *Uluslararası Erken Çocukluk Eğitimi Çalışmaları Dergisi*, 5(2), 1-20. <https://doi.org/10.37754/737081.2020.521>
- Chen, X., Chang, L., He, Y., & Liu, H. (2005). The peer group as a context: Moderating effects on relations between maternal parenting and social and school adjustment in chinese children, *Child Development*, 2(76), 417-434.
- Creswell, J. W. (2009). *Qualitative inquiry and research design: Choosing among five traditions*. London: Sage.
- Dağlar, M., Melhuish, E., & Barnes, J. (2011). Parenting and preschool child behaviour among Turkish immigrant, migrant and non-migrant families. *European Journal of Developmental Psychology*, 8(3), 261-279.
- Dilek, H., & Demiral, Ü. (2021). Öğretmen adaylarının gözünden göçmen çocuklara yönelik erken çocukluk eğitiminin kalitesi. *Millî Eğitim*, 50(1), 633-660.
- Entzinger, H., & R. Biezeveld (2003). *Benchmarking in immigration integration*. European Research Centre on Migration and Ethnic Relations, Erasmus University of Rotterdam.
- Er, A. R., & Bayındır, N. (2015). Pedagogical approaches of elementary teachers for primary refugee children. *International Journal of Social and Educational Sciences*, 2(4), 175-185.
- Glesne, C. (2013). *Nitel araştırmaya giriş* (A. Ersoy & P. Yalçınoglu, Trans.). Ankara: Anı Yayıncılık.
- Green, L. (2011). *Learning, teaching and musical identity: Voices across cultures*. Bloomington: Indiana University Press.

- Guo, Y., Maitra, S., & Guo, S. (2019). "I belong to nowhere": Syrian refugee children's perspectives on school integration. *Journal of Contemporary Issues in Education*, 14(1), 89-105.
- Gülay Ogelman, H., & Ertan, H. (2013). 5-6 yaş çocuklarının akran ilişkileri ve sosyal konumlarının okula uyum düzeyleri üzerindeki yordayıcı etkisi (boylamsal çalışma). *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 30, 153-163.
- Hart, R. (2009). Child refugees, trauma and education: Interactionist considerations on social and emotional needs and development. *Educational Psychology in Practice*, 25(4), 351-368.
- Hernandez S., & Leung B. P., (2004). Using the internet to boost parent-teacher relationships. *Kappa Delta Pi Record*, 40(3), 36-138.
- Hernandez, D. J., Takanishi, R., & Marotz, K.G. (2009). Life circumstances and public policies for young children in immigrant families. *Early Childhood Research Quarterly*, 24(4), 487-501.
- Kağnıcı, D. Y. (2017). Suriyeli mülteci çocukların kültürel uyum sürecinde okul psikolojik danışmanlarına düşen rol ve sorumluluklar. *İlköğretim Online*, 16(4), 1768-1776.
- Karaman, H., & Bulut, S. (2018). Göçmen çocuk ve ergenlerin eğitim engelleri, psikolojik sorunları ve çözüm önerileri üzerine bir araştırma. *Sosyal Politika Çalışmaları Dergisi*, Göç Özel Sayısı, 18, 393-412. <https://doi.org/10.21560/spcd.vi.446297>
- Karoly, L. A., & Gonzalez, G. C. (2011). Early care and education for children in immigrant families. *The Future of Children*, 21(1), 71-101.
- Kia Keating, M., & Ellis, B. H. (2007). Belonging and connection to school in resettlement: Young refugees, school belonging, and psychosocial adjustment. *Clinical Child Psychology and Psychiatry*, 12(1), 29-43.
- Kiremit, R. F., Akpınar, U., & Tüfekçi Akcan, A. (2018). Suriyeli öğrencilerin okula uyumları hakkında öğretmen görüşleri. *Kastamonu Eğitim Dergisi*, 26(6), 2139-2149.
- Kirova, A. (2010). Children's representations of cultural scripts in play: Facilitating transition from home to preschool in an intercultural early learning program for refugee children. *Diaspora, Indigenous, and Minority Education*, 4(2), 74-91.
- Lunneblad, J. (2017). Integration of refugee children and their families in the Swedish preschool: Strategies, objectives and standards. *European Early Childhood Education Research Journal*, 25(3), 359-369.
- Marsh, K. (2017). Creating bridges: Music, play and well-being in the lives of refugee and immigrant children and young people. *Music Education Research*, 19(1), 60-73.
- McBrien, J. L. (2005). Educational needs and barriers for refugee students in the United States: A review of the literature. *Review of Educational Research*, 75(3), 329-364.
- MoNE, (2016). Göç ve Acil Durum Daire Başkanlığının Kurulmasına İlişkin Yönetmelik. Erişim adresi: [https://sbb.gov.tr/wpcontent/uploads/2020/02/MYB\\_GercekleşmeleriveBeklentilerRaporu\\_2017.pdf](https://sbb.gov.tr/wpcontent/uploads/2020/02/MYB_GercekleşmeleriveBeklentilerRaporu_2017.pdf).
- Mercan Uzun, E. & Bütün, E. (2016). Okul öncesi eğitim kurumlarındaki Suriyeli sığınmacı çocukların karşılaştıkları sorunlar hakkında öğretmen görüşleri. *Uluslararası Erken Çocukluk Eğitimi Çalışmaları Dergisi*, 1(1), 72-83.
- Merriam, S. B. (2013). *Nitel araştırma: desen ve uygulama için bir rehber*. (S. Turan, Trans.). Ankara: Nobel Yayınları.
- Mevorach, M. (2008). Do preschool teachers perceive young children from immigrant families differently? *Journal of Early Childhood Teacher Education*, 29(2), 146-156. <https://doi.org/10.1080/10901020802059508>
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.




- Moinolnolki, N., & Han, M. (2017). No child left behind: What about refugees? *Childhood Education*, 93(1), 3-9.
- Neitzel, C., Drennan, K., & Fouts, H. N. (2019). Immigrant and nonimmigrant children's social interactions and peer responses in mainstream preschool classrooms. *The Journal of Educational Research*, 112(1), 46-60. <https://doi.org/10.1080/00220671.2018.1437529>
- Olsen, L. (2000) Learning English and learning America: Immigrants in the center of a storm. *Theory into Practice*, 39(4), 196-202. [https://doi.org/10.1207/s15430421tip3904\\_2](https://doi.org/10.1207/s15430421tip3904_2)
- Paat, Y. F. (2013). Working with immigrant children and their families: An application of Bronfenbrenner's ecological systems theory. *Journal of Human Behavior in the Social Environment*, 23(8), 954-966. <https://doi.org/10.1080/10911359.2013.800007>
- PIKTES (2016). Suriyeli Çocukların Türk Eğitim Sistemine Entegrasyonunun Desteklenmesi Projesi. Erişim adresi: <https://piktes.meb.gov.tr>
- Polat Uluocak, G. (2009). İç göç yaşamış ve yaşamamış çocukların okulda uyumu. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, 26, 35-44.
- Rah, Y., Choi, S., & Nguyễn, T. S. T. (2009). Building bridges between refugee parents and schools. *International Journal of Leadership in Education*, 12(4), 347-365.
- Rose, A. (2019). The role of teacher agency in refugee education. *The Australian Educational Researcher*, 46(1), 75-91.
- Sheridan, S. (2007). Dimensions of pedagogical quality in preschool. *International Journal of Early Years Education*, 15(2), 197-217. <https://doi.org/10.1080/09669760701289151>
- Sohn, S., & Wang, X. C. (2006). Immigrant parents' involvement in American schools: Perspectives from Korean mothers. *Early Childhood Education Journal*, 34(2), 125-132.
- Soylu, A., Kaysılı, A., & Sever, M. (2020). Refugee children and adaptation to school: An analysis through cultural responsiveness of the teachers. *Eğitim ve Bilim*, 45(201), 313-334.
- Szente, J., Hoot, J., & Taylor, D. (2006). Responding to the special needs of refugee children: Practical ideas for teachers. *Early Childhood Education Journal*, 34(1), 15-20.
- Thommessen, S. A. O., & Todd, B. K. (2018). How do refugee children experience their new situation in England and Denmark? Implications for educational policy and practice. *Children and Youth Services Review*, 85, 228-238.
- Tosun, A., Yorulmaz, A., Tekin, İ., & Yıldız, K. (2019). Mülteci öğrencilerin eğitim sorunları, eğitim ve din eğitiminden beklentileri: Eskişehir örneği. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, 19(1), 107-133.
- Tuğluk, M. N., & Avcı, Z. (2018). Türkiye'de Suriyeli çocuklar ve eğitimleri. Z. Seçer. (Ed.), *Risk altındaki çocuklar ve eğitimleri içinde* (s. 149-163). Ankara: Eğiten Kitap.
- Türker Üçüncü, Ş., & Aktan Acar, E. (2021). Erken çocukluk dönemindeki sığınmacı ve Türk asıllı çocukların okula uyum sürecinin analizi. *IBAD Sosyal Bilimler Dergisi*, (11), 221-248.
- UNICEF, (2019). *Türkiye'deki geçici koruma altındaki çocukların eğitimine ilişkin istatistik raporu*. Erişim adresi: <https://www.unicef.org/turkiye/media/10711/file/Ge%C3%A7ici%20koruma%20alt%C4%B1ndaki%20%C3%A7ocuklar%C4%B1n%20e%C4%9Fitim%20istatistikleri.pdf>.
- UNICEF (2020). *Data child displacement*. Erişim adresi: <https://data.unicef.org/topic/child-migration-and-displacement/displacement/>

- Uyan Semerci, P., & Erdoğan, E. (2018). Who can not access education? Difficulties of being a student for children from Syria in Turkey. *Vulnerable Children and Youth Studies, 13*(1), 30-45.
- Yalçın, V., & Simsar, A. (2020). Adjustment of Syrian refugee children into pre-school education in Turkey. *İlköğretim Online, 19*(3), 1214-1224.
- Yanık Özger, B., & Akansel, A. (2019). Okul öncesi sınıfındaki Suriyeli çocuklar ve aileleri üzerine bir etnografik durum çalışması: Bu sınıfta biz de varız! *Eğitimde Nitel Araştırmalar Dergisi, 7*(3), 942-966.
- Yıldırım, A., & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin Yayıncılık.

# The Role of Parental Academic Pressure in Adolescent-Parent Conflict: An Investigation by Gender

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 12.06.2022</p> <p>Available online: 19.11.2022</p>	<p>The purpose of the current study is to investigate the role of parental academic pressure perceived by adolescents attending different types of high schools in their conflicts with their parents. In the study employing the predictive correlational model, 751 students attending high schools were included as participants. The adolescent-parent conflict scale and the perceived parental academic pressure scale were administered to the participants in the study. The data obtained from the participants of the study were examined in separate groups as male (n=205) and female (n=546) adolescents and to include all the 751 participants. From the data obtained, first, normality assumptions were examined for all three groups (all participants, male and female adolescents) and Cronbach alpha reliability coefficients were calculated. For all three groups, measurement models were examined before the structural equation model (SEM) and then SEMs were conducted. According to the results obtained, all the models were significant and the academic pressure perceived by adolescents from their parents had a significant role in the adolescent-parent conflict in all three groups. The findings were discussed in light of the literature and some suggestions were made.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> Adolescent-parent conflict, perceived parental academic pressure, gender.</p>

## Introduction

People are in a constant interaction in their daily lives at home, at work, on the street, in traffic, at school, in the family and in many other areas. Individuals can sometimes experience conflicts in these interactions. According to Fisher (1990), conflict is defined as the incompatibility of goals or values between two or more parties in a relationship, with attempts to control each other and with hostile feelings toward each other. When the relevant literature is reviewed, it is seen that the concept of conflict is studied in many areas where people are in interaction in society. The concept of conflict has been researched on health personnel (Akca and Erigüç

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2006), students (Bircan and Bacanlı, 2005), teachers (Zembat, 2012), academicians (Kahraman and Çelik, 2018), athletes (Polat and Üzümlü, 2018), civil servants (Bozkurt, 2016) and families (Mustafayeva and Bayraktaroğlu, 2014). The types of conflict researched within the family include the conflict between spouses (Şengül-Öner, 2013) as well as the conflict between parents and adolescents (Güler, 2013). The current study focused on adolescent-parent conflict.

Family relationships and interactions change depending on the maturation process during adolescence (Dhillon & Kanwar, 2018). Adolescence is considered a stormy period in many societies (Kulaksızoğlu, 2005). In this stormy period, adolescents may experience conflicts with their parents, who have an important place in their lives. According to Abalı (2006), the intensity of parent-adolescent conflict may vary during this period. According to Yavuzer (1998), parents' understanding of discipline based on the pressure against adolescents can turn this period into a period full of conflicts.

Studies investigating adolescent-parent conflict are encountered in the literature. Liu, Wang, and Tian (2019) found that there is a positive and significant correlation between adolescents' risky behaviors and adolescent-parent conflict. Dekovic' (1999) found that adolescents' conflicts with their parents are on issues such as spending money, going out, housework, TV shows watched, rules and arguments among siblings. Yang and Zhang (2021), on the other hand, found that there is a positive and significant correlation between adolescents' intense mobile phone use and adolescent-parent conflict. In another study, it was found that as adolescents' conflicts with their parents increase, their depression levels also increase (Kaveh, Shirdel and Asadollahi, 2018). In their study, Ahmad and Amin (2019) found that as the conflicts of male and female children with their parents increase, their social competence levels decrease. When the relevant literature is considered, it can be said that as adolescents' conflicts with their parents increase, some undesirable situations may also increase. One of the causes of adolescent-parent conflict is situations related to their academic life.

Another finding obtained in the study by Dekovic' (1999) is that adolescents have conflicts with their parents in terms of academic success, motivation, choice of school and profession. Yavuzer, Liman, and Kılıçarslan (2019) in their study with female adolescents stated that one of the areas of conflict with their parents is academic failure. In the study conducted by Kılıç-Ceyhan (2018) on adolescents, the adolescents stated that the issue they had the most disputes about with their parents was studying. When the relevant literature is considered, it is seen that parents' concerns about their children's academic achievement may be an important factor in their experiences of conflicts with adolescents. According to Kapıkıran (2020), parents can exert pressure as well as offer support to increase the academic success of their children who are preparing for exams.

Parental pressure for achievement can be defined as parents forcing their children to reach their standards of achievement (Kapıkıran, 2016). In their study on high school students, Nagpal and Sinha (2016) found that as students' perceived pressure from their parents increases, their academic achievement decreases. In the study conducted by Ritchwood, Carthron and Decoster (2015), it was concluded that as the parental pressure on high school students increases, the test anxiety of the students increases, too. According to the results of Quach, Epstein, Riley, Falconier, and Fang (2015) in their study, as the academic pressure imposed by parents on male and female adolescents increases, the anxiety and depression levels of both male and female adolescents increase.

The high school period is one of the most challenging periods for students in Turkey. Most high school students need to prepare for the exam to get a place in the university they want. A certain part of these students can enroll in a department of their choice (Kapıkıran, 2020). Parents may desire a higher level of academic success for their children, and the reality of the exam mentioned above, in addition to their expectations based on these desires, may cause some parents to exert pressure on their children, whether they are aware of it or not. According to Kapıkıran (2016), this pressure can manifest itself in the form of a desire for their children

to work harder or in the form of unrealistic success or grade expectations that are not suitable for the level of their children. According to Kaynak, Koçak, and Kaynak (2021), this pressure can manifest itself as restrictions, psychological pressure and excessive expectations in children's lives. This academic pressure, which emerges in different forms, can cause adolescents to experience conflicts with their parents. Deb, Strodl, and Sun (2015) argue that students' mental health has become a serious problem among researchers and policy makers due to the increasing incidence of suicide among students worldwide, especially arising from academic stress and its negative impacts. It is thought that the current study can contribute to the literature due to the paucity of studies examining the effects of academic pressures perceived by adolescents from their parents on conflicts experienced in adolescent-parent relationships and because of the scarcity of studies examining this situation depending on gender. In line with the relevant literature, it is thought that it is important for the literature to examine the role of academic pressures of parents in the adolescent-parent conflict in terms of three groups (all participants, male and female adolescents). In this context, the purpose of the current study is to examine the role of academic pressure perceived by adolescents from their parents in adolescent-parent conflict separately for male and female participants and all participants. To this end, answers to these three questions were sought:

1. Does the academic pressure perceived by male adolescents from their parents predict the conflict they experience with their parents?
2. Does the academic pressure perceived by female adolescents from their parents predict the conflict they experience with their parents?
3. Does the academic pressure perceived by all the participants from their parents predict the conflict they experience with their parents?

## **Method**

### **Research Model**

In the current study, the predictive correlational research design, one of the relational models, was used. Predictive correlational studies are used to explain the changes in the dependent variable based on one or more independent variables (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2012). In this study, the predictive correlational research design was used to investigate whether the academic pressure perceived by the adolescents attending different types of high schools from their parents has a role in the conflicts they experience with their parents.

### **Participants**

The participants of the study are 751 students attending different types of high schools in the city of Konya in the fall term of the 2021-2022 school year. Of these students, 205 are male and 546 are female. Moreover, 199 of the students are 9<sup>th</sup> graders, 252 are 10<sup>th</sup> graders, 179 are 11<sup>th</sup> graders and 120 are 12<sup>th</sup> graders. The data obtained from the participants of the study were examined in separate groups as male (n=205) and female (n=546) adolescents and to include all the 751 participants.

### **Data Collection Tools**

**Parent-Adolescent Conflict Scale (PACS):** The scale was developed by Eryılmaz and Mammadov (2016) to measure adolescent-parent conflict in adolescents. The scale yields measurements from 1 (None) to 4 (Very much). According to the results of the analysis, the internal consistency coefficient of the PACS consisted of 12 items, and a single dimension explaining 44.00% of the total variance is 0.88. Results of the confirmatory factor analysis (CFA) were found to be as follows;  $\chi^2/df=2.65$ ; CFI=0.97; NFI =0.95; NNFI=0.96; IFI=0.97; GFI=0.92; AGFI=0.89 and RMSEA= 0.076. In the current study, as seen in Table 1, the Cronbach Alpha

internal consistency coefficient was found to be 0.809, 0.793 and 0.819 for all participants, male, and female adolescents, respectively.

**Perceived Parental Academic Pressure Scale (PPAPS):** This scale was developed by Kaynak et al (2021) to measure the academic pressure that adolescents perceive from their parents. The scale is a five-point Likert scale (1=Not suitable at all – 5=Completely suitable) consisting of 20 items and three sub-dimensions (psychological pressure, restriction and over-expectation) explaining 53.244% of the variance. The CFA results for the three-factor, and second-order three-factor models are as follows:  $\chi^2/df=2.66$ ; CFI=0.98; NNFI=0.97; GFI=0.90; AGFI=0.87; SRMR=0.060 and RMSEA= 0.066. The Cronbach's alpha coefficient was found to be .87 for psychological pressure, .855 for restriction, .819 for over-expectation and .92 for the whole scale, respectively. As seen in Table 1, the Cronbach Alpha internal consistency coefficient for the whole scale in the current study was found to be 0.938, 0.932 and 0.941 for all participants, male and female adolescents, respectively.

### Process

First the permissions were obtained from the authors of the scales to be used in the study. Then, approval was granted by Selçuk University Education Faculty Ethics Committee (E.109355). Later, the permission for implementation was taken from Konya Provincial Directorate of National Education over the Rectorate of Selçuk University. After the research permission was taken, the school administrators were contacted and their consent was obtained. Data were collected from the students who volunteered and had the permission of their parents. Since there would be physical contact with paper and pencil, data were collected online in order not to take any risk under pandemic conditions.

On the data obtained, firstly, missing data, outliers, normality assumptions, and multicollinearity problems were checked. It was seen that there was no missing data. In the context of outliers, univariate and multivariate outliers were examined and a total of 27 data were excluded. On the obtained data, normality assumptions for all the models were checked. In order to determine whether the normality assumption was met, the kurtosis and skewness coefficients were examined. While it is stated that the kurtosis and skewness between  $\pm 1$  meet the normal distribution assumption (Büyüköztürk, 2010), according to another view, values between  $\pm 2$  are accepted as acceptable values for the normal distribution (George and Mallery, 2010). In this study, as seen in Table 1 for all three groups (all participants, male and female adolescents), the kurtosis values for PACS ranged from 0.894 to 0.992, and the skewness values ranged from 1.044 to 1.080. For PPAPS, the kurtosis values were found to be ranging from -0.517 to -0.566 and the skewness values were found to be ranging from 0.180 to 0.306. All the kurtosis and skewness values were found to be at an acceptable level. Finally, for the multicollinearity problem, since the PPAP variable was modelled as a single dimension in the study, the multicollinearity problem did not arise because it was the only independent variable.

In the study, Pearson correlation coefficients were calculated to examine the relationship between PAC and PPAP in all three groups (all participants, male and female adolescents). Structural equation modeling (SEM) was used to examine the predictive relationship between PAC and PPAP in the study. In SEM,  $\chi^2/df$ , Comparative Fit Index (CFI), Incremental Fit Index (IFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR) values were examined as fit indices. In the literature, values between 0 and 5 for  $\chi^2/df$  are taken into account (Aksu, Eser and Güzeller, 2017; Karagöz, 2019; Özdamar, 2016). While a value between .90 and .95 is an acceptable value for CFI, IFI and GFI, a value of .95 and above is considered a good fit (Aksu et al., 2017; Gürbüz, 2019; Hu and Bentler, 1999; Özdamar, 2016). A value of .85 and above is expected for AGFI (Aksu et al., 2017). The acceptable value for SRMR and RMSEA is between .05 and .08 and a value of .05 or below indicates a good fit (Browne and Cudeck, 1993; Hooper, Coughlan and Mullen, 2008; Hu and Bentler, 1999; Karagöz, 2019). SPSS 22 and AMOS programs were used in the analysis.

## Findings

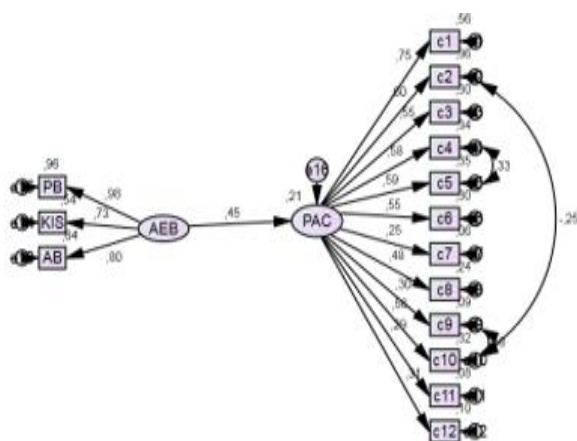
In this section, the Pearson correlation coefficients between the variables of all participants, male and female adolescents, measurements for each group, the fit values for SEMs and the shapes of the SEMs are presented.

**Table 1.** Pearson correlation coefficients, kurtosis, skewness and Cronbach Alpha values for all participants, male and female adolescents

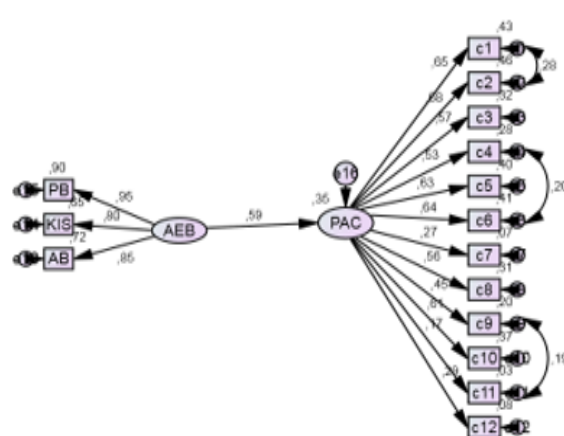
Variables	All participants (n=751)	Male adolescents (n=205)	Female adolescents (n=546)
PAC-PPAP C.C.	0.479*	0.422*	0.499*
PAC Kurt. and Skew.	0.950 – 1.068	0.894 – 1.044	0.992 – 1.080
PPAP Kurt. and Skew.	-0.564 – 0.270	-0.517 – 0.180	-0.566 – 0.306
PAC Cronbach Alpha	0.809	0.793	0.819
PPAP Cronbach Alpha	0.938	0.932	0.941

\* $p < .01$ ; PAC: Parent-Adolescent Conflict, PPAP: Perceived Parental Academic Pressure C.C.=Correlation Coefficient, Kurt.=Kurtosis, Skew. = Skewness

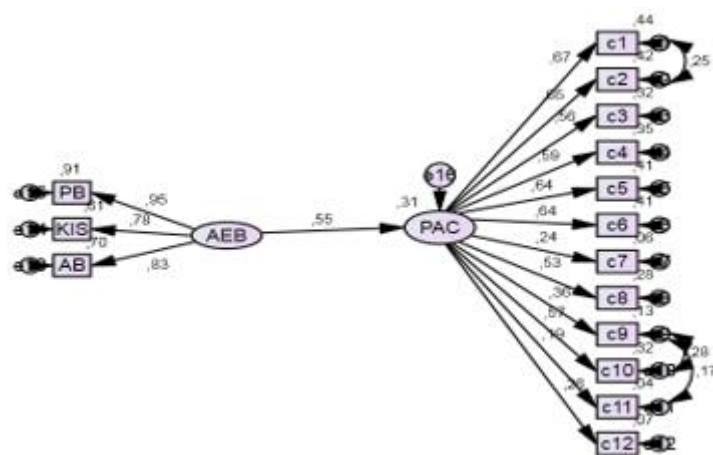
As can be seen in Table 1, the Pearson correlation coefficients calculated for the correlations between PAC and PPAP for all participants, male and female adolescents were found to be 0.479, 0.422 and 0.499, respectively. Thus, there is a medium, positive and significant correlation for all the three groups.



**Figure 1.** SEM for the male adolescents



**Figure 2.** SEM for the female adolescents



**Figure 3.** SEM for all the participants

**Table 2.** Fit values of the measurement models for all participants, male and female adolescents

Groups	CMIN	DF	CMIN/DF	CFI	IFI	GFI	AGFI	RMSEA	SRMR
Male	171.708	86	1,997	.91	.91	.90	.86	.07	.0725
Female	241.050	86	2,803	.944	.945	.944	.922	.058	.0472
All	319.370	86	3,714	.94	.94	.94	.92	.06	.0509

As seen in Table 2 and Figures 1, 2, and 3, SEM was used to examine the predictive role of PPAP in PAC. In the measurement model analyses performed for all three groups (all participants, male and female adolescents) before SEM, initially desired fit values could not be obtained. Thus, modification was applied for all three groups. First, as seen in Figure 1, in the modification made for the male adolescents, covariance was added between the error variances of the items I2-I10, I4-I5 and I9-I10 and the fit values were brought to the appropriate range ( $\chi^2/df=1,997$ , CFI=.91, IFI=.91, GFI=.90, AGFI=.86, RMSEA=.07 and SRMR=.0725). Secondly, in the modification made for the female adolescents, the covariance was added between the error variances of the items I1-I2, I4-I6 and I9-I11 and the fit values were brought to the appropriate range ( $\chi^2/df=2,803$ , CFI=.94, IFI=.95, GFI=.94, AGFI=.92, RMSEA=.058 and SRMR=.0472). Finally, in the modification in which all the participants were included, covariance was added between the error variances of the items I1-I2, I9-I10 and I9-I11 and the fit values were brought to the appropriate range ( $\chi^2/df=3,714$ , CFI=.94, IFI=.94, GFI=.94, AGFI=.92, RMSEA=.06 and SRMR=.0509).

After the measurement models, SEM was performed for each group. The goodness of fit values of all the models were found to be the same as the measurement models. Firstly, as seen in Figure 1, the model established for the male adolescents was also found to be significant ( $\beta=.45$ ,  $p<.05$ ) and PPAP was found to explain 21% of the variance in PAC. Secondly, as seen in Figure 1, the model established for the female adolescents was also found to be significant ( $\beta=.59$ ,  $p<.05$ ) and PPAP was found to explain 35% of the variance in PAC. Finally, the model established for all participants was also found to be significant ( $\beta=.55$ ,  $p<.05$ ) and PPAP was found to explain 31% of the variance in PAC. In all three models, all path coefficients were found to be significant.

### Results, Discussion and Suggestions

In the current study, the role of academic pressure perceived by adolescents from their parents in the conflict experienced by adolescents attending different types of high schools with their parents was examined. In this predictive relationship, SEM was formed for each of three groups: all participants, only male adolescents, and only female adolescents. It was found that the three models had sufficient fit values in the measurement models and SEMs, and statistically significant results were obtained in all three models of the predictive relationship. In addition, in all three groups, it was found that there was a statistically significant, medium and positive correlation between PPAP and PAC.

It was found that the adolescents' perceived academic pressure from their parents had a significant predictive role in the conflict experienced by them with their parents ( $\beta=.55$ ,  $p<.05$ ;  $R^2=.31$ ). There are studies in the literature reporting similar results (Dekovic, 1999; Kılıç-Ceyhan, 2018; Yavuzer et al., 2019). In a study of Chinese adolescents, adolescents' perceived pressure for academic achievement from their parents was found to be correlated with their anxiety and depression (Riley, 2003). In another study conducted on adolescents in India, it was found that two-thirds of the participants were pressured by their parents to perform better, that there was a significant correlation between the academic stress experienced by adolescents and parental pressure and that this academic stress was also correlated with psychiatric conditions (Deb et al., 2015). In a qualitative study conducted on adolescents, Karataş, Mercan and Belge (2016) stated that the conflict they experienced with their parents on issues such as coming home late, watching TV and time spent on the Internet was found to be correlated with a decrease in the time allocated by adolescents to study. According



to Nagpal and Sinha (2016), when parents put too much emphasis on grades academically, students may feel nervous and underperform in exams. When the relevant literature and the results of the current study are considered, it can be said that the academic pressure exerted on adolescents by their parents has negative effects on both their mental health and their relationships with their parents. Kapıkıran (2020) stated that when parents' expectations from their children are realistic, this contributes positively to their academic success while acting in line with unrealistic expectations can put pressure on their children. Adolescents who perceive this situation as pressure may experience conflict with their parents. From another point of view, because of the unrealistic and excessively high expectations of parents, they may restrict or hinder their children in other areas of life outside their academic life (Source et al., 2021). This may cause adolescents to have conflicts with their parents.

The predictive model, which was established for all participants in the study, was also established for both male and female adolescents. According to the results obtained, PPAP predicted PAC significantly for both the male and female groups ( $\beta_{\text{male}}=.45$ ,  $p<.05$ ;  $R^2_{\text{male}}=.21$ ;  $\beta_{\text{female}}=.59$ ,  $p<.05$ ;  $R^2_{\text{female}}=.35$ ). As a result of the analyses made for both groups, it was found that PPAP explained 35% of the variance in PAC in the model for the female adolescents, while PPAP explained 21% of the variance in PAC in the model for the male adolescents. Ahmad and Amin (2019) in their study on adolescents in Pakistan found that while female adolescents have more conflicts with their mothers than male adolescents, male adolescents have more conflicts with their fathers than female adolescents. In the study conducted by Zeytin (2015), it was found that female adolescents have higher levels of stress regarding academic expectations than males. In the same study, it was found that female adolescents have higher academic stress than males both in terms of stress stemming from academic expectations of their own and stress stemming from the expectations of teachers/parents. When the relevant literature and the results of the current study are considered, it can be argued that some parents' expectations for their girls to be successful in the academic field and accordingly to have a job, and their perception of these expectations as a kind of pressure in addition to more academic stress experienced by girls may cause conflicts between girls and their parents. Another factor might be that female adolescents experience more restrictions for their academic achievement than male adolescents, which may cause female adolescents to have more conflicts with their parents. In the relevant literature, there are studies showing that female adolescents have more technology-based addictions such as social media addiction and smartphone addiction than male adolescents (Güney and Taştepe, 2020; Hoşoğlu, 2019; Kocaman and Kazan, 2021; Pamuk and Kutlu, 2016; Sağıroğlu and Akkanat, 2019). In this connection, parents may tend to exert greater pressure on female adolescents for academic issues such as studying, doing homework and preparing for exams. This might cause more conflicts to be experienced by female adolescents with their parents.

When evaluated in general, it can be said that the academic pressure that adolescents perceive from their parents has a role in conflicts that adolescents experience with their parents and that female adolescents experience more conflicts than male adolescents with their parents. Today, conflicts can be experienced on many different issues in the relations of adolescents with their parents. Factors such as academic pressures, restrictions, the constant reminders of lessons, homework and exams, comparisons with other students, especially in the context of grades and over-expectations, which are discussed in this study, may cause tension in adolescents (Kapıkıran, 2016; Kaynak et al., 2021). These tensions can sometimes turn into conflicts. Parents may think of their children's well-being with the restrictions and prohibitions they impose and constant reminding they make but when adolescents perceive this situation as pressure, conflict may arise. In this context, parents can be trained on academic support and academic pressure, along with the developmental characteristics of adolescents. In the current study mothers and fathers are generally considered as parents instead of being handled separately, in future studies the conflicts between adolescents and parents can be considered as mother-adolescent and father-adolescent conflicts so that more contributions can be made to the literature. In addition, a more in-depth analysis can be made by conducting qualitative research with

adolescents who have conflicts with their parents on academic issues. Family counselling can be provided to families who have conflicts with their children on academic issues.

**Ethical Approval.** Ethical report was taken from the Ethics Committee of Faculty of Education of Selçuk University (E.109355).

**Data Availability Statement** The data presented in this study are available on request from the corresponding author.

## REFERENCES

- Abalı, O. (2006). *Adolescence period and its problems*. (Second Edition). Epsilon Publishing, İstanbul.
- Ahmad, I., & Amin, Z. (2019). Perceived parent-adolescent conflict and social competence: Moderating role of gender. *Journal of Behavioural Sciences*, 29(2), 37-52.
- Akca, C. & Erigüç, G. (2006). A study on reasons of conflict the hospital employees experience with their managers and colleagues. *Hacettepe Health Administration Journal*, 9(2), 126-153.
- Aksu, G., Eser, M. T., & Güzeller, C. O. (2017). *Structural equation model applications with exploratory and confirmatory factor analysis*. Ankara: Detay Publishing.
- Bircan, S. & Bacanlı, F. (2005). The effect of adolescents' emotional intelligence on conflict tendencies and criminal behaviors. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 22, 61-82.
- Bozkurt, Ö. (2016). Examined the causal and analytical investigation of relations conflict and burnout in public institutions. *Bolu Abant İzzet Baysal University Journal of Social Sciences Institute*, 16(4), 79-92.
- Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. K. A. Bollen ve J. S. Long (Eds.), *Testing structural equation models içinde* (s. 136–162). Newbury Park, CA: Sage.
- Büyüköztürk, Ş. (2010). *Data analysis handbook for social sciences* (11<sup>th</sup> edition). Ankara: Pegem Akademi Publishing.
- Büyüköztürk, S., Kılıç Çakmak, E., Akgün, O.E., Karadeniz, S., & Demirel, F. (2012). *Scientific Research Methods*. Ankara: Pegem Akademi Publishing.
- Deb, S., Strodl, E., & Sun, H. (2015). Academic stress, parental pressure, anxiety and mental health among Indian high school students. *International Journal of Psychology and Behavioral Science*, 5(1), 26-34. DOI: 10.5923/j.ijpbs.20150501.04.
- Dekovic, M. (1999). Parent-adolescent conflict: Possible determinants and consequences. *International Journal of Behavioral Development*, 23(4), 977-1000.
- Dhillon, R. & Kanwar, P. (2018). Relationship of parent adolescent conflict with internalizing and externalizing symptoms. *Journal of Indian Health Psychology*, 12,2, 53-62.
- Eryılmaz, A. & Mammadov, M. (2016). Examining the psychometric properties of the adolescent-parent conflict scale. *Turkish Journal of Child and Adolescent Mental Health*, 23 (3), 201-210.
- Fisher, R.J. (1990). *The social psychology of intergroup and international conflict resolution*. New York: Springer-Verlag.
- George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 update (10a ed.) Boston: Pearson.
- Güler, İ. (2013). *A Research on Causes of Urban pre-adolescent (age : 12-14) Students' confrontation/conflict with their parents*. (Unpublished Master's thesis), Hacettepe University Social Sciences Institute, Ankara.
- Güney, M., & Taştepe, T. (2020). Social media usage and social media addiction in adolescents. *Journal of Ankara Health Sciences*, 9(2), 183-190. DOI: <https://www.doi.org/10.46971/ausbid.757713>.
- Gürbüz, S. (2019). *Structural equation modeling, basic principles and applied analysis with AMOS*. Ankara: Seçkin Publishing.


- Hooper, D., Coughlan, J. ve Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1):53-60. <https://doi.org/10.21427/D7CF7R>.
- Hosoglu, R. (2019). Investigating mobile phone addiction in high school students/Lise öğrencilerinin cep telefonu bağımliliklerinin incelenmesi. *ADDICTA: The Turkish Journal on Addictions*, 6(1), 51-69. DOI: 10.15805/addicta.2019.6.1.0024.
- Hu, L.T. & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>.
- Kahraman, Ü., & Çelik, K. (2018). The relationship between workload perceptions and work and family conflicts of academicians. *Journal of Higher Education & Science/ Yükseköğretim ve Bilim Dergisi*, 8(1), 95-105. DOI: 10.5961/jhes.2018.251.
- Kapıkıran, Ş. (2016). Parent academic achievement pressure and support scale psychometric assessment and construct validity: Amongst secondary school and high school students. *Ege Journal of Education*, 17(1), 62-83.
- Kapıkıran, Ş. (2020). The mediator role of academic resilience in the relationship between parental academic success pressure and support and test anxiety in adolescents. *Pamukkale University Journal of Education*, 48, 409-430. <https://doi.org/10.9779/pauefd.521230>.
- Karagöz, Y. (2019). *SPSS-AMOS-META applied qualitative, quantitative, mixed scientific research methods and publication ethics* (Second Edition). Ankara: Nobel Akademik Publishing.
- Karataş, S., Mercan, Ç. S., & Düzen, A. (2016). Perceptions of adolescents' relationships with parents: A qualitative research, *Balıkesir University The Journal of Social Sciences Institute*, 19(36), 237-258. <https://doi.org/10.31795/baunsobed.645231>.
- Kaveh, M. H., Shirdel, F., & Asadollahi, A. (2018). Parent-adolescent conflict and general health of 14-year-old adolescents in Behbahan, Iran. *Journal of Health Sciences & Surveillance System*, 6(1), 36-39.
- Kaynak, S., Koçak, S. S., & Kaynak, Ü. (2021). Measuring adolescents' perceived parental academic pressure: A scale development study. *Current Psychology*, 1-13. <https://doi.org/10.1007/s12144-021-01347-w>
- Kılıç-Ceyhan, E. (2018). Investigation of the relationship between mother father adolescent relationships and family functioning from a school social work perspective. Unpublished doctoral thesis, Ankara Yıldırım Beyazıt University Health Sciences Institute, Ankara.
- Kocaman, G., & Kazan, H. (2021). Investigation of the Relationship between High School Students' Instagram Addiction and Social Appearance Anxiety. *OPUS International Journal of Society Researches*, 18(40), 2638-2664. <https://doi.org/10.26466/opus.877656>.
- Kulaksızoğlu, A. (2005). *Adolescent psychology*. (seventh edition). Remzi Bookstore, İstanbul.
- Liu, L., Wang, N., & Tian, L. (2019). The parent-adolescent relationship and risk-taking behaviors among Chinese adolescents: The moderating role of self-control. *Frontiers in psychology*, 10, 542, 1-8. doi: 10.3389/fpsyg.2019.00542.
- Mustafayeva, L., & Bayraktaroğlu, S. (2014). The relationship between work-family conflict and life satisfaction: Comparative study between the UK and TURKEY. *The Journal of Business Science*, 2(1), 127-145.

- Nagbal, M. & Sinha, C. (2016). Perceived parental pressure and academic achievement among students: Exploring the mediating effect of test anxiety among school students. *Open Journal of Educational Psychology*, 2, 13-20.
- Özdamar, K. (2016). *Scale and test development structural equation modeling*. Eskişehir: Nisan Bookstore.
- Pamuk, M. & Kutlu, M. (2016). Investigation of problematic mobile phone use in adolescents in terms of some variables. It was presented as oral at VIII. International Congress Of Educational Research, Çanakkale.
- Polat, E., & Üzümlü, H. (2018). The Effect of Assertiveness Level on the Conflict Tendency of Team Players. *Turkish Journal of Sports Science*, 2(1), 45-52.
- Quach, A. S., Epstein, N. B., Riley, P. J., Falconier, M. K., & Fang, X. (2015). Effects of parental warmth and academic pressure on anxiety and depression symptoms in Chinese adolescents. *Journal of Child and Family Studies*, 24(1), 106-116. <https://doi.org/10.1007/s10826-013-9818-y>
- Riley, P. J. (2003). *The relationship between parental warmth and parental pressure to achieve adolescent depression and anxiety in china*. (Unpublished master dissertation) Maryland: Faculty of the Graduate School of the University of Maryland at College Park). <http://hdl.handle.net/1903/301>.
- Ritchwood, T. D., Carthron, D., & Decoster, J. (2015). The impact of perceived teacher and parental pressure on adolescents' study skills and reports of test anxiety. *Journal of Best Practices in Health Professions Diversity*, 8(1), 1006-1019.
- Sağiroğlu, K. E., & Akkanat, Ç. (2019). Investigating Smart Phone Addiction of High School Students. *Online Journal of Technology Addiction and Cyberbullying*, 6(2), 1-16.
- Şengül-Öner, D. (2013). *Study of examining marital conflict, conflict resolution styles and marital adjustment of married individuals* (Unpublished Doctoral dissertation,). Dokuz Eylül University Educational Sciences Institute, İzmir.
- Yang, X., & Zhang, L. (2021). Reducing parent-adolescent conflicts about mobile phone use: The role of parenting styles. *Mobile Media & Communication*, 2050157920986190.
- Yavuzer, H. (1998). *Child psychology*. (15<sup>th</sup> edition). Remzi Bookstore, İstanbul.
- Yavuzer, Y., Liman, B., & Kılıçarslan, S. (2019). Opinions of girl adolescents on conflict situations between parents-adolescents and parent reactions. *Mehmet Akif Ersoy University Journal of Education Faculty*, 50, 90-109.
- Zemba, R. (2012). A study on preschool teachers' perceived conflict with school administrators, colleagues and parents. *Education and Science*, 37(163), 203-215.
- Zeytin, Y. (2015). *An investigation on the levels of academic expectations stress and subjective well-being of the students prepared to the university entrance exams*. (Unpublished Master's thesis), Gaziantep University Educational Sciences Institute, Gaziantep.

# The Relationship Between Attitudes Towards Social Sciences Course and Democratic Attitudes\*

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 07.07.2022</p> <p>Available online: 22.11.2022</p>	<p>The current research aims to investigate the relationship between the attitudes of primary school students toward social sciences course and their democratic attitudes according to some demographic variables. The research employed the correlational survey method, one of the quantitative research methods. The participants were 826 3rd-grade students studying in 13 schools in the central district of Elazığ. Data gathering instruments included the Democratic Attitude Scale and the Attitude Scale toward Social Sciences Courses. The results revealed no statistically significant differences in the variables of gender, educational status of the father, number of siblings, and attitudes towards social sciences course in terms of democratic attitudes of primary school students. However, a statistically significant difference was found in terms of the educational status of mothers. The illiterate group showed a lower median value than the high school group and the other three groups, meaning that students with the lowest level of democratic attitudes are children of illiterate mothers. Primary school students' attitudes toward social science courses and their attitudes about democracy were also found to be significantly positively correlated.</p>
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## Introduction

Information is generally accessed through books, magazines, television, and technology-based tools while attitudes and value judgments, important outputs of the school are acquired through social interactions. Social interactions first turn into feelings by directing our perspective, and then into attitudes and values that affect our behavior (Borich, 2017). To understand the role of attitudes and values in lessons such as social

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sciences, first of all, it is necessary to know which attitudes and values will be taught to the child with the principle of relativity, how they will be taught, and how they are learned (Seefeldt, Castle, and Falconer, 2015). It is one of the first courses encountered in primary school to acquire basic life skills. This process begins with the parents and is planned to continue in the classroom (Çelik, 2020). While arranging content based on progressivism and reconstructivism in education, it should include a structure that is social, open to change, advocates a democratic environment, is practice-oriented, and uses scientific methods (Sönmez, 2020). In the social sciences course, which adopts deductive development, collective teaching is carried out instead of giving single and fragmented information. In the collective teaching approach, multidimensional structures such as students, teachers, programs, and books appear as a system that aims to gain multidimensional thinking skills with a holistic perspective of various disciplines. In addition to multidimensional thinking skills, students are allowed to grow as individuals who meet the needs of the developing age by bringing different disciplines together and producing original and new ideas (Kaya, 2020). The concept of democracy is also a multidimensional concept. It will not be easy to understand the concept when it is not given together with the different values and skills that make up this concept (Altun, 2016).

Democracy is a system that has become an area of life that embodies the principles of freedom, justice, and equality embedded in all areas of life (Çelik, 2018). The concept of democracy has been discussed for about 2500 years. A large part of the development of democracy can be attributed to the spread of democratic ideas and behaviors as long as appropriate conditions are provided (Dahl, 2021). The continuation of this system also requires a participatory democracy. Participatory democracy can also be achieved through the presence of responsible and sensitive citizens who take action (Önal, 2020). Democratic citizenship is the life in independent societies that go through logical and impartial stages where the rights of the minority are also protected. The key component in citizenship education is the learning of democratic ideals (Zarillo, 2016). Society consists of a set of values. The more these values are, the more meaningful society becomes. Having many values is also shown as proof of the democratic nature of that society (Tezcan, 2021). Democratic attitudes and behaviors begin in childhood; the family is the first social structure. The second social structure in which this structure develops is schools, which are the institutions where activities are carried out theoretically and practically (Dağ, 2020).

The development of democracy is from the bottom up, not from the top down. For a culture of democracy to be formed, democracy should become a manner of life in individual classrooms in schools, which are part of an organized system (Okutan, 2010). In classrooms where a democratic atmosphere is provided, students feel more confident and happier in a freer and more interactive environment and participate more effectively in the decisions in their classrooms (Sağlam, 2020). Democracy and education interact with each other. While democracy increases the quality of education, education ensures the adoption of democracy by individuals. Democratic attitudes and behaviors are brought to individuals through various activities with programs in primary education between the ages of 6-14. This education takes place not with memorization but rather with a democratic education-teaching process (Genç, 2016). Equipping new individuals with democratic values enables the individuals of that country to experience democracy. The guarantee of democracy is the existence of citizens who keep democracy alive (Gözütok, 2021).

If it is the citizens who keep democracy alive, this does not arise on its own. Schools have a key role in shaping the process of becoming a democratic citizen. For this reason, democratic citizenship education in schools should not be overshadowed by academic success concerns. It is necessary to constantly strive for the development and realization of democratic ideals in lessons (Parker, 2018). The social sciences course is one of the first courses in primary school to create a democratic attitude. Examining the attitudes of primary school 3rd-grade students towards the social science course and their democratic attitudes will give us some insights for the future. It is important to examine the relationship between the attitudes towards the social sciences

course, which is thought to be effective in the formation of democratic attitudes, and democratic attitudes. The current study aimed to examine the attitudes and democratic attitudes of primary school 3rd-grade students towards social sciences course according to gender, mother's education level, father's education level, and the number of siblings, and to reveal the relationship between attitudes toward social sciences course and democratic attitudes. To this end, the following questions guided the study:

1. Do the attitudes of primary school 3rd-grade students towards social studies course differ in terms of
  - 1.1. Gender
  - 1.2. Mother's education status
  - 1.3. Father's education
  - 1.4. The number of siblings?
2. Do the democratic attitudes of primary school 3rd-grade students differ in terms of
  - 2.1. Gender
  - 2.2. Mother's education status
  - 2.3. Father's education
  - 2.4. The number of siblings?
3. Is there a relationship between primary school 3rd-grade students' attitudes towards social studies course and their democratic attitudes?

## Method

### Research Design

One of the quantitative research methods employed in this study was the correlational survey method.

In survey studies, tendencies, views, and attitudes about the universe are described quantitatively through the sample determined from the universe (Creswell, 2017). Survey studies "...measure attitudes, opinions, and beliefs using good measurement procedures, they are able to examine relationships among the variables, make predictions, and determine how subgroups differ" (Christensen, Johnson and Turner, 2015, p.336).

### Sample of the Research

The study's universe is comprised of 6663 students enrolled in the 3rd-grade primary school in Elazığ's central district during the 2016–2017 academic year. The sample for the study was chosen using the following formula:

$$n_0 = [(t \times S) / d]^2 \quad n = [n_0 / (1 + (n_0 / N))]$$

N: The size of the universe, n: The sample size,  $n_0$ : The estimate in the formula for the sample size, t: the confidence level, d: The amount of deviation, S: The standard deviation estimated for the population (Büyüköztürk, Çakmak, Akgün, Karadeniz and Demirel, 2011). Based on the formula, the sample size was calculated as at least 363 people. The schools' administrators were contacted to inform them about the research, and the necessary permissions were obtained by interviewing the school administrators for the applications. The consent form was sent to 1500 parents of 3rd-grade students among 13 primary schools during the 2017-2018 academic year. Among them, 826 parents accepted their children's participation in the study. The application in each class took an average of 40 minutes. Table 1 below shows the sample distribution. The distribution of girl and boy students is close to the same level: 51,1% (422) girls and 48,9% (404) boys. The mother's educational status variable, is as follows: 11,9% (80) illiterate, 22,5% (151) graduates of primary school, 14,8% (99) graduates of secondary school, 23,8% (160) graduates of high school, 27 (181) graduates of a university. The father's educational status variable, is as follows: 6,1% (41) illiterate, 13% (87) graduates of primary school, 16,3% (109) graduates of secondary school, 21,6% (145) graduates of high school, 43% (288)



graduates of university. Children who do not know their parents' educational status left this part blank. According to the number of siblings variable, 6.3% (52) of the students have no siblings, 27,6% (228) of the students have one sibling, 32,7% of the students (270) have two siblings, 23,2% of the students (192) have three siblings, and 10,2% of the students (84) have four or more siblings.

**Table 1.** Demographic Characteristics of the Sample Group

Variable	Category	f	%
Gender	Girl	422	51,1
	Boy	404	48,9
Mother's Educational Status	Illiterate	80	11,9
	Primary school	151	22,5
	Middle school	99	14,8
	High School	160	23,8
	University	181	27
Father's Educational Status	Illiterate	41	6,1
	Primary school	87	13
	Middle school	109	16,3
	High School	145	21,6
	University	288	43
Number of siblings	0	52	6,3
	1	228	27,6
	2	270	32,7
	3	192	23,2
	4 and above	84	10,2

Note: adapted from Tiryaki's (2018) master thesis

The distribution of girl and boy students is close to the same level: 51,1% (422) girls and 48,9% (404) boys. According to the mother's educational status variable, 11,9% (80) were illiterate, 22,5% (151) primary school, 14,8% (99) secondary school, 23,8% (160) high school, 27 (181) of them are university. According to the father's educational status variable, 6,1% (41) were illiterate, 13% (87) primary school, 16,3% (109) secondary school, 21,6% (145) high school, 43% (288) university. Children who do not know their parents' educational status left this part blank. According to the number of siblings variable, 6.3% (52) of the students have no siblings, 27,6% (228) of the students have one sibling, 32,7% (270) of the students have two siblings, 23,2% (192) of the students have three siblings, and 10,2% (84) of the students have four or more siblings.

### Data Collection Tools

Two scales were used to collect data in the current study. The first scale Attitude Scale towards Social Sciences Course developed by Zayimoğlu Öztürk and Coşkun (2015) consists of a two-factor structure called "positive and negative attitude", with 15 items in the 3-point (Yes, Partially, No) Likert type. The KMO sample fit coefficient is .912, and the Barlett Sphericity test  $\chi^2$  value is 1987,220.

The second scale Democratic Attitude Scale developed by Erbil and Kocabaş (2017) consists of a 3-point (Yes, Partially, No) Likert-type, single-factor structure with 10 items. All fit index values obtained from CFA were at the perfect level and Cronbach's Alpha reliability coefficient was .76. An open-ended part was left at the bottom of the scales (please state your views). Before the research, we obtained permission to use the scales. Firat University Non-Interventional Research Ethics Committee approved the ethical compliance of the research with decision number 20 of the 11th meeting dated 06.07.2017 with document number -97132852/100. After that, the research was carried out with the permission of the Elazığ Provincial Directorate of National Education with the document number 79137285-605.01-E.13695458. The research findings were used from Tiryaki's (2018) master thesis.

## Data Analysis

Kolmogorov-Smirnov (K-S) test was used according to the sample size in the study.

If the sample size is higher than 50 in a study, the K-S test is used. Normality tests were conducted with K-S. The fact that the p-value is less than 0.05 in the statistical results obtained necessitates not using statistics that require the assumption of "normality". If the z-statistic to be obtained by dividing the skewness coefficient by the standard error is greater than 1.96 for  $\alpha = .05$ , it is interpreted that the distribution is not normal (Büyükoztürk, 2016). When the distribution patterns are examined, the histogram, normal Q-Q plot and detrended normal Q-Q plots graphs, Kolmogorov-Smirnov test, skewness, and kurtosis values show that the distribution is not normal.

**Table 2.** Normality Test

Scale Names	Statistic	Std Error	
Attitude Scale Towards Social Sciences Course Skewness	-1,506	.085	
Attitude Scale Towards Social Sciences Course Kurtosis	3,309	.170	
Democratic Attitude Scale Skewness	-1,428	.085	
Democratic Attitude Scale Kurtosis	2,821	.170	
Scale Names	Statistics	df	p
Attitude Scale Towards Social Sciences Course	.146	826	.000
Democratic Attitude Scale	.185	826	.000

Note: adapted from Tiryaki's (2018) master thesis

Tests requiring normality assumption were not used based on the obtained normality p-value (.00). Spearman-Brown Rank Differences correlation coefficient, frequency, Mann Whitney U (MWU)-test, and Kruskal Wallis Test (KWT) were used in the analysis of the data.

The perfect value of 1.00 indicates a positive correlation in the correlation coefficient; the value of -1,00 indicates a perfect negative relationship, and the value of .00 indicates no relationship. While there is no general common range when interpreting the correlation coefficient, the following limits can generally be used: High correlation between .70-1,00; the medium correlation between .70- .30 and .30-.00, a low correlation (Büyükoztürk, 2016). The current study determined the correlation coefficient ranges based on these limits.

## Results

The findings of the statistical analyses are presented in this section.

**Table 3.** MWU-Test of Democratic Attitude Scale by Gender Variable

Gender	n	MR	Rank Sum	U	p
Girl	422	423,16	178575,00	81166,000	.228
Boy	404	403,41	162976,00		

Note: adapted from Tiryaki's (2018) master thesis, Mean Rank= MR

As seen in Table 3, a significant difference was not found in terms of gender variable based on the MWU-test ( $U = 81166,000$ ,  $p > .05$ ) regarding the democratic attitude scale. The mean rank of the boys ( $SO = 403,41$ ) is close to the girls' points ( $SO = 423,16$ ).

**Table 4.** MWU-Test of attitudes towards social sciences course according to gender variable

Gender	n	MR	Rank Sum	U	p
Girl	422	425,87	179717,00	80024,000	.126
Boy	404	400,58	161834,00		

Note: adapted from Tiryaki's (2018) master's thesis

According to Table 4, attitudes towards social sciences course did not show a statistically significant difference in terms of gender in the MWU-test ( $U=80024,000$ ,  $p>.05$ ). In the group mean rank, the scores of the girl students ( $SO= 425,87$ ) were approximately equal to the scores of the boy students ( $SO= 400,58$ ).

**Table 5.** Mean rank according to mother's educational status variable of democratic attitude scale and Kruskal Wallis Test

Mother's educational status	n	MR	df	$\chi^2$	p
Illiterate	80	276,50	4	9,929	.042
Primary school	151	347,93			
Middle school	99	325,61			
High School	160	348,04			
University	181	347,39			

Note: adapted from Tiriyaki's (2018) master thesis

In Table 5, the KWT revealed a statistically significant difference in the democratic attitude levels of the participants in five different educational status groups [ $\chi^2(4) = 9,929$ ,  $p<.05$ ]. The group with the lowest mean rank score on the students' democratic attitude scale according to their mother's education level is the illiterate group. Examining their medians (Md), the illiterate group (Md=27), revealed a lower median value than the other groups [the high school group (Md=28,5), and the other three groups (Md=28)].

**Table 6.** The mean ranks of the attitudes towards social sciences lesson according to the variable of mother's educational status and Kruskal Wallis Test

Mother's educational status	n	MR	df	$\chi^2$	p
Illiterate	80	318,64	4	4,580	.333
Primary school	151	356,34			
Middle school	99	311,67			
High School	160	329,28			
University	181	345,96			

Note: adapted from Tiriyaki's (2018) master thesis

According to Table 6, the scores of the students' attitude scale towards the social sciences course did not show a statistically significant difference in terms of the mother's educational status variable [ $\chi^2(4) = 4,580$ ,  $p>.05$ ]. The group mean rank of the students according to their mother's education level is similar.

**Table 7.** Mean rank according to father's educational level variable of democratic attitude scale and Kruskal Wallis Test

Father's educational status	n	MR	df	$\chi^2$	p
Illiterate	41	280,72	4	4,336	.362
Primary school	87	342,17			
Middle school	109	325,74			
High School	145	338,03			
University	288	343,70			

Note: adapted from Tiriyaki's (2018) master thesis

As seen in Table 7, no statistically significant difference was found between the mean ranks of the students' democratic attitude scale scores according to the father's educational status variable [ $\chi^2(4) = 4,336$ ,  $p>.05$ ]. There was a significant difference between the scores of the democratic attitude scale according to the mother's educational status. However, there was no statistically significant difference in terms of the father's education status. The illiterate group has the lowest mean in the mother's educational status.

**Table 8.** The mean ranks of the attitudes towards social sciences course according to the father's educational status variable and Kruskal Wallis Test

Father's educational status	n	MR	df	$\chi^2$	p
Illiterate	41	339,73	4	2,866	.581
Primary school	87	362,50			
Middle school	109	316,10			
High School	145	332,74			
University	288	335,47			

Note: adapted from Tiryaki's (2018) master thesis

There was no statistically significant difference between the mean ranks of the attitude scale scores toward the social sciences course according to the father's educational status variable [ $\chi^2(4) = 2,866$ ,  $p > .05$ ]. Social sciences course attitude scores are similar according to the father's education status.

**Table 9.** Mean rank according to number of siblings and Kruskal Wallis Test of democratic attitude scale

Number of Siblings	n	MR	df	$\chi^2$	p
0	52	403	4	4,269	.371
1	228	429,70			
2	270	415,59			
3	192	413,84			
4 and above	84	368,54			

Note: adapted from Tiryaki's (2018) master thesis

As seen in Table 9, no statistically significant difference was found between the mean ranks of the democratic attitude scale scores according to the number of siblings [ $\chi^2(4) = 4,269$ ,  $p > .05$ ]. It is seen that those who have four or more siblings have the lowest democratic attitude scale score, and those who have the highest democratic attitude scale score have only one sibling.

**Table 10.** Mean rank according to the number of siblings variable and Kruskal Wallis Test of attitude towards social sciences course scale

Number of Siblings	n	Rank Average	df	$\chi^2$	p
0	52	420,65	4	.853	.931
1	228	405,03			
2	270	421,86			
3	192	407,31			
4 and above	84	419,33			

Note: adapted from Tiryaki's (2018) master thesis

As seen in Table 10, no significant difference was found between the mean rank of attitude scores in the social sciences course according to the number of siblings variable [ $\chi^2(4) = .853$ ,  $p > .05$ ].

**Table 11.** Correlation between attitude scale towards social sciences course and democratic attitude scale

Scales	Attitude Towards Social Sciences Course	Democratic Attitude
1. Attitude Towards Social Sciences Course		
2. Democratic Attitude		.346**

Note: adapted from Tiryaki's (2018) master thesis,  $p < .001$  (One way)

As seen in Table 11, the Spearman rho correlation coefficient (.346) is positive between students' attitudes towards the social sciences course and the total scores of democratic attitudes. Based on the findings, a positive correlation was found between primary school students' attitudes towards social sciences course and their democratic attitudes. A moderate relationship was found between the two variables (the level of attitude towards the social sciences course and the level of democratic attitude) in terms of relationship

strength. The higher the students' attitudes towards the social studies course are, the more their democratic attitudes increase.

The open-ended opinion section in the questionnaire was used to take participants' opinions. Forty-five out of 826 students filled out this part and wrote their opinions. While 28 students wrote their opinions about their attitudes towards the social sciences course, 17 students expressed their opinions about democratic attitudes. While 14 students stated that they liked the social sciences course, 5 students expressed that they like the lessons, 2 students expressed that the social sciences course taught life, and the remaining students expressed different opinions. In addition, students expressed 17 views on democratic attitudes. The students state that everyone is equal, that people should be valued because they are human beings, that democracy is everywhere, and that everyone has a right.

### Discussion and Conclusion

If it is desired to educate students according to democratic values, it is necessary to explain the essence and importance of a democratic society to students. The most important institutions of democratic societies are educational institutions. School environments should support the development of democratic attitudes in children by encouraging them to ask questions, think, discuss and solve problems by using appropriate learning methods (Matusovà, 1997). School is not just a place where lessons that are considered separate from society are taught. It is the living and real form of community life (Dewey, 2010). The social sciences course provides students with basic values, knowledge, and skills to grow up as democratic citizens and adopt democratic values in their lives (Çanak, 2019). The current research investigated the relationship between the attitudes of primary school students towards social sciences course and their democratic attitudes according to some demographic variables.

In parallel with this aim, democratic attitudes and attitudes towards social sciences course were examined according to demographic variables. The findings revealed that gender variable does not affect the democratic attitudes of the people. Numerous studies in the literature also found no significant difference in terms of gender, including Demirbilek and Kırbaç's study (2021) on basic democratic value levels, Aydoğmuş and Kiraz's study (2020), Elkatmış and Toptaş's study (2015), Altunay Şam, Çaypınar and Alimcan's study (2016), and Gündoğan's study (2021) on democratic value perceptions, Onuray Eğilmez, Eğilmez and Engür's study (2018), Vatansever Bayraktar and Karakülçe (2019), Nazıroğlu and Çetin's study (2014), İnal Kızıltepe Uyanık, Özşüer and Can Yaşar's study (2013), Saraçaloğlu, Sanem, Baydilek and Çoşkun's study (2013) on democratic attitudes, Özaslan, Kumcağız and Baba Öztürk's study (2020) on democratic perceptions and attitudes, Cura and Yılmaz's study (2018) on democratic attitudes and behaviors, and Kesici, Pesen and Oral's study on (2017) democratic behaviors in the classroom. However, there are a few contradictory studies reporting differences in terms of gender. For instance, in the studies conducted by Gömleksiz and Çetintaş (2011), Yaşar Ekici (2014), and Arslan and Çalmaşur (2017), a significant difference was found in terms of democratic attitudes in favor of women while in Özbek's study (2016) a significant difference was found in favor of male students.

Students' attitudes towards social sciences courses did not show a statistically significant difference in terms of gender variables. However, unlike the results of the current research, in the literature, some studies have results in favor of male or female students. While Batmaz (2021), and Özgün (2019) found a significant difference in the attitudes of students towards social sciences courses in favor of females Çetin (2020) and Sarı (2020) reached the same result for males. In the current study, it is concluded that attitudes towards social sciences course did not differ in terms of gender variable. When examined in terms of gender variable, it is seen that both attitudes toward social studies course and democratic attitudes do not differ.

The functionality of democracy awareness in children depends on the education given in schools, as well as families' democratic awareness and their involvement in the process (Çullu and Samancı, 2016). For this reason, the current study investigated the democratic attitudes of the students in terms of the educational status of their families. A remarkable finding of this study is that mothers' educational status makes a statistically significant in the democratic attitudes of their children. The illiterate group showed a lower median value than the high school group and the other three groups, meaning that students with the lowest level of democratic attitudes are children of illiterate mothers. The studies in the literature supported our findings. In a study conducted on 50 gifted children at the secondary school level, the awareness of democracy, love, and tolerance of gifted students increased as the education level of mothers increased (Çetinkaya and Kıncal, 2015). In the study conducted by İnal Kızıltepe et al. (2013), according to the mothers' opinions, as the mother's education level of preschool children increases, children's democratic attitudes increase. They concluded that the democratic attitudes of individuals with a higher education level are lower than those of other education levels. According to Ural and Sağlam's study (2011), the democratic attitudes of primary school students increase as their educational status increases, except for university graduates, according to their mother's education level. In addition, some studies have reported different results from the current research results. In their study on democratic attitudes, Yaşar Ekici (2014), Elkatmış and Toptaş (2015), Özgün (2019), and Demirbilek and Kırbaç (2021) and in their study on democratic perceptions and attitudes Onuray Eğilmez et al. (2018) found no significant difference in terms of mothers' educational status.

In terms of the father's educational status, the current study found no statistically significant difference in the democratic attitudes of primary school students. There are also studies in the literature showing similar results. In their studies on democratic attitudes, Yaşar Ekici (2014), Elkatmış and Toptaş (2015), Gömleksiz and Çetintaş (2011), Ural and Sağlam (2011), Demirbilek and Kırbaç (2021), Özgün (2019) and Nazıroğlu & Çetin (2014) and Onuray Eğilmez et al. (2018) found no significant difference according to father's education level. However, İnal Kızıltepe et al. (2013) found that according to the mother's opinions, as the father's education level of preschool children increases, children's democratic attitudes increase. In the study of Çetinkaya and Kıncal (2015), it was concluded that as the education level of the father increases, the awareness of democracy, love, and tolerance of gifted students improves. In light of the findings, it can be suggested that children's democratic attitudes can be increased as the education level of the family increases, especially that of the mother's.

The average education level of adults aged 25-64 in Türkiye is below the OECD (Organization for Economic Cooperation and Development) averages. In particular, the biggest difference is that the ratio of adults who do not even graduate from secondary education is 58% in Türkiye, while the OECD average is 21%. In this group, Türkiye is well below the OECD average. Again, when the education levels of young people between the ages of 25-34 are examined according to the gender distribution, Türkiye is below the OECD averages at all education levels for the years 2010 and 2020. In particular, although the rate of women not even having a secondary education degree decreased from 64% in 2010 to 43% in 2020, and from 52% for men in 2010 to 39% in 2020, these figures are below the OECD average (OECD, 2021). Therefore, based on the OECD data and results from the current study, the education levels of women and men should be increased in Türkiye, who cannot even receive education at secondary education and below.

In the current study, students' attitudes toward the social sciences course did not cause a statistically significant difference in terms of parents' educational status. Sarı (2020) found no significant difference in the attitudes towards the social sciences course according to the mother's and father's educational status variable. In this study, the educational status of the mother and father did not make any significant difference in the attitudes of students toward the social sciences course.

The number of siblings, one of the other demographic variables in the current study, did not make a statistical difference in the participants' democratic attitudes and attitudes toward the social studies course. In the literature, numerous studies including the studies of Karatekin, Merey and Kuş (2013), Özgün (2019), and Yaşar Ekici (2014) share similar findings when it comes to the number of siblings in the family.

The relationship between primary school students' attitudes toward social sciences course and their democratic attitudes was found to be .35 which is accepted as moderate. There is a positive relationship between attitudes towards social sciences course and democratic attitudes. According to Pamuk and Pamuk (2016), one of the existential purposes of both Sachunterricht in Germany and the social sciences course in Türkiye is to raise citizens with democratic attitudes. According to Aslan (2011), when our 1924 primary school curriculum is examined, it can be seen that it gave importance to raising individuals with a democratic mindset in line with social life. Armağan Erbil and Doğan (2019) determined that students should gain democracy awareness under the theme of effective citizenship based on teachers' opinions. According to the results of the current research, there is no relation between the attitudes toward the social sciences course and the democratic attitudes of the students. Positive development of students can be achieved by improving students' attitudes towards social sciences course and their democratic attitudes. In future studies, different factors that affect students' democratic attitudes and attitudes toward social sciences courses can be examined. To improve the democratic attitudes of the students, activities can be organized to increase the educational status of the parents, considering their influence on their children.

## REFERENCES

- Altun, A. (2016). Hayat bilgisi derslerinde kavram öğretimi. S. Güven & S. Kaymakçı (Ed.). In *Hayat Bilgisi Öğretimi*. (pp. 180-214). Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Altunay Şam, E., Çaypınar, İ., & Alimcan, D. (2016). Öğretmen adaylarının demokratik tutumları ve şiddete karşı tutumları arasındaki ilişki (Amasya Üniversitesi Örneği). *Istanbul Journal of Innovation in Education*, 2(2), 31-53. Retrieved from <https://dergipark.org.tr/tr/pub/ieyd/issue/24453/396293>
- Armağan Erbil, B., & Doğan, B. (2019). İlkokul hayat bilgisi dersi öğretim programı için öğretmenlerin görüşlerine göre ortaya çıkan ihtiyaçlar. *Eğitim Kuram ve Uygulama Araştırmaları Dergisi*, 5(1), 14-26. Retrieved from <https://dergipark.org.tr/tr/pub/ekud/issue/44939/559319>
- Arslan, A., & Çalmaşur, H. (2017). İlkokul ve ortaokul öğretmenlerinin çok kültürlü eğitim tutumları ve demokratik tutumlarının çeşitli değişkenler açısından incelenmesi. *Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Dergisi*, (34), 90-109. Retrieved from <https://dergipark.org.tr/tr/pub/ataunikkefd/issue/29687/297697>
- Aslan, E. (2011). The first primary school curriculum of the Turkish Republic: "1924 ilk mektepler müfredat programı". *Elementary Education Online*, 10(2), 717-734. Retrieved from <https://www.ilkogretim-online.org/fulltext/218-1596873404.pdf?1658172513>
- Aydoğmuş, B & Kiraz, Z. (2020). Üniversite öğrencilerinin demokratik tutum ve tolerans düzeylerinin incelenmesi. *Bolu Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 20(3), 1322-1339. doi: <https://doi.org/10.17240/aibuefd.2020.-541382>
- Batmaz, O (2021). İlkokul öğrencilerinin hayat bilgisi dersinde eğlenme düzeyleri ile derse yönelik tutumları arasındaki ilişkinin incelenmesi. *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi*, 11(3), 1535-1547. Retrieved from <https://dergipark.org.tr/tr/pub/nevsosbilen/issue/65184/934527>
- Borich, G. D. (2017). *Etkili öğretim yöntemleri araştırma temelli uygulama*, B. Acat (Trans Ed.). Ankara: Nobel.
- Büyüköztürk, Ş. (2016). *Sosyal Bilimler İçin Veri Analizi El Kitabı* (22<sup>nd</sup> ed). Ankara: Pegem Akademi.
- Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2011). *Bilimsel Araştırma Yöntemleri*. Ankara: Pegem Akademi.
- Christensen, L. B., Johnson R. B., & Turner, L. A. (2015). *Research methods, design, and analysis* (12<sup>th</sup> ed.). Pearson Education Limited.
- Creswell, J.W. (2017). *Araştırma Deseni Nitel, Nicel ve Karma Yöntem Yaklaşımları* (3<sup>rd</sup> ed), S. B. Demir (Trans Ed.). Ankara: Eğiten Kitap.
- Cura, Ü. & Yılmaz, E. (2018). The relationship between principals' leadership styles and democratic attitudes and behaviors. *Uluslararası Yönetim Akademisi Dergisi*, 1(2), 10-21. Retrieved from <https://dergipark.org.tr/tr/pub/mana/issue/38967/452924>
- Çanak, S. (2019). *Sınıf öğretmenlerinin hayat bilgisi dersinde öğrencilere demokratik değerlerin kazandırılmasına yönelik görüşleri*. Yüksek Lisans Tezi, Tokat Gaziosmanpaşa Üniversitesi, Tokat Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi>
- Çelik, H. (2018). Eğitim ve demokrasi. M. Karataş (Ed.). In *Eğitim ve Toplum Yazıları*. (pp. 1-27). Der. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Çelik, Ö. (2020). Hayat bilgisi dersinin amacı, kapsamı ve içeriği. V. Aktepe ve M. Gündüz (Ed.). In *Kuramdan uygulamaya hayat bilgisi öğretimi*. (pp. 2-22). Ankara: Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Çetin, B. (2020). İlkokul iki ve üçüncü sınıf öğrencilerinin hayat bilgisi dersine yönelik tutumlarının çeşitli değişkenler açısından incelenmesi. *Trakya Üniversitesi Sosyal Bilimler Dergisi*, 22(2), 989-1000. doi: <https://doi.org/10.26468/trakyasobed.645269>




- Çetinkaya, Ç., & Kıncal, R. Y. (2015). Üstün zekâlı ve yetenekli çocukların demokrasi eğitimi. *Journal of Gifted Education Research*, 3(1), 1-22.
- Çullu, M. S., & Samancı, O. (2016). Çocuk eğitiminde demokrasi. *Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(1), 79-84. Retrieved from <https://dergipark.org.tr/tr/download/article-file/225292>
- Dağ, N. (2020). Hayat bilgisi dersinde demokrasi eğitimi. V. Aktepe ve M. Gündüz (Ed.). In *Kuramdan uygulamaya hayat bilgisi öğretimi*. (pp. 248-273). Ankara: Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Dahl, A.R. (2021). Demokrasi Üzerine (6<sup>th</sup>ed). Phoenix. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Demirbilek, N., & Kırbaç, M. (2021). Lise öğrencilerinin eleştirel düşünme eğilimleri ile temel demokratik değer düzeyleri arasındaki ilişki. *Muallim Rifat Eğitim Fakültesi Dergisi*, 3(1), 24-43. Retrieved from <https://dergipark.org.tr/en/pub/mrefdergi/issue/60110/812917>
- Dewey, J. (2010). *Okul ve Toplum* (2<sup>nd</sup> ed), H. A. Başman (Trans.). Pegem Akademi.
- Elkatmış, M., & Toptaş, V. (2015). Sınıf öğretmenleri adaylarının demokratik tutumlarının incelenmesi. *Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, 12(1), 128-144. Retrieved from <https://dergipark.org.tr/tr/pub/yyuefd/issue/25854/272575>
- Erbil, D.G. & Kocabaş, A. (2017). İlkokul 3. sınıf öğrencileri için bir ölçek geliştirme çalışması: Demokratik tutum ölçeği. *Kastamonu Eğitim Dergisi*, 1 (25), 221-232. Retrieved from <https://dergipark.org.tr/tr/pub/kefdergi/issue/27737/309043>
- Genç, S. Z. (2016). *Eğitim sürecinde aile okul ve toplum*. Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Gömlüksiz, M. N., & Çetintaş, S. (2011). Öğretmen adaylarının demokratik tutumları. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, (17), 1-14. Retrieved from <https://dergipark.org.tr/en/pub/zgefd/issue/47948/606647>
- Gözütok, F. D. (2021). *Öğretim İlke ve Yöntemleri* (7<sup>th</sup> ed). Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Gündoğan, A. (2021). Okulöncesi ve sınıf öğretmenleri adaylarının demokratik değer algıları ile toplumsal cinsiyet rollerine ilişkin tutumları arasındaki ilişki. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 36(4). doi: 774-787. <https://doi.org/10.16986/HUJE.2020059308>
- İnal Kızıltepe, G., Uyanık, Ö., Özsüer, S., & Can Yaşar, M. (2013). 61-72 aylık çocukların demokratik tutum ve davranışlarının anne görüşlerine göre değerlendirilmesi. *Türkiye Sosyal Araştırmalar Dergisi*, 17(3), 227-244. Retrieved from <https://dergipark.org.tr/en/pub/tsadergisi/issue/21486/230312>
- Karatekin, K., Meray, Z., & Kuş, Z. (2013). Öğretmen adayları ve öğretmenlerin demokratik tutumlarının çeşitli değişkenler açısından incelenmesi. *Kastamonu Eğitim Dergisi*, 2(2), 561-574. Retrieved from <https://app.trdizin.gov.tr/makale/TVRRM09EUTBOQT09>
- Kaya, E. (2020). *Hayat bilgisi, sosyal bilgiler ve fen bilgisi derslerinin temeli: toplu öğretim sistemi* (2<sup>nd</sup> ed). Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Kesici, A., Pesen, A., & Oral, B. (2017). Öğretmenlerin sınıf içi demokratik davranışlarının çeşitli değişkenlere göre incelenmesi. *Elektronik Sosyal Bilimler Dergisi*, 16(60), 34-45. doi: <https://doi.org/10.17755/esosder.289649>
- Matusovà, S. (1997). Democratic values as a challenge for education. *European Education*, 29(3), 65-76. doi: <https://doi.org/10.2753/EUE1056-4934290365>
- Nazıroğlu, B. & Çetin, M. (2014). Yüksek din eğitimi öğrencilerinin demokratik tutumları üzerine bir inceleme. *Hitit Üniversitesi İlahiyat Fakültesi Dergisi*, 13(25), 57- 91. Retrieved from <https://dergipark.org.tr/tr/pub/hititilahiyat/issue/7680/100607>
- OECD (2021). *Education at a Glance 2021: OECD Indicators*. OECD Publishing. doi: <https://doi.org/10.1787/b35a14e5-en>


- Okutan, M. (2010). Türk Eğitim Sistemi'nde demokrasi eğitimi. *Uluslararası İnsan Bilimleri Dergisi*, 7(1), 938-946. Retrieved from <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/1191/524>
- Onuray Eğilmez, H., Eğilmez, Ö., & Engür, D. (2018). Democratic perception and attitudes of pre-service music teachers in Turkey. *International Journal of Evaluation and Research in Education*, 7(2), 100-108. doi: <https://doi.org/10.11591/ijere.v7i2.13141>
- Önal, G. (2020). Sivil toplum ve eğitim ilişkisi: Demokrasi okulu? (Ed. Y. Kabapınar). In *Demokrasinin beşinci gücü olarak eğitim temelli sivil toplum kuruluşları*. (pp. 1-19). Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Özaslan, H., Kumcağız, H., & Baba Öztürk, M. (2020). Öğretmen adaylarının duygusal zekaları ile demokratik algı ve tutumları arasındaki ilişkinin incelenmesi. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 21(2), 636-654. <https://doi.org/10.17679/inuefd.590592>
- Özbek, B. (2016). Öğretmenlerin okul yöneticilerinin demokratik tutum ve davranışlarına ilişkin görüşlerinin çeşitli değişkenlere göre incelenmesi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, (27), 59-70. doi: <https://doi.org/10.14582/DUZGEF.677>
- Özgün, A. (2019). *Sosyal bilgiler öğretmen adaylarının eleştirel düşünme eğilimlerinin demokratik tutumlarına etkisinin çeşitli değişkenler açısından değerlendirilmesi*. Yüksek Lisans Tezi. Nevşehir Hacı Bektaş Veli Üniversitesi, Nevşehir. Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi>
- Pamuk, I., & Pamuk, A. (2016). Almanya'da sachunterricht ve Türkiye'de hayat bilgisi ders kitaplarında okulda demokrasi uygulamalarına örnek olarak sınıf başkanı seçimi. *Cumhuriyet Uluslararası Eğitim Dergisi*, 5(2), 67-83. doi: <https://doi.org/10.30703/cije.321398>
- Parker, W. C. (2018). *İlkokul ve ortaokullarda sosyal bilgiler öğretimi*, F. Zayimoğlu Öztürk & S. B. Demir (Trans. Ed.). Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Sağlam, H. İ. (2020). *İnsan hakları ve demokrasi eğitimi*. Pegem Akademi. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Saraçaloğlu, A. S., Sanem, U. Ç. A., Baydilek, N. B., & Coşkun, N. (2013). Öğretmen adaylarının demokratik tutumları ile değer algılarının incelenmesi. *Adnan Menderes Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 4(1), 45-59. Retrieved from <https://dergipark.org.tr/en/pub/aduefebder/issue/33893/375253>
- Sarı, S. (2020). *İlkokul 2. ve 3. sınıf öğrencilerinin sosyal beceri düzeyleri ile hayat bilgisi dersine yönelik tutumlarının incelenmesi: Kars ve Bursa örneği*. Yüksek Lisans Tezi, Bursa Uludağ Üniversitesi, Bursa. Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi>
- Seefeldt, C., Castle, S. & Falconer, R. C. (2015). *Okul öncesi/ilkokul çocukları için sosyal bilgiler öğretimi*, S. Coşkun Keskin (Trans. Ed.). Ankara: Nobel Publishing.
- Sönmez, V. (2020). *Eğitim felsefesi* (16<sup>th</sup> ed). Anı Publishing.
- Tiryaki, B. (2018). *İlkokul 3. sınıf öğrencilerinin hayat bilgisi dersine yönelik tutumlarıyla demokratik tutumları arasındaki ilişki*, Yüksek Lisans Tezi, Fırat Üniversitesi, Elazığ. Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi>
- Tezcan, M. (2021). *Eğitim Sosyolojisi* (22<sup>nd</sup> ed). Anı Publishing. [DX Reader version] Retrieved from <https://www.turcademy.com/tr>
- Ural, S. N., & Sağlam, H. İ. (2011). İlköğretim öğrencilerinin demokratik tutum düzeylerinin bazı değişkenler açısından incelenmesi. *Değerler eğitimi dergisi*, 9(22), 161-180. Retrieved from <https://dergipark.org.tr/en/pub/ded/issue/29178/312450>
- Vatansever Bayraktar, H., & Karakülçe, N. (2019). İlkokul yöneticilerinin ve sınıf öğretmenlerinin demokratik tutumlarının incelenmesi. *Kesit Akademi Dergisi*, 18(5), 39-59. doi: <https://doi.org/10.18020/kesit.1603>
- Yaşar Ekici, F. (2014). Öğretmen adaylarının demokratik tutumları ve demografik özellikleri arasındaki ilişkinin incelenmesi. *Turkish Studies*, 9(11), 593-602. doi: <https://doi.org/10.7827/TurkishStudies.7416>
- Zarillo, J. J. (2016). *Sosyal bilgiler öğretimi ilkeler ve uygulamalar*, Tay, B. & Demir, S. B. (Trans. Ed.). Ankara: Anı Publishing.
- Zayimoğlu Öztürk, F. & Coşkun, M. (2015). Hayat bilgisi dersine yönelik bir tutum ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Uluslararası Türk Eğitim Bilimleri Dergisi*, 3(4), 239-251. Retrieved from <https://dergipark.org.tr/tr/pub/goputeb/issue/34518/381530>

# Views of Science Teachers on the Use of Artificial Intelligence in Education

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 11.07.2022</p> <p>Available online: 25.10.2022</p>	<p>The aim of this research is to reveal the views of science teachers about the use of artificial intelligence in education. Phenomenology pattern, which is one of the qualitative research patterns, was used in the research. Within the scope of the research, focus group interviews were conducted with 30 science teachers in 15 different public middle schools in Diyarbakır city center. Before the focus group interviews were conducted, a pilot focus group interview was conducted with 6 different science teachers. Based on the themes obtained as a result of this pilot interview, a semi-structured interview form was prepared by the researchers. In the focus group interviews, the questions in this interview form were asked to the teachers. As a result of the research, it was revealed that the opinions of teachers about the use of artificial intelligence in education were gathered under five titles (themes). These themes are; "effect on students", "effect on teachers", "effect on education-teaching process", "concern" and "suggestion". For each of the themes of "effect on students", "effect on teachers" and "effect on education-teaching process", two categories named positive effect and negative effect were determined. While two categories, professional concern and ethical concern, were identified in relation to the theme of concern, two categories were determined in relation to the theme of suggestion, namely systemic suggestions and application suggestions.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b></p> <p>Artificial intelligence, Education, Science education, Focus group interview.</p>

## Introduction

One of the most important technologies of our age is artificial intelligence. Artificial intelligence is used in many fields such as industry, communication, energy, agriculture, health and mining. The term artificial intelligence was first used by John McCarthy in the 1950s (Good, 1987; Arslan, 2017). McCarthy defined artificial intelligence as "the science and engineering of making human-like intelligent machines, especially intelligent computer programs" (Good, 1987; Arslan, 2017). Artificial intelligence is defined differently by

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different scientists. A few examples of the definition of artificial intelligence are as follows: Artificial intelligence is the ability of computers to perform some operations such as learning, problem solving and decision making, which are processes specific to humans (Bellman, 1978). Artificial intelligence is the effort to produce computers and machines that can think like humans (Buchanan, 2005; Hristov, 2016). Artificial intelligence is the art of designing machines to do work that requires intelligence and to do work that can be done by humans (Hodges, 2020). Artificial intelligence is a computer that can perform human-specific activities such as seeing, thinking, making decisions, perceiving and acquiring information (Dogan & Alp, 2002). Artificial intelligence is making an effort to perform complex cognitive processes such as understanding, learning and problem solving by computers (Nabiyev, 2005). With reference to the examples given, artificial intelligence can be defined as a system that can imitate human intelligence. Many applications such as Siri-like personal assistants, driverless vehicles, fast language translations, smart education management systems, virtual classrooms, patient tracking systems, game theory and strategic planning, hand/speech/face/pattern recognition, automation, robotics have turned into artificial intelligence applications.

The use of technology in the field of education provides students with opportunities for both learning and personal interpretation of what they have learned. The use of technology in educational environments also ensures that students' learning styles and individual differences are taken into account (Ic & Tutak, 2017). In this way, the development of students according to their interests and needs can be easily monitored (Clements & Sarama, 2000). The use of technological tools in the school environment for educational purposes is carried out with different technology-oriented educational materials such as projection, animation, interactive board and simulation programs. The frequent use of technological devices such as computers and smart phones in daily life causes students to live intertwined with technology in the daily life and creates significant changes in students' interests (Chassignol et al. 2018). For this reason, it is necessary to develop new technological-based educational materials that can attract the attention of students (Isler & Kilic, 2021). Aiming to attract more attention of students, to make learning more meaningful and permanent, and to accelerate the learning process by making use of technological developments, many scientists have recently focused on research on the use of artificial intelligence in education (Cetin & Akdas, 2021). As a result of these studies, it is stated that the use of artificial intelligence in education is likely to bring many advantages and disadvantages in the context of the educational organization, teacher, student and parent. Possible advantages and disadvantages of using artificial intelligence in education are given in Table 1 (Cetin & Akdas, 2021; Osetskyi et al. 2020).

**Table 1.** Advantages and disadvantages of using artificial intelligence in education.

Partner	Advantages	Disadvantages
Education Organization	Identification of students as personality and individuals, School safety, Objectivity of assessment, Digital learning, Protection of students' personal data, Efficient learning and study opportunities, Lifelong learning, Personalized teaching.	Low trust in the new system, Possible problems in evaluating students' creative work, Concerns about maintaining classroom discipline, Possibility of the system crashing or being attacked.
Student	Observing the learning process objectively, Increasing the quality of distance learning, Integration with new technologies, Accessibility at any time.	Difficulty in motivation, Lack of student-teacher communication and interaction
Teacher	Ease of managing students, Automating task and content creation, Continuous improvement, Objective assessment, Quick and complete feedback, Performance tracking, Protecting teachers' strengths and contributing to the development of their weaknesses.	It can lead to an increase in the professional qualifications expected from the teacher, It can replace the teachers.

Parent	Real-time feedback, Informing about progress, New learning opportunities for students, Reducing the problems of families with poor access to education	Lack of communication and interaction and dehumanization because people are not contacted.
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According to the 2018 Horizon Research and Innovation Framework Program report, artificial intelligence and adaptive learning technologies have come to the fore as important developments in the field of educational technology (Becker et al., 2018). With the use of artificial intelligence in the field of education, education and training processes are operated at lower costs, in a shorter time and with higher success rates than the operations performed with previously known methods (Han, 2018). With the use of artificial intelligence in education, opportunities are offered to educational institutions, students and teachers in subjects such as determining the student profile, predicting student success, increasing success by individualizing learning, and taking precautions by predicting possible risk situations. Students have different personality traits such as interests, learning styles, needs and learning speeds. Because of these requirements, artificial intelligence takes place in learning environments through adaptive and customizable environment. (Baz, 2016; Baz & Tetik, 2015; Knox, 2020; Ocal, 2016).

In this study, it is aimed to reveal the views of science teachers about the use of artificial intelligence in education.

### Method

Phenomenology pattern, which is one of the qualitative research patterns, was used in the research. Phenomenological study is defined as the common meaning of the experiences and experiences of more than one individual regarding a concept or phenomenon (Creswell, 2013). In phenomenological research, the researcher makes sense of what he sees and makes a distinction by comparing the data he has obtained (Tutak & Guder, 2014; Creswell, 2013).

The study group of this research is 30 science teachers in 15 different middle schools in Diyarbakır city center in the 2020-2021 academic year. Volunteering was taken as a basis while determining the teachers to participate in the research.

In each session, focus group interviews were conducted with science teachers in different schools in order to determine the opinions of science teachers on the use of artificial intelligence in education. Before the aforementioned focus group interviews were conducted, a pilot study was conducted by conducting focus interviews with six science teachers who did not participate in this study. With the pilot studies, the opinions of science teachers about the use of artificial intelligence in education were collected and analyzed. As a result of the analysis, five different themes were obtained. These themes are as follows: "effect on students", "effect on teachers", "effect on education and teaching process", "concern" and "suggestion". Within the scope of the study, a semi-structured interview form was prepared by the researchers considering these themes. In the focus group interviews, questions in the semi-structured interview form containing questions about the above-mentioned themes were asked to the participants. During the focus group interviews, the groups were formed from 6 science teachers. Additional questions were also asked in the interviews in order to obtain in-depth and more descriptive information. Interviews were recorded both visually and audibly. Audio and visual recorded interviews were transcribed. Thus, transcripts were prepared for each focus group interview. Each of the obtained transcripts was evaluated separately by three researchers, categories were determined and coded based on the themes mentioned above. The issues that all three researchers coded in the same way were accepted as "consensus", and the issues that they coded differently were accepted as "disagreement". For the reliability of the research, the formula suggested by Miles and Huberman (1994) was used. The formula is:  $\text{reliability} = \text{consensus} / (\text{consensus} + \text{disagreement}) \times 100$ . According to this formula, the reliability of the

research was calculated as 92%. The points of disagreement were re-discussed by three researchers and a consensus was reached by taking expert opinions. Thus, the coding was given its final shape.

### Findings

The themes and categories obtained as a result of the analysis of the focus interviews with science teachers are presented in Table 2.

**Table 2.** Obtained themes and categories

Theme	Category
effect on students	positive effect
	negative effect
effect on teachers	positive effect
	negative effect
effect on education and teaching process	positive effect
	negative effect
concern	professional concern
	ethical concern
suggestion	systemic suggestions
	application suggestions

The categories and codes related to the theme of “effect on students” are presented in Table 3 (f: frequency, %: percent).

**Table 3.** Categories and codes obtained regarding the theme of effect on students.

Categories	Codes	f	%
positive effect	Students will gain some cognitive skills more quickly and solidly, such as problem solving and creative thinking.	12	40
	Students' mental processes will progress more actively.	7	23,3
	Students will become even more aware of their own cognitive development.	5	16,6
	Alternative sources of knowledge will increase, as students will not depend solely on the teacher.	6	20
negative effect	Students will feel lack of motivation and boredom.	8	26,6
	The stress level of students will increase.	5	16,6
	Students will have difficulty adapting to the process.	3	10
	Students' sociability and ability to communicate effectively with other people will decrease.	2	6,6
	The feeling of skepticism will increase in students.	2	6,6
	Students can use artificial intelligence technologies as a digital game tool.	16	53,3
	Since it will be easier to reach the information, the students will be distrustful of the information they have obtained.	9	30

When the positive effect category is examined in Table 3, the following points are understood: 40% of the teachers believe that students will acquire some cognitive skills such as problem solving and creative thinking faster and more solidly, 23.3% of them think that students' mental processes will progress more actively, 16.6% of them believe that students will be more aware of their own cognitive development, and 20% believe that alternative sources of information will increase. When the negative effect category is examined in Table 3, the following points are understood: 26.6% of the teachers believe that students will feel lack of motivation and fatigue, 16.6% of them believe that the stress level of students will increase, 10% of them believe that students will have difficulty in adapting to the process, 6.6% of them believe that the ability of students

to be sociable and communicate effectively with other people will decrease, 6.6% of them believe that students' skepticism will increase, 53.3% of them believe that students can use artificial intelligence technologies as a digital game tool, and 30% of them believe that since it will be easier to access information, students will become distrustful of the information they have obtained.

The categories and codes obtained related to the theme of “effect on teachers” are presented in Table 4 (f: frequency, %: percent).

**Table 4.** Categories and codes obtained regarding the theme of effect on teachers

Categories	Codes	f	%
positive effect	Teachers will be able to monitor the cognitive development of students more easily.	14	46,6
	Teachers will be able to determine the learning conditions of students more easily.	16	53,3
	Teachers will be able to identify students' needs and deficiencies more easily.	22	73,3
	Teachers will realize their own shortcomings.	24	80
	Teachers will more easily identify the strengths and weaknesses of students.	20	66,6
	Teachers will more easily determine which intelligence type students are more dominant.	11	36,6
negative effect	Teachers will find it difficult to adapt to the process.	9	30
	Emotional bonds between teachers and students will decrease.	3	10
	Teachers will have difficulty in acquiring some cognitive skills to students.	5	16,6
	Teachers will have a hard time understanding how students think and what cognitive pathways they use.	4	13,3

When the positive effect category is examined in Table 4, the following points are understood: 46.6% of teachers believe that teachers can monitor the cognitive development of students more easily, 53.3% of them believe that teachers can determine the learning conditions of students more easily, 73.3% of them believe that teachers can identify students' needs and deficiencies more easily, 80% of them believe that teachers will realize their own shortcomings, 66.6% of them believe that teachers will determine the strengths and weaknesses of students more easily, 36.6% of them believe that teachers can more easily identify which intelligence type the students are dominant in. When the negative effect category is examined in Table 4, the following points are understood: 30% of teachers believe that teachers will have difficulty in adapting to the process, 10% of them believe that the emotional bond between teachers and their students will decrease, 16.6% of them believe that teachers will have difficulty in gaining some cognitive skills to students, 13.3% of them believe that teachers will have a hard time understanding how students think and what cognitive pathways they use.

The categories and codes obtained related to the theme of “effect on the education-teaching process” are presented in Table 5 (f: frequency, %: percentage).

**Table 5.** Categories and codes obtained regarding the theme of effect on the education-teaching process

Categories	Codes	f	%
	Since educational activities can be carried out independently of time and place, the education-training process will not be interrupted and education activities will progress faster.	19	63,3
	Disruptions in the process of education and training activities will be monitored more quickly.	15	50
	Since the progress of the students can be monitored continuously, it will be possible to make predictions about the future of the students.	14	46,6
	Access to information will be easier and faster.	25	83,3
	With the help of computer programs, materials such as three-dimensional images will be used more frequently and learning will be facilitated.	6	20

positive effect	Gifted students will be more easily identified.	5	16,6
	Individual differences can be detected more easily, and private environments can be prepared for individuals.	3	10
	The performances of students, teachers and administrators will be monitored more easily.	7	23,3
	Measurement and evaluation can be carried out by artificial intelligence, so that more objective measurement and evaluation is made.	2	6,6
	The success status of students studying in different classes/schools can be compared more easily.	8	26,6
negative effect	Some predictions can be made early about the situation of the next generation students.	11	36,6
	The lack of knowledge of students, teachers, administrators and parents about using information tools will complicate and slow down educational activities.	5	16,6
	There may be problems in the evaluation of open-ended exams, which will complicate and slow down educational activities.	4	13,3
	It may be difficult for students, teachers, administrators and parents to abandon their old habits, which will make educational activities difficult and slow down.	8	26,6

When the positive effect category is examined in Table 5, the following points are understood: 63.3% of the teachers believe that the education-training process will not be interrupted and education-training activities will progress faster, since educational activities can be carried out independently of time and place, 50% of them believe that the disruptions in the teaching activities will be monitored faster, 46.6% of them believe that since the progress of the students can be monitored continuously, predictions can be made about the future of the students, 83.3% of them believe that access to information will be easier and faster, 20% of them believe that materials such as three-dimensional visuals will be used more frequently with the help of computer programs and learning will be easier, 16.6% of them believe that gifted students will be detected more easily, 10% of them believe that private environments can be prepared by identifying individual differences more easily, 23.3% of them believe that the performances of students, teachers and administrators will be monitored more easily, 6.6% of them believe that when measurement and evaluation is carried out by artificial intelligence, more objective measurement and evaluation will be made, 26.6% of them believe that the success status of students studying in different classes/schools can be compared more easily, 36.6% of them believe that some predictions can be made early on the situation of the next generation students.

When the negative effect category is examined in Table 5, the following points are understood: 16.6% of teachers believe that the lack of knowledge of students, teachers, administrators and parents in using technological tools will complicate and slow down the educational activities, 13.3% of them believe that there may be problems in the evaluation of open-ended exams, which will make educational activities difficult and slow down, 26.6% of them believe that it may be difficult for students, teachers, administrators and parents to abandon their old habits, and this situation will complicate and slow down educational activities.

The categories and codes related to the theme of “concern” are presented in Table 6 (f: frequency, %: percent).

**Table 6.** Categories and codes obtained for the theme of concern

Categories	codes	f	%
professional concern	Machine power will overtake human power.	23	76,6
	The importance of the teaching profession will decrease.	12	40
	The teaching profession will face extinction.	12	40
	Teachers will experience economic concern due to the loss of importance of their profession.	10	33,3
ethical concern	Teachers and students will be worried that their personal information will fall into the hands of others.	11	36,6
	Malicious people can enter the system.	10	33,3



Unethical situations such as ideological or gender discrimination may be encountered.	5	16,6
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When the professional concern category in Table 6 is examined, it is understood that 76.6% of the teachers have concerns that machine power will overtake human power. 40% of the teachers have concerns that the importance of the teaching profession will decrease, 40% of the teachers have concerns that the teaching profession will face extinction, and 33.3% of the teachers have concerns that they will experience economic concern due to the loss of importance of their profession. When the ethical concern category in Table 6 is examined, it is understood that 36.6% of teachers are concerned about the possibility of personal information of teachers and students falling into the hands of others. 13.3% of the teachers are concerned about malicious people entering the system. 16.6% of the teachers are concerned about unethical situations such as ideological or gender discrimination.

The categories and codes obtained for the “suggestion” theme are presented in Table 7 (f: frequency, %: percent).

**Table 7.** Categories and codes obtained related to the suggestion theme

Categories	codes	f	%
Systemic suggestions	Teachers should be able to share information inventory with each other in the artificial intelligence system.	2	6,6
	The content related to the artificial intelligence system and to be used in this process should be prepared by the relevant people.	14	46,6
	By examining the artificial intelligence systems of different countries, a system suitable for our country's education system should be developed.	12	40
	Artificial intelligence applications should be designed to provide teacher and student harmony.	10	33,3
	Artificial intelligence applications should be designed to meet the demands and expectations of the z-generation.	7	23,3
	Artificial intelligence applications should be designed to activate the parents in the process.	5	16,6
	In the process of artificial intelligence applications, data should be recorded and backed up.	8	26,6
	Artificial intelligence applications should be designed in such a way that students' participation in the course and their actions can be monitored.	8	26,6
	The measurement and evaluation system should be revised to coincide with artificial intelligence applications.	14	46,6
	Education/seminar should be given to students, teachers and administrators regarding the use of the artificial intelligence system.	24	80
application suggestions	Plenty of applications should be made about artificial intelligence outside of class hours in schools.	17	56,6
	Teachers should be provided with the necessary technological devices.	19	63,3
	Counseling teachers experienced in artificial intelligence should be allocated to schools.	5	16,6
	The monitoring of students' emotional states should not be neglected.	6	20
	In order for the process to work more efficiently, cooperation should be made with institutions and organizations such as Universities, TUBITAK, etc.	11	36,6

When the systemic suggestions category is examined, the following points are understood: 6.6% of the teachers suggest that teachers can share their knowledge inventory with each other in the artificial intelligence system, and 46.6% of the teachers suggest that the content related to the artificial intelligence system and to be used in this process should be prepared by the relevant people. 40% of the teachers suggest that the artificial intelligence systems of different countries should be examined and a system suitable for our country's education system should be developed, and 33.3% of the teachers suggest that artificial intelligence applications should be designed in a way that ensures harmony between teacher and student. 23.3% of the

teachers suggest that artificial intelligence applications should be designed to meet the demands and expectations of the z-generation, and 16.6% of the teachers suggest that artificial intelligence applications should be designed in a way that will activate the parents in the process. 26.6% of the teachers recommend recording and backing up data in the process of artificial intelligence applications, and 26.6% of the teachers recommend that artificial intelligence applications be designed in such a way that they can monitor the students' participation in the lesson and their actions. 46.6% of the teachers suggest that the measurement and evaluation system be revised to match artificial intelligence applications. When the category of application suggestions is examined, it is understood that: 80% of the teachers recommend that students, teachers and administrators be provided with training/seminars on the use of the artificial intelligence system, and 56.6% of the teachers recommend that many practices be made about artificial intelligence in schools outside of class hours. 63.3% of the teachers suggest that the necessary technological devices be provided to the teachers, and 16.6% of the teachers suggest that counselors experienced in artificial intelligence be allocated to the schools. 20% of the teachers recommend that the emotional states of the students should not be neglected, and 36.6% of the teachers recommend cooperation with universities, TUBITAK (The Scientific and Technological Research Council of Turkey), etc. institutions and organizations to make the process work more efficiently.

### **Results**

Within the scope of this research, the views of science teachers on the use of artificial intelligence in education were examined. As a result of the research, it was revealed that the opinions of teachers about the use of artificial intelligence in education were gathered under 5 titles (themes). These themes are; "effect on students", "effect on teachers", "effect on education-teaching process", "concern" and "suggestion". For each of the themes of "effect on students", "effect on teachers" and "effect on education-teaching process", two categories named positive effect and negative effect were determined. While two categories, professional concern and ethical concern, were determined in relation to the theme of "concern", two categories were determined in relation to the theme of "suggestion", namely systemic suggestions and application suggestions.

When the opinions of the teachers are evaluated collectively, it is seen that the total number of expressions is 581. While 75 of these statements (12.9%) are related to the effects of using artificial intelligence in education on students, 128 of them (22%) are related to the effects of using artificial intelligence in education on teachers. 132 of the statements (22.7%) are related to the effects of the use of artificial intelligence on the education-teaching process. While 83 (14.3%) of the statements were related to a concern, 163 (28%) were related to a suggestion. This shows that the order of frequency of teachers' views on the use of artificial intelligence in education is as follows: "suggestion", "effect on the education-teaching process", "effect on teachers", "concern" and "effect on students".

The total number of expressions of the thought that the use of artificial intelligence in education will have positive effects on students is 30. The total number of expressions of the opinion that the use of artificial intelligence in education will have negative effects on students is 45. In other words, 30 (40%) of a total of 75 statements about the effects of artificial intelligence use in education on teachers are related to positive effects and 45 (60%) are related to negative effects. This situation leads to the conclusion that teachers talk more about the negative effects of using artificial intelligence in education on students.

The total number of expressions of the thought that the use of artificial intelligence in education will have positive effects on teachers is 107. The total number of expressions of the opinion that the use of artificial intelligence in education will have negative effects on teachers is 21. In other words, 107 (83.5%) of a total of 128 statements about the effects of artificial intelligence use in education on teachers are related to positive effects and 21 (16.5%) are related to negative effects. This situation leads to the conclusion that teachers talk more about the positive effects of the use of artificial intelligence in education on teachers.

The total number of expressions of the thought that the use of artificial intelligence in education will have positive effects on education-teaching process is 115. The total number of expressions of the opinion that the use of artificial intelligence in education will have negative effects on education-teaching process is 17. In other words, 115 (87.1%) of a total of 132 statements about the effects of artificial intelligence use in education on education-teaching are related to positive effects and 17 (12.9%) are related to negative effects. This situation leads to the conclusion that teachers talk more about the positive effects of the use of artificial intelligence in education on education-teaching process.

The total number of expressions of a professional concern regarding the use of artificial intelligence in education is 57. The total number of expressions of an ethical concern regarding the use of artificial intelligence in education is 26. In other words, 57 (68.6%) of the 83 statements expressing a concern about the use of artificial intelligence in education are related to professional concern and 26 (31.4%) are related to ethical concerns. This situation leads to the conclusion that teachers talk more about professional concerns related to the use of artificial intelligence in education.

The total number of statements of a systemic suggestion regarding the use of artificial intelligence in education is 80. The total number of expression of an application suggestion regarding the use of artificial intelligence in education is 82. In other words, out of a total of 163 statements, 80 (49%) are related to systemic suggestions and 82 (51%) are related to application suggestions. This situation leads to the conclusion that teachers talk about the systematic and application suggestions equally in relation to the use of artificial intelligence in education.

### **Discussion and Conclusion**

When the researches on artificial intelligence in education are examined, it is seen that artificial intelligence applications take place in almost every field of education. The following examples can be given to the application areas of artificial intelligence that support learning: analysis of students' homework or articles, personalized education systems, student-robot interaction, automatic test creation systems, assessment systems based on artificial intelligence, educational environments for children with special needs. There are also application areas of artificial intelligence that support educational institutions administratively. For example, areas such as curriculum, exam management, cyber security, personnel programs, facility management and security are areas where artificial intelligence contributes directly to school management and indirectly to teaching (Arslan, 2017; Hodges et al., 2020). The people affected by artificial intelligence applications, which have such a wide application area in education, are of course students, teachers, administrators and parents. In order for education and training activities to be carried out efficiently, all stakeholders of education need to trust artificial intelligence. This is one of the most important issues in achieving success in the effective use of artificial intelligence (Cetin & Aktas, 2021; Han, 2018). The use of artificial intelligence in the field of education is still new. For this reason, it is very important to reveal the views of teachers, who are one of the most important stakeholders of educational processes, about artificial intelligence applications in education. In order for teachers to carry out the education-teaching processes supported by artificial intelligence technologies efficiently, teachers need to have detailed information about artificial intelligence technologies. In addition, if teachers have concerns or suggestions about the use of artificial intelligence technologies, teachers' concerns and suggestions should be given importance (Cam, et al., 2021). Considering these facts, it is obvious that this research, which reveals the views of science teachers about the use of artificial intelligence in education, will make positive contributions to the literature.

The results of the current study show that pre-service teachers think that the use of artificial intelligence in education can have both positive and negative effects on teachers, students and the education-teaching process. The results of different studies in the literature are similar to the results of the current study. For example, Osetkyi et al. (2020) mentioned some advantages and disadvantages of artificial intelligence in the

context of education stakeholders. The advantages and disadvantages mentioned by Osetkyi et al.(2020) are presented in Table 1. The present study yielded similar results to those found by Osetkyi et al. In particular, the possible disadvantages that Osetkyi et al. (2020) identified as "dehumanization", "lack of student-teacher communication", "low trust in the new system" and "the possibility of the system crashing or being attacked" were also identified in the current study.

When the contribution of artificial intelligence applications to education is evaluated, we recommend that educational institutions move to artificial intelligence-based education together with all stakeholders. In this process, institution administrators also need to develop themselves in artificial intelligence and reach a level that can guide students, parents and teachers. For this reason, we recommend that school administrators attend in-service trainings so that they can acquire the necessary information about artificial intelligence education. In order to see the positive reflections of artificial intelligence on education, first of all, the awareness levels of teachers and administrators on this issue should be determined. If teachers and administrators feel inadequate or deficient in artificial intelligence, deficiencies can be eliminated by providing in-service training or courses on this subject. In addition, the experience of experts can be benefited from by collaborating between educational institutions and institutions that develop software with artificial intelligence. It may be useful to carry out motivational studies in order to eliminate the prejudice of teachers to lose their profession. By holding regular meetings with parents, parents can be informed in detail about the issue. In this way, parents' anxiety can be reduced. In this study, the views of science teachers on the use of artificial intelligence in education were examined. Research can also be conducted to determine the opinions of different branch teachers. In this study, a qualitative research design was adopted. Future research can also be conducted using mixed research designs to determine teachers' thoughts on the use of artificial intelligence in education.

## REFERENCES

- Arslan, K. (2017). Artificial intelligence in education and its applications, *Western Anatolian Journal of Educational Sciences*, 11(1), 71-88.
- Baz, F. C. (2016). Designing a web-based adaptive online learning environment in accordance with the blended teaching model and its effect on student success, *Ph.D. Thesis, Mustafa Kemal University, Institute of Science and Technology*, Hatay.
- Baz, F.C., & Tetik, E. (2015). The use of blended teaching model with adaptive online learning environment and student expectations, *International Journal of Scientific and Technological Research*, 1(4), 22-26.
- Becker, S. A., Brown, M., Dahlstrom, E., Davis, A., DePaul, K., Diaz, V., & Pomerantz, J. (2018). Horizon report 2018 higher education edition brought to you by EDUCAUSE (pp. 1-54). EDU18.
- Bellman, R. (1978). An introduction to artificial intelligence: can computers think? San Francisco: Boyd & Fraser Pub. Co.
- Buchanan, B. G. (2005). A (very) brief history of artificial intelligence. *AI Magazine*, 26(4), 53-53.
- Cam, M. B., Celik, N. C., Turan G. E., & Durukan, U. G. (2021). Determination of teacher candidates' awareness of artificial intelligence technologies. *Hatay Mustafa Kemal University Journal of Social Sciences Institute*, 18(48), 263-285.
- Cetin, M. & Aktaş, A. (2021). Artificial intelligence and future scenarios in education, *International Journal of Society Research*, 11(18), 4225-4268.
- Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2018). Artificial Intelligence trends in education: a narrative overview, *Procedia Computer Science*, 136, 16-24.
- Clements, D. H., & Sarama, J. (2000). Young children's ideas about geometric shapes, *Teaching Children Mathematics*, 6, 482-488.
- Creswell, J.W. (2013). Qualitative inquiry and research design, (translation editors: M. Butun & S.B. Demir, Qualitative research method: qualitative research and research design according to five approaches, Siyasal Bookstore.
- Dogan, A., & Alp, K. (2002). Artificial intelligence. Istanbul, Kariyer Publishing.
- Good, R. (1987). Artificial intelligence and science education, *Journal of Research in Science Teaching*, 24(4), 325-342.
- Han, L. (2018). Analysis of new advances in the application of artificial intelligence to education, *Advances in Social Science, Education and Humanities Research*, 220, 608-611.
- Hodges, B. D. (2020). Ones and zeros: medical education and theory in the age of intelligent machines, *Medical Education*, 54(8), 691-693.
- Hristov, K. (2016). Artificial intelligence and the copyright dilemma, *The Journal of The Franklin Pierce Center for Intellectual Property (IDEA)*, 57, 431.
- Ic, U. & Tutak, T. (2017). Correlation between computer and mathematical literacy levels of 6th grade students, *European Journal of Educational Research*, 7(1), 63-70.
- Isler, B. & Kilic, Y.M. (2021). The use and development of artificial intelligence in education, *e-Journal of Media*, 5(1) 1-11.
- Knox, J. (2020). Artificial intelligence and education in China. *Learning, Media and Technology*, 45(3), 298-311.
- Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook, Thousand Oaks, CA: Sage Publications.


- Nabiyev, V. V. (2005). Artificial intelligence: problems-methods-algorithms, second edition, Seckin Publisher, Ankara.
- Ocal, O. (2016). Student modeling with fuzzy logic approach in adaptive intelligent teaching system, *Master Thesis, Marmara University, Institute of Science and Technology, Istanbul*.
- Osetskyi, V., Vitrenko, A., Tatomyr, I., Bilan, S., & Hirnyk, Y. (2020). Artificial intelligence application in education: financial implications and prospects. *Financial and Credit Activity Problems of Theory and Practice*, 2(33), 574-584.
- Tutak, T., Guder, Y. (2014). Opinions of secondary school mathematics teachers on mathematical modelling, *Educational Research and Reviews*, 9(19), 799-806.

# The Relationship Between Empowering Leadership, Self-Efficacy and Organizational Resilience<sup>1</sup>

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 11.07.2022</p> <p>Available online: 22.11.2022</p>	<p>This study examined the relationship between empowering leader behaviors of school principals and self-efficacy and organizational resilience perceptions of teachers. The universe of the research consisted of teachers working in public primary schools in 5 education regions in the center of Elâzığ in the 2020-2021 educational year. Among them, 385 took part in the study. Simple random sampling, one of the probabilistic sampling methods, was used in sample selection. The Structural Equation Modelling results revealed that self-efficacy predicted organizational resilience, and empowering leadership predicted teachers' self-efficacy and organizational resilience in a positive and significant way. In addition, empowering leadership explained 20% of the variance in self-efficacy, and empowering leadership and self-efficacy explained 40% of the variance in organizational resilience. Finally, it was concluded that self-efficacy had a partial mediating role in the relationship between empowering leadership and organizational resilience.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> Empowering leadership, self-efficacy, organizational resilience, school principals, classroom teachers, structural equation modelling</p>

## Introduction

Recent events have revealed that crises and even disasters take place more often than projected. For example, post-tsunami crisis in Japan, the hurricanes in the South and Midwest USA, natural disasters and pandemics indicate that modern infrastructures are still vulnerable to the forces of nature. The recession and related expenditure following the Wall Street crash show that human-involved disasters can be disturbing as well (Bhamra et al., 2011; Everly Jr, 2011).

<sup>1</sup> This study is based on the doctoral thesis named "Examination of the relationship between empowering leadership, organizational resilience, and self-efficacy"

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Organizations and leaders frequently experience crises and challenges testing their systems and resources (Southwick et al., 2016). The leader plays a critical role in developing a culture of resilience in the organization, having resilient employees and developing resilience capacity. Due to the rapid and continuous change of organizations, there has been a focus on leadership approaches that enable leaders to handle disruptive events and uncertainties better (Lee et al., 2017). Empowering leadership is highly appropriate in such situations as it concentrates on stimulating self-management and removing the powerlessness related constraints (Doğru, 2016; Lee et al., 2017).

The empowering leader encourages the employee to participate in the decision-making. This process potentially provides an employee a better control over their current work and gives confidence that their own actions can make a difference, thereby promoting the employee's sense of influence. In this sense, empowering leadership affects followers' psychological empowerment perceptions (Zhang & Bartol, 2010). In this context, one of the significant features of establishing a resilient organization is the employee.

An Employee's positive and proficient response to destruction, disruptions, challenges and threats is ensured through resilience, an internal resource he/she finds in themselves. Resilience capacity is related to self-efficacy. Albert Bandura argues that self-efficacy perceptions shape basic human behaviors. Self-efficacy theory is used to operationalize many of the resilience traits. Everly Jr (2011) puts forward that if a small number of self-confident employees exhibit resilience-related behaviors, resilience characteristics of other employees also increase, which have the ability to change the entire culture of the organization.

Another concept focused on in this study is organizational resilience. These days, rapid changes are experienced in every field and thus organizations experience higher levels of internal and external threats than ever before. In order to survive, all components of the organization must respond to constantly changing demands, risks and threats, keep up with change and be resilient (Hamel & Välikangas, 2003; Robb, 2000; Witmer, 2019).

In the organizational context, "resilience" refers to an organization's ability to recover, adapt and transform. The recovery capabilities of organizations help them survive and their ability to adapt and transform contributes to sustainability. In other words, resilience refers to the ability of organizations to recover from the "wounds" they have received during disasters and to maintain their lives (Gerçek & Börekçi, 2019).

Today, both proactive and unpredictable change is inevitable for all organizations and few organizations have the ability of recovery and, more importantly, growth after disruptive events (Moran & Tame, 2012). Similar to other organizations, educational organizations experience uncertainties and destructive events such as terrorist incidents, natural disasters, pandemics, legal changes and technological changes that pose a threat to them and may hinder the goals of the organization. These disrupting events in educational organizations may pave the way to shocks or interruption of education for a particular time. These interruptions will lead to learning losses at all levels of education, deepening of inequalities, and a decrease in healthy nutrition opportunities for students with low socioeconomic status. In addition, it is likely to have a negative effect on the physical and mental development, socialization and communication skills of students who require special education. In order to prevent these significant losses, schools should establish a resilience culture before, during and after these events.

Organizational resilience is a positive management understanding since it stands against environmental risks and uncertainties, and overcomes the threats individuals experience and is gaining utmost importance today. Educational organizations need to develop strategies and practices for their survival when the uncertainties in their environment increase and complex issues emerge. In this context, with the empowering leadership, which play a significant role in increasing organizational resilience, employees are empowered in



their work and decision-making processes, and are ensured to participate in the management. However, the effectiveness of empowering leadership is directly linked to the self-efficacy perception of the employees. Based on the aforementioned review above, this study aimed to investigate the relationship between these three concepts. For this, the effect of empowering leadership on organizational resilience through self-efficacy was examined based on teacher opinions.

## **Conceptual Framework**

### **Empowering Leadership**

The word "power", which originates from the Latin, basically refers to "having the ability to do or act". Power is ability, in other words, energy or vitality that emerges in motion (Ashcroft, 1987). As a concept, power indicates an individual's ability to set the agenda and be effective on decision making (Flaherty, 2018). Braynion (2004), Daft (2015) and Gonos and Gallo (2013) explains power as the ability of an individual or group to influence others to achieve goals in an organization. Power is a relational concept, that is, there must be communication and interaction between individuals and groups (Çetin Ş. , 2017). The power is performed vertically or horizontally (Daft, 2015). Power in the organization includes some situational features as well as individual characteristics or position (Çetin Ş. , 2017). The concepts of power and leadership in organizations are also entangled (Riggio, 2016).

It is thought that power and leadership are not same, instead the former is considered as a feature of the latter. Power is defined in three ways in organizations. First, the leader in organizations is dependent on authority-based power. This entails some costs in relation to followers and achieving goals. Second, power provides individuals the opportunity to act more freely in some areas of organizational operations. Third, power is defined as effectively resisting disapproved demands (Hollander & Offermann, 1990). In the contemporary leadership approach, the leader shares his/her power of authority and responsibility with the employee and provides a common unity of purpose. He/she uses empowerment as a means of activating the employee. In an organization with an empowered culture, employees are autonomous and self-governing.

The origin of empowerment dates back to the Latin word "empower". It means to authorize or to allow (Redhouse, 1986). Empowerment was a management concept widely used in the 1990s. Now, it is used in various disciplines and each discipline interprets this concept differently (Lincoln et al., 2002).

Argyris (1998) emphasized the importance of empowering employees in achieving the goals of the organization, stating that "No strategy, no vision can be achieved without empowered talented employees". Empowerment can be defined as task motivation that increases as a result of the removal of pressure to achieve a goal and a positive orientation to the job role (Lincoln et al., 2002; Spreitzer, 1995). Ashcroft (1987) states that empowerment is the development of belief in abilities.

Honold (1997) describes empowerment as an interactive process in which the individual internalizes the organization's goal with the perceived competence. It should be noted that, in this kind of empowerment, the employees have a say and manage the organization with cooperation. Similarly, Lightfoot (1986) expresses empowerment as a process in which individuals acquire the competence to take responsibility for their own development and solve their problems. The empowered individual believes he/she has the required knowledge and skills to act on and improve a situation (Honold, 1997; Short, 1992). The studies in the literature have not achieve a consensus on the general naming of the empowerment concept (Bolat et al., 2009) due to different approaches to empowerment. Thus, it is dealt with based on its structural and psychological dimensions as personnel empowerment, psychological empowerment and organizational empowerment (Bolat T. , 2003; Çelik & Konan, 2021).

As stated above, the discussions of empowerment focused on its structural and psychological dimensions. In the former approach, empowerment is described as a set of behaviors, including delegation of responsibility, to give employees greater decision-making opportunities while they perform their primary job duties (Boudrias et al., 2004; Leach et al., 2003). In the latter approach, empowerment is considered as psychological state involving four dimensions. It is grounded on of (a) meaningfulness, (b) competence, (c) autonomy, (d) impact perception of employees (Conger & Kanungo, 1988; Spreitzer, 1995; Spreitzer, 1996). Contrary to those who describe empowerment as the delegation of authority and resources, Conger and Kanungo (1988) refers it as motivating through increasing personal effectiveness. In addition, Arnold, Arad, Rhoades, and Drasgow (2000) and Whetten and Cameron (2016) define empowerment as sharing power with subordinates and as a series of behaviors that increase intrinsic motivation levels. Likewise, Bellous & Pearson (1995) regards it as an interactive process based on synergy.

Erstad (1997) expressed empowerment as a tool that enables employees to make decisions and a phenomenon where they assume responsibility for their actions, and stated that its ultimate purpose of is to improve the potential and performance of the organization besides the individual. Empowered employees become active problem solvers who help plan and carry out tasks (Cunningham et al., 1996).

In this sense, it is possible to define empowering leadership as leader behavior in which the leader gives more autonomy and responsibility to related parties through a particular leader behavior (Cheong, 2017; Cunningham et al., 1996; Gao et al., 2011; Vecchio et al., 2021). It is built on trust, belief, expectation and independence (Martin A. M., 2013). Spreitzer (2008) puts forward that an important role of an empowering leader is to improve the subordinate's perceived control over the job. It also implicates delegating power and improving autonomy and responsibility levels. It reveals itself in certain behaviors such as encouraging employees to express ideas, making decision-making a collaborative activity, and supporting knowledge sharing and cooperation (Arnold et al., 2000; Martin et al., 2013; Salazar et al., 2006).

### **Self-Efficacy**

Self-efficacy, a concept in social learning theory, has attracted great attention by researchers since it was first introduced by Bandura in 1977. According to Bandura (1994) it is "people's beliefs about their performance having an impact on events that affect their lives". Although Bandura initially depicted self-efficacy as a highly specific expectation of an individual's belief in a series of behaviors necessary to produce a particular behavior or outcome, he later expanded it to "people's beliefs about their ability to exercise control over events that affect their lives" (Maddux, 1995).

Self-efficacy theory includes predictions about the effect of self-efficacy decisions on other psychological reactions and factors that play role in making self-efficacy decisions, and principles for developing actions to improve people's functional abilities and reduce their distress (Williams, 1995). It is also a person's perception of whether her/she will cope effectively with a task. It refers to the knowledge of one's own abilities as to whether or not an individual will successfully complete a particular task without comparing it to the abilities of others. In this sense, Hoy (2015) argues that self-efficacy beliefs are a strong determinant of behavior.

The self-efficacy perception regarding the abilities one possesses can be regarded as an individual belief about what one can do with the existing abilities (Çetin & Basım, 2017). These beliefs are not a fixed personality trait, instead, they represent an assessment of perceived capacity concerning specific contexts or goals (Gallagher, 2012). Self-efficacy is a contextual assessment of ability to act on a task. It is contextual in that it varies depending on the topic or task. Someone with a low self-efficacy perception regarding singing may have a high self-efficacy perception in map-reading or wayfinding (Hoy, 2015). Bandura (2003) emphasized that self-efficacy beliefs consist of four basic sources of information: mastery experiences, vicarious experiences, social persuasion, and emotional states. Individuals develop their self-efficacy perceptions

regarding different fields and situations by processing the information they have obtained from these four basic sources (Arseven, 2016). Individuals develop their self-efficacy perceptions regarding different fields and situations by processing the information they have obtained from these four basic sources (Arseven, 2016).

### **Organizational Resilience**

The word Resilience is originated from the Latin word “resilio”, meaning to come back (Chakravorty, 2015; Klein et al., 2003; McAslan, 2010). It refers to the ability to return to original form, flexibility, and quick recovery (Redhouse, 1986). It is an individual's or an organization's ability to design and apply positive and adaptive behaviors suitable to the existing situation under difficult conditions while maintaining its existence under normal conditions (Darkow, 2018; Mallak L. A., 1998b). In positive psychology, it refers to the positive adaptation of the individual under adverse conditions and the power to fulfill his/her developmental tasks (Masten & Reed, 2002).

Threats from terrorism, natural disasters, pandemics, attacks on information systems and other disturbing challenges has increased in recent years, which paved the way for society to feel lonely and vulnerable. Resilience responds to these threats in a positive manner. It provides the ability to cope with difficulties, recovery and determination, the ability to come back and even become stronger as a result of experience (McAslan, 2010). In this sense, the organizational perspective of the resilience should also be examined.

Koçel (2017) stated that organizational resilience, a recent concept in management and organization, is linked to the behaviors in the organization and that it can be achieved at the individual, group and organizational level. It was considered as a part of disaster and crisis management, and then positive management approach in the organizational theory literature (Luthans, 2002; Öztürk, 2018).

Organizations aim to survive against entropy, chaos and pathology. In these conditions, some organizations maintain their existing based on their goals, while others cannot survive. Organizational resilience provides ways in which organizations achieve anticipated results against difficulties, tensions, threats or significant obstacles to development (Sutcliffe & Vogus, 2003).

Duchek (2014) defines it as an organization's ability to predict developments and potential threats, effectively cope with unanticipated events, and generate a dynamic capability to facilitate organizational change. It is the ability to hold out the impact of a crisis situation (Engemann & Henderson, 2012). Hamel and Välikangas (2003) depict organizational resilience as flexibility, specifying it as the gap between the pace of change in the environment and the organization's ability to adapt. Similarly, according to Kumbalı (2018), it refers to an organization's ability to respond to unexpected situations.

Organizational resilience management blueprints the actions needed to anticipate, prevent (if possible), prepare for, and respond to changes in the environment, and outline a management framework for decision-making. Organizational resilience increases an organization's capacity to prevent, manage, and survive adverse events. It provides organizations with decision-making tools such as anticipation, evaluation, learning and change to take all necessary measures to ensure the maintainance of the organization (Leflar & Siegel, 2013; McManus, 2008).

Robb (2000) stated that resilient organizations show characteristics such as creating or changing the structure, providing security in the times of change, managing the emotional outcomes of constant transformation and change, learning, developing and growing. Resilience requires an organization to use its accumulated cultural capacity to figure out risks and adverse events, reduce pressure, and eventually safeguard social capital and reputation of the organization. This capacity is based on four main bodies:

preparedness, responsiveness, adaptability and learning. Organizational resilience is supported by trust, cultural and social capital foundations and perceived strong identity (Koronis & Ponis, 2018).

Lengnick-Hall, Beck, and Lengnick-Hall (2011) state that there are two different views on organizational resilience. The first perspective regards it as the ability to recover from unpredicted, stressful and negative situations and continue where they stopped. They argue that this perspective considers resilience within the framework of the flexibility in physical science, as a material's ability to regain its original shape and properties after being stretched. The second perspective goes beyond restoration and includes developing new capabilities and an extended ability to keep up with and even produce new opportunities. As a result, it is stated as the ability of the organization to come out of a difficult situation stronger than before. Braes and Brooks (2010) argue that enterprise risk management, security management, sustainability, governance, leadership, situational awareness, culture, values and independence are the basic concepts of organizational resilience.

### **Theoretical Framework of the Model**

There has been a growing interest in organizational resilience. It has been studied in many studies (Bhamra, Dani, & Burnard, 2011; Denyer, 2017; Duchek, 2014; Duchek, 2020; Everly Jr, 2011; Hamel & Välikangas, 2003; Lengnick-Hall, A, & Beck, 2008; Mallak L., 1998a; Sutcliffe & Vogus, 2003; Youssef & Luthans, 2007): However, there are limited studies conducted recently in Türkiye (Akgün & Keskin, 2014; Kantur & İşeri-Say, 2012; Kantur & Iseri-Say, 2015; Karaköse, 2019). In recent years, a limited number of studies have been carried out on organizational resilience in educational organizations in Türkiye (Gültekin, 2019; Limon et al., 2021). Therefore, this study is significant in that it tries to provide a better understanding of the organizational resilience in educational organizations and contribute to the growing literature.

Leaders have noteworthy responsibilities regarding achieving the goals of organizations, keeping up with innovations, social, political and economic changes and resisting destructive events. The literature review on leadership style and organizational resilience shows that there are theoretical studies on this issue. For example, Karaköse (2019), Karaköse, İmamoğlu, & İnce (2020), Limon, Dilekçi, & Demirer (2021) investigated the effects of leadership on organizational resilience.

However, it seems that there is no study on empowering leadership, organizational resilience and self-efficacy. In addition, it was found that studies in which two of these variables were examined was also limited. These studies focused on the relationship between empowering leadership and self-efficacy (Ahearne, Mathieu, & Rapp, 2005; Çelik & Konan, 2021; Dağlı & Kalkan, 202; Kim & Beehr, 2017) and endurance and self-efficacy (Mache et al., 2014). In this sense, it was anticipated that this study would contribute to educational management field as it examined the relationship between organizational resilience and empowering leadership, one of the contemporary leadership approaches.

This study was based on organizational theory, organizational behavior and leadership style. In the study, three features, namely organization, leader and employee, were discussed together. The study is also significant in that it presented suggestions for organizational resilience based on the results, and may guide policy makers and practitioners in revealing empowering leadership and employee self-efficacy roles.

### **Research Questions the Purpose of the Study**

The present study aimed to examine the relationship between school principals' empowering leadership behaviors and self-efficacy and organizational resilience perceptions of teachers. Accordingly, answers to the following research questions were sought in the study:

What is the level of classroom teachers' perceptions of school principals' empowering leadership behaviors, self-efficacy perceptions and organizational resilience?

Is there a relationship between empowering leadership and self-efficacy and organizational resilience?

Is empowering leadership and self-efficacy significant predictors of organizational resilience?

Does self-efficacy play a mediating role in the relationship between empowering leadership and the organizational resilience?

### Method

Relational survey model was employed in the study. The survey model is a quantitative research approach in which the researchers methodically ask a large number of people the same questions and then document them (Neuman, 2006). The relational survey model is based on measuring two or more variables and examining the degree of relationship between them (Christensen, Johnson, & Turner, 2015). In addition, In the study, three variables, organizational resilience as endogenous variable, empowering leadership and self-efficacy as exogenous variables, were examined using Structural Equation Modeling (SEM). The tested model is shown in Figure 1.

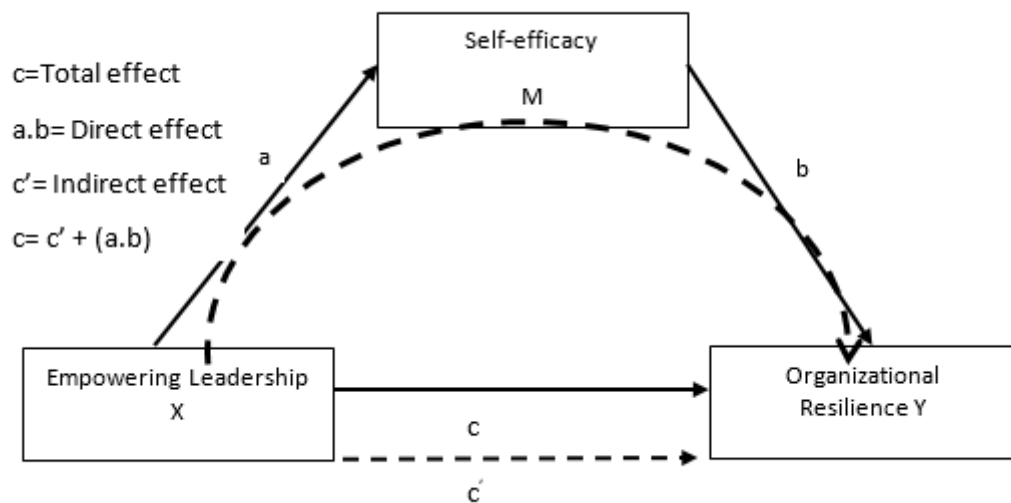


Figure 1. Theoretical Model

### Universe and Sample

The universe of the study consisted of 967 classroom teachers working in primary schools in 5 education regions in the city center of Elâzığ. The sample involved 385 teachers who voluntarily took part in the study and answered the data collection tool. Simple random sampling, a probabilistic sampling method, was used in sample selection. The participants' demographic characteristics are presented in Table 1.

Table 1. Participants' Demographic Characteristics

Variable	Group	Frequency	Percentage (%)
Gender	Female	212	55.1
	Male	173	44.9
	Total	385	100.0
Education Status	Undergraduate	340	88.3
	Graduate	45	11.7
	Total	385	100.0
Work Experience (years)	1-10	39	10.1
	11-20	129	33.5
	21-30	172	44.7
	30 and above	45	11.7
	Total	385	100.0

Working Time at	1-3	87	22.6
the School	4-6	83	21.6
(years)	7-9	86	22.3
	9 and above	129	33.5
	Total	385	100.0

### Data Collection Tools

*Empowering Leadership Scale (ELS)*: The scale was developed by Konczak, Stelly, & Trusty (2000) and adapted into Turkish by Konan & Çelik (2018). The 17-item scale has three dimensions: *delegation of authority*, *responsibility*, *supporting*. The *delegation of authority* and *responsibility* dimensions involved three items whereas *supporting* dimension consisted of 11 items. The Cronbach's Alpha values were calculated as .76 for *Delegation of Authority*, .82 for *Responsibility*, .80 for *Supporting*. Also, CFA indicated that the goodness of fit values were  $\chi^2/Sd = 2.54$ , GFI=.92, NNFI=.98, CFI=.95; RMSEA=.054 and SRMR=.032.

In the study, CFA was performed to examine the construct validity of the scale. The results showed that the fit indices for the three-factor structure of the scale were as follows:  $\chi^2/Sd = 409.681/112 = 3.658$ , GFI=.89, CFI=.94, RMSEA=.83, SRMR = .044. In addition, the Cronbach's Alpha were calculated as .86, .80, and .95 for the *Delegation of Authority*, *Responsibility*, and *Supporting*, respectively, and .95 for the total scale. In the study, the ELS was applied to teachers in order to examine the extent to which the principals displayed empowering leadership behaviors.

*The General Self-efficacy Scale (GSS)*: The scale was developed by Schwarzer & Jerusalem (1995) to examine gesneral self-efficacy perceptions. It was adapted into Turkish by Aypay (2010). The component analysis revealed that 10-item scale had a two-factor structure whose eigenvalues were greater than 1. The Cronbach's Alpha value of the scale were found as .79 for the first factor and .63 for the second factor and .83 for the total scale.

In the present study, CFA was conducted to investigate the construct validity of the scale. It was found that  $\chi^2/Sd = 99.4/ 32 = 3.1$ , GFI=.95, CFI=.96, RMSEA=.74, SRMR = .034. The Cronbach's Alpha were calculated as .87, .79 for Effort and Resistance, Ability and Confidence dimensions, respectively, and .90 for the total scale.

*Organizational Resilience Scale (ORS)*: The "Organizational Resilience Scale" was developed by Kantur & Iseri-Say (2015). The 9-item scale consists of three dimensions: Robustness, Agility and Integrity. The Cronbach's Alpha was found as .85. CFA showed that goodness of fit values were [ $\chi^2(24) = 59$ ], CFI=.95, NFI=.92, RMSEA=.08. The concurrent validity criterion among the items representing the implicit structure was calculated as AVE=.83 in Robustness, AVE=.86 in Agility, and AVE=.94 in Integrity. An AVE value above .5 indicates that the factor has convergent validity (Gürbüz, 2019a). The Cronbach's Alpha were calculated as .82, .73, and .85 for Robustness, Agility and Integrity dimensions, respectively.

In the present study, CFA was carried out to examine the structure of scale. The goodness of fit values were found as  $\chi^2/Sd = 93.544/22 = 4.252$ , GFI=.95, CFI=.98, RMSEA=.09, SRMR = .029. The Cronbach's Alpha coefficients were found to be .90, .86, and .92 for Robustness, Agility and Integrity dimensions, respectively and .95 for the total scale.

### Data Analysis

The data were analyzed using IBM SPSS Statistics 25 and PROCESS Macro 3.5 package programs. Before data analysis, Z-scores were calculated to examine outliers. Scores beyond the normal distribution limits and the Z scores out of the range of  $\pm 3$  were considered as outlier (Cokluk et al., 2010). Accordingly, 23 participants were removed from the study. The skewness and kurtosis values were calculated to examine normality of the data. The skewness and kurtosis values should be  $\pm 1$  for a dataset to have a normal distribution (Joseph F.

Hair et al., 2019). It was found that skewness and kurtosis values were between  $\pm .9 - \pm .9$  in the study. There are also some requirements for performing a regression analysis. In this sense, multivariate normality and linearity and multicollinearity should be investigated. For this, it is recommended to examine the relationships between independent variables, tolerance and VIF values (Cokluk et al., 2010). Tolerance and VIF values were calculated as .80 and 1.24, respectively for the empowering leadership, and as .80 and 1.24, respectively for the self-efficacy. It was found that the tolerance values were above .10 and the VIF values were below 10. Accordingly, it was considered that these values, there was no multicollinearity problem among the independent variables (Cokluk et al., 2010). Structural Equation Modelling was used in order to provide an answer to the question "Does self-efficacy play a mediating role in the relationship between empowering leadership and the organizational resilience?". The Baron and Kenny method, which adopts the causal steps approach in the analysis of mediation models, is widely used. Recently, the causal steps approach has been criticized and regression analysis through the bootstrap method, which is claimed to provide more valid and reliable results for mediation analysis, has been suggested (Fritz & MacKinnon, 2007; Gürbüz, 2019b). In this study, the bootstrap method, which does not prioritize incremental significance or require a significant relationship between each endogenous and exogenous variable in the final model, was preferred. In the bootstrap method, Bias Corrected and Accelerated Bootstrap Confidence Interval (BCA CI) are calculated. The existence of a mediating effect or an indirect effect (a.b) is determined by examining the CI values in the 95% confidence interval in the bootstrap method. The absence of a zero (0) in the lower and upper confidence interval values of indirect effect value indicates a significant indirect effect, which proves a mediating effect (Gürbüz & Bayık, 2018; Gürbüz, 2019b). In the analysis, the PROCESS macro developed by Hayes (2018) was used and 5000 resampling option was preferred in the bootstrap.

### Findings

The descriptive statistics are presented in Table 2.

**Table 2.** The Descriptive Statistics (n=385)

Variables	$\bar{x}$	Sd	1	2	3	4	5	6	7	8	9	10	11
1.Organizational Resilience	3.98	.71	1										
2.Robustness	4.01	.72	.96**	1									
3.Agility	3.94	.75	.93**	.83**	1								
4.Integrity	3.99	.85	.89**	.79**	.75**	1							
5.Empowering Leadership	4.07	.64	.62**	.60**	.57**	.56**	1						
6.Delegation of Authority	4.18	.69	.54**	.52**	.48**	.52**	.84**	1					
7.Responsibility	4.08	.71	.30**	.30**	.27**	.23**	.52**	.36**	1				
8.Supporting	4.03	.71	.62**	.60**	.57**	.56**	.98**	.76**	.43**	1			
9.Self-efficacy	3.49	.46	.38**	.37**	.34**	.37**	.44**	.45**	.35**	.41**	1		
10. Effort and Resistance	3.47	.49	.36**	.34**	.31**	.35**	.39**	.40**	.31**	.37**	.97**	1	
11. Ability and Confidence	3.52	.47	.37**	.36**	.33**	.35**	.47**	.48**	.37**	.43**	.93**	.81**	1

\*\*p < .01

As seen in Table 2, the participants responded at the level "mostly" ( $\bar{x}=4.07$ ) to the items in the ELS, "totally correct" to the items in the GSS ( $\bar{x}=3.49$ ) and "agree" to the items in the ORS ( $\bar{x}=3.98$ ). In addition, there was a significant, moderate and positive relationship between empowering leadership (henceforth EL) and self-efficacy (henceforth SE) perceptions ( $r=.44$ ,  $p<.01$ ) and organizational resilience (henceforth OL) ( $r=.62$ ,  $p<.01$ ), and between SE and OR ( $r=.38$ ,  $p<.01$ )

### Findings on Regression Analysis and Mediation Analysis

In the model, empowering leadership was the independent variable (X), self-efficacy was mediator variable (M), and organizational resilience was the dependent variable (Y). The effect of the independent variable (X) on the mediating variable (M) was shown with path “a”, the effect of the mediating variable (M) on the dependent variable (Y) with path “b”, the direct effect of the independent variable (X) on the dependent variable (Y) with path “c”, and the total effect of the independent variable (X) on the dependent variable (Y) with path “c”.

**Table 3.** The Effect of Empowering Leadership on Self-Efficacy

Model	4					
Y (dependent)	Organizational Resilience					
X (independent)	Empowering Leadership					
M (mediator)	Self-efficacy					
Sample Size	385					
Path a Dependent Variable	Self-efficacy					
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.4427	.196	.1717	93.3755	1.0000	383.0000	.0000
Model						
	Coefficients	se	t	p	LLCI	ULCI
Constant	2.194	.1360	16.1401	.0000	1.9270	2.4616
Empowering Leadership	.319	.0330	9.6631	.0000	.2538	.3835

The results showed that EL significantly and positively affected SE ( $b = .319$ , 95% CI [.2538, .3835],  $t=9.6631$ ,  $p < .001$ ). The non-standardized b value was significant, p value was less than .001 and that the values of the confidence interval did not contain a zero value, which proved the significance of the model. EL explained 19.6% ( $R^2=.196$ ) of the variation in SE.

In the second stage, the effects of SE as the mediator variable (M) (Path b) and the EL (X) (Path c) on OR (Y), the result variable, were tested. The results are presented in Table 4.

**Table 4.** The Effect of Empowering Leadership and Self-Efficacy on Organizational Resilience

Dependent Variable	Organizational Resilience					
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.6327	.4003	.3021	127.4808	2.0000	382.0000	.0000
Model						
	Coefficients	se	t	p	LLCI	ULCI
Constants	.7330	.2337	3.1359	.0018	.2734	1.1926
Empowering Leadership	.6190	.0488	12.6895	.0000	.5231	.7149
Self-Efficacy	.2082	.0678	3.0725	.0023	.0750	.3415

As shown in Table 4, SE affected OR significantly and positively ( $b=.2082$ , 95% CI [.0750,.3415],  $t= 3.0725$ ,  $p<.005$ ). In addition, EL also had a significant positive effect on OR. ( $b=.6190$ , 95% CI [.5231, .7149],  $t= 12.6895$ ,  $p= .0000$ ). EL and SE explained 40% ( $R^2=.4003$ ) of the variation in OR.

In the third stage, in a model without mediating variable of SE (M), the effect of EL (X) on OR (Y) (Path c), that is, the total effect, was tested. The results are given in Table 5.



**Table 5.** The Total Effect of Empowering Leadership on Organizational Resilience

Dependent Variable	Organizational Resilience					
	Model Summary					
R	R-sq	MSE	F	df1	df2	p
.6209	.3855	.3088	240.2275	1.0000	383.0000	.0000
Model						
	Coefficients	se	t	p	LLCI	ULCI
Constant	1.1900	.1823	6.5272	.0000	.8315	1.5484
Empowering Leadership	.6853	.0442	15.4993	.0000	.5984	.7723

Table 5 revealed that EL had a significant and positive effect on OR in a model without mediating variable SE ( $b=.6853$ , 95% CI [.5984, .7723],  $t= 15.4993$ ,  $p < .001$ ). In addition, the fact that the values of the confidence interval (CI=.5984, .7723) did not comprise a zero value also proved the significance of the model. It was found in Table 4 that the influence of the independent variable (empowering leadership) on the dependent variable (organizational resilience) decreased ( $b=.6853$ ,  $b=.6190$ ) with the inclusion of the mediator variable (self-efficacy) in the model ( $b=.6853$ ,  $b=.6190$ ). It was concluded that there was a partial mediation effect since there was no change in the significance of values, whereas the values decreased.

**Table 6.** Indirect Effects of Empowering Leadership (EL) on Organizational Resilience (OR)

Indirect Effect of X on Y				
	Effect	Boot SE	BootLLCI	BootULCI
Self-efficacy	.0664	.0281	.0146	.1253
Partially Standardized Indirect Effect of X on Y				
	Effect	Boot SE	BootLLCI	BootULCI
Self-efficacy	.0937	.0400	.0205	.1779
Completely Standardized Indirect (Mediation) Effect of X on Y				
	Effect	Boot SE	BootLLCI	BootULCI
Self-efficacy	.0601	.0255	.0128	.1139

Table 6 shows the confidence intervals calculated by bootstrap technique to examine whether EL had an indirect effect on OR. Accordingly, the effect of EL on OR was significant. Therefore, it was concluded that SE mediated the relationship between EL and OR ( $b=.0664$ , 95% BCA CI [.0146, .1253]).

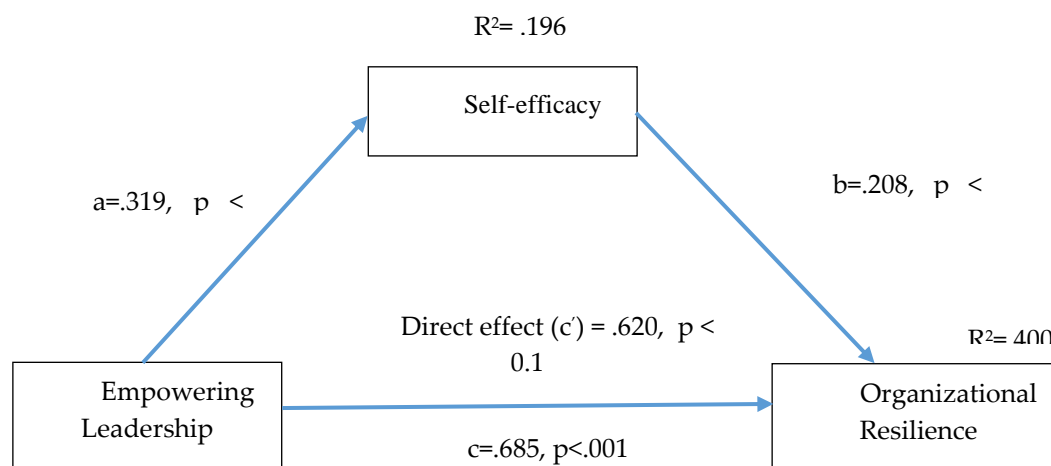
Table 6 presents the complete and partial standardized effect sizes of EL on OR. It was found that the CI in both effect sizes were significant since they did not consist of zero values. The completely standardized effect size was .0601, and the partially standardized effect size was .0937. A  $K^2$  value close to .01 is interpreted as small,  $K^2$  close to .09 as medium,  $K^2$  close to .25 as large (Cohen, 1988; Preacher & Kelley, 2011). Accordingly, the mediation effect in the tested model had a medium effect.

In order to test whether self-efficacy mediated the effect of EL on OR, a regression analysis was run through bootstrap. It is stated in the literature that the Bootstrap method provides more reliable results than the traditional Baron and Kenny method (1986) and the Sobel test (Hayes, 2018; Zhao et al., 2010). Table 7 shows the regression analysis results

**Table 7.** Regression Analysis Results for Mediation Analysis

		Result Variables				
		M (Self-efficacy)		Y (Organizational Resilience)		
Predictive Variables		<i>b</i>	S.H.		<i>b</i>	S.H
X (Empowering Leadership)	<i>a</i>	.319***	.330	<i>c'</i>	.620***	.049
M (Self-efficacy)	-			<i>b</i>	.208**	.068
Constant	<i>I<sub>M</sub></i>	2.194***	.136	<i>I<sub>Y</sub></i>	.733**	.233
		R²= .196		R²= .400		
		F (1;383) = 93.3755; p < .001		F (2;382) = 127.4808; p < .001		

Figure 2 shows the representation of the analysis in the model.

**Figure 2.** Results on the Mediation Role of Self-Efficacy in the Reinforcing Leadership-Organizational Resilience Relationship

SEM reveals direct, indirect and total effects. The standardized direct effects in Figure 2 indicated that EL had an effect on SE (.319), and OR (.620), and SE had an effect on OR (.208).

### Discussion, Conclusion and Recommendations

In the study, first, the participants' EL behavior and SE perceptions and OR levels were examined. The results indicated that the participants exhibited a high level of EL behaviors. This finding is in line with those in the literature (Bayın, 2021; Çelik & Konan, 2021; Koçak, 2016; Koçak & Burgaz, 2017; Konan & Çelik, 2017). It was found that the supporting dimension of ELS was lower than other dimensions in the scale. Similar to the present study, Konan and Çelik (2017) found that school principals exhibited supporting behaviors at the lowest level in the scale. In addition, Çelik and Konan (2021), Koçak (2016), Konan and Çelik (2017) reported that school principals had a high level of delegation of authority. Coleman (1996) states the necessity of delegating authority and avoiding telling employees what to do, while maintaining relations with them as the paradox of empowerment. Coleman (1996) states that it is the paradox of empowerment that an individual delegates authority and avoids telling employees what to do, while maintaining relations with them. Although sharing power is perceived as a risk, the findings of the present study indicated that school principals exhibited highly EL behaviors with the delegation of power and authority. In addition, the participants expressed that their SE perceptions were at the level of "totally correct" in both dimensions. However, the level of the skill and confidence dimension was slightly higher than the effort and resistance dimension. In the skill and confidence dimension, the participants perceived indirect experience and the belief to be able to do a job at a high level, especially with expressions such as "If I make the necessary effort, I can solve many problems" and "If I make enough effort, I can always find a way to solve difficult problems". The standard deviation values

of the items were similar, which indicated that the participants' SE perceptions were similar in both dimensions. It was also found that the participants had comparable results in all dimensions of ORS. However, the lowest level was observed in agility, and the highest level was observed in robustness. The participants "agreed" with the statements in all three dimensions. Thus, it can be argued that the views of the participants on OR were similar in all dimensions. This finding is supported by Limon, Dilekçi and Demirer (2021).

Secondly, the relationship between the variables were examined in the study. The findings revealed a moderate and positive relationship between EL and SE and OR, and a moderate and significant relationship between SE and OR. No study has investigated the direct relationship between EL and OR. Therefore, these findings were discussed based on other studies aiming to examine the relationship between OR and other leadership types or organizational behaviors. For example, Karaköse (2019) reported that adaptive leadership style had a positive relationship with OR capacity and there was no statistical relationship between transformational leadership and OR capacity. In addition, Gültekin (2019) found that there was a moderate and negative relationship between organizational blindness and OR. Limon, Dilekçi, & Demirer (2021) found a positive and significant relationship between distributed leadership and OR. It was also found in the present study that there was a significant relationship between SE and all dimensions of ORS. Relationships between all dimensions of both scales were at "moderate" level. As a detailed literature review showed that there was no study in which SE and OR were correlated. Thus, the results were compared with those in studies examining the relationship between SE and organizational behaviors. It was found that SE was positively and significantly correlated with some organizational variables such as organizational citizenship (Bogler & Somech, 2004; Çelik & Konan, 2021; Yücel, Yalçın, & Ay, 2009), and teacher leadership (Kurt, 2016).

As the third research question, whether independent variables and dependent variables were a significant predictor was examined. The findings revealed that independent variables significantly predicted dependent variables. Similar to the results of the present study, examining the EL mediated by self-efficacy, Ahearne, Mathieu, and Rapp (2005), Çelik and Konan (2021), Dağlı and Kalkan (2021) concluded that EL was a predictor of self-efficacy. The lack of studies on the relationship between EL and OR limited the comparison of the findings of the present study.

In the fourth research question, the mediating effect of SE in the relationship between EL and OR was tested. The results showed that SE had a partial mediation effect on the relationship between EL and OR. In other words, EL behaviors had a direct and indirect effect on OR.

The results of the present study showed that school principals should be aware that they are in a symbiotic relationship with teachers, that the institution can only achieve its goals with teachers, and that EL behaviors provide managerial and organizational effectiveness. It was also revealed that the school principal's EL behavior was an important source of extrinsic motivation for the teacher. It was concluded that EL had a direct effect on increasing teacher SE and providing OR.

### **Suggestions for Researchers and Educators**

The school principal should consider leadership and delegating power as a process of sharing responsibility and power, not losing control. The school principal should improve initiative and autonomy of teachers.

In order to exhibit empowering leadership behavior, the principals are required to be strong and the school must have an empowerable structure. In unanticipated situations, the school principal should be allowed to take the initiative within the regulation.

When school principals are faced with unanticipated circumstances or conditions that did not occur in the past, they have to make decisions based on the current time. These decisions are unprogrammed, new and

uncertain in solving the problem. In this context, a tool that provides an artificial intelligence-supported solution algorithm can be developed by Ministry of National Education for school principals to improve their decision-making processes.

This study was a cross-sectional research the aim of which is to reveal only the existing state of the phenomenon on variables in a single time period. Thus, longitudinal studies can be carried out to examine the changes in self-efficacy, organizational resilience and empowering leadership over time, which are not static and change depending on the context and time. The relationship between organizational resilience and different leadership styles can be examined. Finally, future studies should aim to reveal the role of organizational image or organizational culture in organizational resilience.

**Ethical Approval:** The study was carried out in accordance with ethical rules. Required permissions were obtained from the Social and Human Sciences Research Ethics Committee (07/07/2020 dated and 13/7 numbered).

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## REFERENCES

- Ahearne, M., Mathieu, J., & Rapp, A. (2005). To Empower or Not to Empower Your Sales Force? An Empirical Examination of the Influence of Leadership Empowerment Behavior on Customer Satisfaction and Performance. *Journal of Applied Psychology*, 90(5), 945-955.
- Akgün, A. E., & Keskin, H. (2014). Organisational resilience capacity and firm product innovativeness and performance. *International Journal of Production Research*, 52(23), 6918-6937. <https://doi.org/10.1080/00207543.2014.910624>
- Arnold, J. A., Arad, S., Rhoades, J. A., & Drasgow, F. (2000). The empowering leadership questionnaire: the construction and validation of a new scale for measuring leader behaviors. *Journal of Organizational Behavior*, 21, 249-269. [https://doi.org/10.1002/\(SICI\)1099-1379\(200005\)21:3<249::AID-JOB10>3.0.CO;2-%23](https://doi.org/10.1002/(SICI)1099-1379(200005)21:3<249::AID-JOB10>3.0.CO;2-%23)
- Arseven, A. (2016). Öz Yeterlilik: Bir Kavram Analizi. *Turkish Studies*, 11(19), 63-80. <https://doi.org/10.7827/TurkishStudies.10001>
- Ashcroft, L. (1987). Defusing "Empowering": The What and the Why. *Source: Language Art*, 64(2), 142-156.
- Aypay, A. (2010). Genel Öz Yeterlilik Ölçeği'nin (GÖYÖ) Türkçe'ye Uyarlama Çalışması. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 11(2), 113-131.
- Bandura, A. (1994). Self-Efficacy. V. S. Ramachandran içinde, *Encyclopedia Of Human Behavior* (Cilt 4, s. 71-81). Academic Press.
- Bandura, A. (2003). Cultivate Self-efficacy for Personal and Organizational Effectiveness. E. A. Locke içinde, *The Blackwell Handbook of Principles of Organizational Behaviour* (s. 121-139). Oxford: Blackwell Publishing.
- Bayın, M. A. (2021). Okul Müdürlerinin Güçlendirici Liderlik Düzeyi ile Öğretmenlerin Örgütsel Muhalefeti Arasındaki İlişki. [Yayımlanmamış yüksek lisans tezi]. T.C. İnönü Üniversitesi Eğitim Bilimleri Enstitüsü.
- Bellous, J. E., & Pearson, A. T. (1995). Empowerment and Teacher Education. *Studies in Philosophy and Education*, 14(1), 49-62.
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: the concept, a literature review and future directions. *International Journal of Production Research*, 18, 5375-5393.
- Bogler, R., & Somech, A. (2004). Influence of teacher empowerment on teachers' organizational commitment, professional commitment and organizational citizenship behavior in schools. *Teaching and Teacher Education*, 20(3), 277-289. <https://doi.org/10.1016/j.tate.2004.02.003>
- Bolat, O. İ., Bolat, T., & Aytemiz Seymen, O. (2009). Güçlendirici Lider Davranışları ve Örgütsel Vatandaşlık Davranışı Arasındaki İlişkinin Sosyal Mübadele Kuramından Hareketle İncelenmesi. *Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 12(21), 215-239.
- Bolat, T. (2003). Personeli Güçlendirme: Davranışsal ve Bilişsel Boyutta İncelenmesi ve Benzer Yönetim Kavramları İle Karşılaştırılması. *İktisadi ve İdari Bilimler Dergisi*(3-4), 199-219.
- Boudrias, J.-S., Gaudreau, P., & Laschinger, H. K. (2004). Testing The Structure Of Psychological Empowerment: Does Gender Make A Difference? *Educational And Psychological Measurement*, 64 (5), 861-877. <https://doi.org/10.1177/0013164404264840>
- Braes, B., & Brooks, D. (2010). Organisational Resilience: A Propositional Study to Understand and Identify the Essential Concepts. *3rd Australian Security and Intelligence Conference* (s. 14-22). Cowan University. <https://doi.org/10.4225/75/579ec432099ca>

- Braynion, P. (2004). Power and leadership. *Journal of Health Organization and Management*, 18(6), 447-463. <https://doi.org/10.1108/14777260410570009>
- Burke, B. W. (1986). Leadership as Empowering Others. I. S. Srivastva içinde, *Executive power* (s. 51-77). San Francisco: Jossey-Bass.
- Chakravorty, S. S. (2015). Organizational resilience Air Force maintenance operations re-engineered to bounce back from disturbances. *Industrial Engineer*, 46-50.
- Cheong, M. (2017). *Empowering Leadership: A Comprehensive Perspective And Tests With Multiple Methods And Studies*. New York: Binghamton University.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Lawrence Erlbaum Associates.
- Coleman, H. J. (1996). Leadership & Organization Development Journal. *Why employee empowerment is not just a fad*, 29-36.
- Conger, J. A., & Kanungo, R. N. (1988). The Empowerment Process: Integrating Theory and Practice. *Academy of Management Review*, 13(3), 471-482.
- Cunningham, I., Hyman, J., & Baldry, C. (1996). Empowerment: the power to do what? *Industrial Relations Journal*, 27(2), 143-154. <https://doi.org/10.1111/j.1468-2338.1996.tb00764.x>
- Çelik, O. T., & Konan, N. (2021). Okul Müdürlerinin Güçlendirici Liderliği ile Öğretmenlerin Özyeterliliği ve Örgütsel Vatandaşlık Davranışları Arasındaki İlişki. *Eğitim ve Bilim*, 46(206), 241-261. <https://doi.org/10.15390/EB.2020.8841>
- Çetin, F., & Basım, H. N. (2017). Örgütte Bireysel Farklılıklar, Kişilik ve Değerler. Ü. Sıgır, & S. Gürbüz içinde, *Örgütsel Davranış* (s. 93-135). İstanbul: Beta Basım A.Ş.
- Çetin, Ş. (2017). Örgütlerde Güç ve Politika. Ü. Sıgır, & S. Gürbüz içinde, *Örgütsel Davranış* (s. 431-479). İstanbul: Beta.
- Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2010). *Sosyal Bilimler İçin Çok Degiskenli İstatistik SPSS ve LISREL Uygulamalar*. Pegem Akademi.
- Daft, R. L. (2015). *Örgüt Kuramları ve Tasarımın Anlamak*. (Ö. N. Özmen, Çev.) Ankara: Nobel Akademik Yayıncılık.
- Dağlı, E., & Kalkan, F. (2021). Okul Müdürlerinin Güçlendirici Liderlik Davranışları ile Öğretmenlerin Öz Yeterlilik Algıları ve İş Doyumu Düzeyleri Arasındaki İlişki. *Eğitim ve Bilim*, 46(208), 105-123. <https://doi.org/10.15390/EB.2021.10083>
- Darkow, P. M. (2018). Beyond “bouncing back”: Towards an integral, capability-based understanding of organizational resilience. *Journal of Contingencies and Crisis Management*, 1-12. <https://doi.org/10.1111/1468-5973.12246>
- Denyer, D. (2017). *Organizational Resilience*. Bedford: BSI and Cranfield University.
- Doğru, Ç. (2016). Güçlendirici Liderlik ve Pozitif Örgütsel Davranış Arasındaki İlişkinin İncelenmesi. *IV.Örgütsel Davranış Kongresi* (s. 659-664). Adana: Çukurova Üniversitesi.
- Duchek, S. (2014). Growth In The Face Of Crisis: The Role Of Organizational. *Academy of Management Proceedings*(1), 861-866.
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*(13), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>

- Engemann, K. J., & Henderson, D. M. (2012). *Business Continuity and Risk Management: Essentials of Organizational Resilience*. Brookfield: Rothstein Associates Inc.
- Erstad, M. (1997). Empowerment and organizational change. *International Journal of Contemporary Hospitality Management*, 9(7), 325-334. <https://doi.org/10.1108/09596119710190976>
- Everly Jr, G. (2011, 6 24). Harvard Business Review. *Building a Resilient Organizational Culture*, s. 1-2.
- Flaherty, A. (2018). Power and Empowerment in Schools. *Contemporary Pedagogies in Teacher Education and Development*, 23. <https://doi.org/10.5772/intechopen.76483>
- Fritz, M. S., & MacKinnon, D. P. (2007). Required Sample Size to Detect the Mediated Effect. *Psychological Science*, 18(3), 233-239. <https://doi.org/10.1111/j.1467-9280.2007.01882.x>
- Gallagher, M. W. (2012). Self-Efficacy. V. S. Ramachandran içinde, *Encyclopedia Of Human Behavior Second Edition Volume 3 P-Z* (s. 314-320). Academic Press is an imprint of Elsevier.
- Gao, L., Janssen, O., & Shi, K. (2011). Leader trust and employee voice: The moderating role of empowering leader behaviors. *The Leadership Quarterly*(22), 787-798.
- Gerçek, M., & Börekçi, D. Y. (2019). "RESILIENCE" Kavramına Örgüt Bağlamında Türkçe Karşılık Önerileri. *Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi*, 28(2), 198-213.
- Gonos, J., & Gallo, P. (2013). Model For Leadership Style Evaluation. *Management*, 18(2), 157-168.
- Gültekin, G. S. (2019). Yükseköğretimde Örgütsel Körlük ve Örgütsel Sürdürülebilirlik Arasındaki İlişkide Örgütsel Dayanıklılığın Aracı Rolü. Bolu: T.C. Bolu Abant İzzet Baysal Üniversitesi Eğitim Bilimler Enstitüsü Eğitim Bilimleri Anabilim Dalı Eğitim Yönetimi Ve Denetimi Bilim Dalı (Yayınlanmamış Doktora Tezi).
- Gürbüz, S. (2019a). *Amos ile Yapısal Eşitlik Modellemesi*. Seçkin.
- Gürbüz, S. (2019b). *Sosyal Bilimlerde Aracı Düzenleyici ve Durumsal Etki Analizleri*. Seçkin Akademik ve Mesleki Yayınlar.
- Gürbüz, S., & Bayık, M. E. (2018). Aracılık Modellerinin Analizinde Modern Yaklaşım: Baron ve Kenny Yöntemi Artık Terk edilmeli mi? 6. *Örgütsel Davranış Kongresi Bildiriler Kitabı 2-3 Kasım* (s. 35-52). Süleyman Demirel Üniversitesi. <http://www.odk.sdu.edu.tr/> adresinden alındı
- Hamel, G., & Välikangas, L. (2003). The Quest for Resilience. *Harvard Business Review*, 81(9).
- Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis. A Regression-based Approach*. Guilford Press.
- Hollander, E. P., & Offermann, L. R. (1990). Power and Leadership in Organizations: Relationships in transition. *American Psychologist*, 45(2), 179-189. <https://doi.org/10.1037/0003-066X.45.2.179>
- Honold, L. (1997). A review of the literature on employee empowerment. *Empowerment in Organizations*, 5(4), 202-212.
- Hoy, A. W. (2015). *Eğitim Psikolojisi*. (D. Özen, Çev.) İstanbul: Kaknüs Yayınları.
- Joseph F. Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. Cengage.
- Kantur, D., & Işeri-Say, A. (2015). Measuring Organizational Resilience: A Scale Development. *Journal of Business, Economics & Finance*, 4(3), 456-472. <https://doi.org/10.17261/Pressacademia.2015313066>
- Kantur, D., & İşeri-Say, A. (2012). Organizational resilience: A conceptual integrative framework. *Journal of Management & Organization*, 18(6), 762-773.

- Karaköse, M. A. (2019). *Liderlik Tarzları, Örgütsel Dayanıklılık, Örgütsel Özümseme Kapasitesi ve Firma Yenilikçiliği İlişkisi*. [Yayımlanmamış doktora tezi]. T.C. Gebze Teknik Üniversitesi Sosyal Bilimler Enstitüsü.
- Karaköse, M. A., İmamoğlu, S. Z., & Ince, H. (2020). Dönüşümcü ve Adaptif Liderlik Tarzlarının Örgütsel Dayanıklılık Kapasitesinin Geliştirilmesindeki Rolü: Kavramsal Bir Model Önerisi. *Doğuş Üniversitesi Dergisi*, 153 - 169.
- Kim, M., & Beehr, T. A. (2017). Self-Efficacy and Psychological Ownership Mediate the Effects of Empowering Leadership on Both Good and Bad Employee Behaviors. *Journal of Leadership & Organizational Studies*, 24(4), 466–478.
- Klein, R. J., Nicholls, R. J., & Thomalla, F. (2003). Resilience to natural hazards: How useful is this concept? *Global Environmental Change Part B: Environmental Hazards*(5), 35-45.
- Koçak, S. (2016). *Ortaöğretim Kurumlarındaki Psikolojik Sözleşme Üzerinde Güçlendirici Liderlik Davranışlarının Rolü*. [Yayımlanmamış doktora tezi]. Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü.
- Koçak, S., & Burgaz, B. (2017). Ortaöğretim Kurumlarındaki Psikolojik Sözleşme Üzerinde Güçlendirici Liderlik Davranışlarının Rolü. *Eğitim ve Bilim*, 42(191), 351-369. <https://doi.org/10.15390/EB.2017.7101>
- Koçel, T. (2017). Yönetim ve Organizasyonda Metodoloji ve Güncel Kavramlar. *İstanbul Üniversitesi İşletme Fakültesi Dergisi*, 46, 3-8.
- Konan, N., & Çelik, O. T. (2017). Okul Müdürlerinin Güçlendirici Liderliğine İlişkin Öğretmen Algısı. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, 6(1), 322–335. <https://doi.org/10.14686/buefad.274186>
- Konan, N., & Çelik, O. T. (2018). Güçlendirici Liderlik Ölçeğinin Eğitim Örgütleri İçin Türkçe'ye Uyarlaması: Geçerlik ve Güvenirlik Çalışması. *Kastamonu Education Journal*, 26(4), 1043-1054. <https://doi.org/10.24106/kefdergi.434140>
- Konczak, L. J., Stelly, D. J., & Trusty, M. L. (2000). Defining And Measuring Empowering Leader Behaviors: Development Of An Upward Feedback Instrument. *Educational and Psychological Measurement*, 60(2), 301-313.
- Koronis, E., & Ponis, S. (2018). Better than before: the resilient organization in crisis mode. *Journal Of Business Strategy*, 39(1), 32-42.
- Kumbalı, H. Ç. (2018). *Örgüt Yapısına Göre Bilgi Yönetimi ve Örgütsel Dayanıklılık İlişkisi*. Denizli: [Yayımlanmamış doktora tezi]. Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü.
- Kurt, T. (2016). Öğretmen Liderliğini Açıklamaya Yönelik Bir Model: Dağıtımcı Liderlik, Örgütsel Öğrenme ve Öğretmenlerin Öz Yeterlik Algısının Öğretmen Liderliğine Etkisi. *Eğitim ve Bilim*, 41, 183 1-28. <https://doi.org/10.15390/EB.2016.5081>
- Leach, D. J., Wall, T. D., & Jackson, P. R. (2003). The effect of empowerment on job knowledge: An empirical test involving operators of complex technology. *Journal of Occupational and Organizational Psychology*, 76, 27–52.
- Lee, A., Willis, S., & Tian, A. W. (2017). Empowering leadership: A meta-analytic examination of incremental contribution, mediation, and moderation. *J Organ Behav.*, 1-20. <https://doi.org/https://doi.org/10.1002/job.2220>
- Leflar, G. J., & Siegel, M. H. (2013). *Organizational Resilience Resilience Managing the Risks of Disruptive Events – A Practitioner's Guide*. Boca Rato: CRC PressTaylor PressTaylor & Francis Group.
- Lengnick-Hall, A. C., & Beck, T. E. (2008). *Resilience Capacity and Strategic Agility: Prerequisites for Thriving in a Dynamic Environment*. San Antonio: Department of Management, University of Texas.



- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*(21), 243-255.
- Lightfoot, S. L. (1986). On Goodness in Schools: Themes of Empowerment. *Peabody Journal Of Education*, 63(3), 9-28. <https://doi.org/10.1080/01619568609538522>
- Limon, İ., Dilekçi, Ü., & Demirer, S. (2021). The Mediating Role of Initiative Climate on the Relationship between Distributed Leadership and Organizational Resilience in Schools. *International Journal of Contemporary Educational Research*, 8(1), 128-144. <https://doi.org/10.33200/ijcer.829411>
- Lincoln, N. D., Travers, C., Ackers, P., & Wilkinson, A. (2002). The meaning of empowerment: the interdisciplinary etymology of a new management concept. *International Journal of Management Reviews*, 4(3), 271-290.
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23, 695-706. <https://doi.org/10.1002/job.165>
- Mache, S., Vitzthum, K., Wanke, E., Groneberg, D. A., Klapp, B. F., & Danzer, G. (2014). Exploring the impact of resilience, self-efficacy, optimism and organizational resources on work engagement. *Work*(47), 491-500.
- Maddux, J. E. (1995). Self-Efficacy Theory An Introduction. J. E. Maddux içinde, *Self-Efficacy, Adaptation, And Adjustment: Theory. Research. And Application* (s. 3-33). New Yor: Springer Science+ Business Media.
- Mallak, L. (1998a). Putting Organizational Resilience to Work. *Industrial Management*, 8-13.
- Mallak, L. A. (1998b). Measuring resilience in health care provider organizations. *Health Manpower Management*, 24(4), 148-152.
- Martin, A. M. (2013). *Empowering Leadership Developing Behaviors for Success*. Illinois: American Library Association.
- Martin, S. L., Liao, H., & Campbell, E. M. (2013). Directive Versus Empowering Leadership: A Field Experiment Comparing Impacts On Task Proficiency And Proactivity. *Academy of Management Journal*, 56(5), 1372-1395.
- Masten, A. S., & Reed, M.-G. J. (2002). Resilience in Development. C. R. Snyder, & S. J. Lopez içinde, *Handbook of Positive Psychology* (s. 74-88). New York: Oxford University Press.
- McAslan, A. (2010). The Concept Of Resilience Understanding its Origins, Meaning and Utility. *Torrens Resilience Institute*, 1-13.
- McManus, S. T. (2008). *Organisational Resilience İn New Zealand*.
- Moran, B. B., & Tame, P. (2012). Organizational Resilience:Uniting Leadership and Enhancing Sustainability. *The Journal of Record*, 5(4), 233-237. <https://doi.org/10.1089/sus.2012.9945>
- Neuman, W. L. (2006). *Toplumsal Araştırma Yöntemleri Nitel ve Nicel Yaklaşımlar 1*. (S. Özge, Çev.) Yayın Odası.
- Öztürk, A. (2018). *Sağlık Sektöründe Hizmet Yenilikçiliğine Dair Yenilikçi Eğilimler İle Örgütsel Dayanıklılık İlişkilerinin İncelenmesi*. Kocaeli: [Yayımlanmamış doktora tezi]. T.C. Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü.
- Preacher, K. J., & Kelley, K. (2011). Effect Size Measures for Mediation Models: Quantitative Strategies for Communicating Indirect Effects. *Psychological Methods*, 16(2), 93-115. <https://doi.org/10.1037/a0022658>
- Redhouse. (1986). *İngilizce-Türkçe Redhouse Sözlüğü*. İstanbul: Redhouse Yayınevi.


- Riggio, R. E. (2016). Etkileme, Güç ve Politika. R. E. Riggio, & B. Özkara (Dü.) içinde, *Endüstri ve Örgüt Psikolojisine Giriş* (K. Özcan, Çev., s. 372-400).
- Robb, D. (2000). Building Resilient Organizations. *OD Practitioner*, 32(3), 27-32.
- Salazar, J., Pfaffenberg, C., & Salazar, L. (2006). Locus of Control vs. Employee Empowerment and the Relationship with Hotel Managers' Job Satisfaction. *Journal of Human Resources in Hospitality & Tourism*, 5(1), 1-15. [https://doi.org/10.1300/J171v05n01\\_01](https://doi.org/10.1300/J171v05n01_01)
- Schwarzer, R., & Jerusalem, M. (1995). The General Self-Efficacy Scale. *Measures in health psychology: A user's portfolio. Causal and control beliefs*, 35-37.
- Short, P. M. (1992). *Dimensions of Teacher Empowerment*. The Pennsylvania State University.
- Southwick, F. S., Martini, B. L., Charney, D. S., & Southwick, S. M. (2016). Leadership and Resilience. *Leadership Today*, 315-33. [https://doi.org/10.1007/978-3-319-31036-7\\_18](https://doi.org/10.1007/978-3-319-31036-7_18)
- Spreitzer, G. M. (1995). Psychological Empowerment In The Workplace: Dimensions, Measurement, And Validation. *Academy of Management*, 38(5), 1442-1465.
- Spreitzer, G. M. (1996). Social Structural Characteristics Of Psychological Empowerment. *Academy of Management Journal*, 39(2), 483-504.
- Spreitzer, G. M. (2008). Taking Stock: A Review of More Than Twenty Years of Research on Empowerment at Work. J. Barling, & C. L. Cooper içinde, *The SAGE Handbook of Organizational Behavior Volume I* (s. 54-72). SAGE Publications.
- Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing For Resilience . C. K.S, D. J.E., & Q. R.E. içinde, *Positive Organizational Scholarship: Foundations of a New Discipline* (s. 94-110). San Francisco: Berrett-Koehler Publishers.
- Şen, S. (2020). *Mplus ile Yapısal Eşitlik Modellemesi Uygulamaları*. Nobel.
- Vecchio, R. P., Justin, J. E., & Pearce, C. L. (2021). Empowering leadership: An examination of mediating mechanisms within a hierarchical structure. *The Leadership Quarterly*, 21(3), 530-542. <https://doi.org/10.1016/j.leaqua.2010.03.014>
- Whetten, D. A., & Cameron, K. S. (2016). *Developing Management Skills*. Pearson.
- Williams, S. L. (1995). Self-Efficacy, Anxiety, And Phobic Disorders. J. E. Maddux içinde, *Self-Efficacy. Adaptation; And Adjustment : Theory. Research. And Application* (s. 69-108). New York: Springer Science+Business Media.
- Witmer, H. (2019). Degendering organizational resilience – the Oak and Willow against the wind. *Gender in Management: An International Journal*, 34(6), 510-528.
- Youssef, C. M., & Luthans, F. (2007). Positive Organizational Behavior in the Workplace The Impact of Hope, Optimism, and Resilience. *Journal of Management*, 33(5), 774-800.
- Yücel, C., Yalçın, M., & Ay, B. (2009). Öğretmenlerin Öz-Yeterlikleri Ve Örgütsel Vatandaşlık Davranışı. *Sosyal Bilimler Dergisi*(21), 221-235.
- Zhang, X., & Bartol, K. M. (2010). Linking Empowering Leadership and Employee Creativity: The Influence of Psychological Empowerment, Intrinsic Motivation, and Creative Process Engagement. *Academy of Management Journal*, 53(1), 107–128. <https://doi.org/10.5465/amj.2010.48037118>
- Zhao, X., Jr., J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257> .

# What Factors Affect Turkish Pre-service Elementary School Teachers Gifted Referral Decisions?\*

## Research Article

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### ABSTRACT

The purpose of this study was to detect the factors affecting Turkish preservice elementary school teachers' gifted referral decisions through eleven profiles (hypothetical scenarios) originally created by five American experts in the field of gifted education. The original profiles were translated from English to Turkish and adapted so that they were more relevant to Turkish culture. The profiles varied based on the characteristics embedded in each profile. The study participants were 204 Turkish pre-service elementary school teachers who are attending two colleges of Education at a university located in the South East of Turkey. The pre-service teachers were asked to indicate, on a four-point Likert scale, whether they would include each profile's hypothetical student in a gifted education program. The results of factorial ANOVAs indicated that Turkish pre-service elementary school teachers' referral decisions were influenced by the following factors: pre-service teachers' gender, students' gender, students' ability areas, students' personality traits, words describing the students, and students' length of passion.

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#### Keywords:

Gifted referral, Gifted nomination, Turkish Pre-service teachers, Teachers qualifications

## Introduction

Teachers play critical and important role regarding the nomination of the students to gifted education programs. Because teachers are the gatekeepers (McBee, 2006) to the identification of gifted students, teachers'

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perceptions, knowledge, and levels of understanding of gifted students' characteristics become very important. Teachers' lack of knowledge about giftedness and their misperceptions about gifted students' characteristics might lead to fallacious referrals. Fallacious referrals could be two sided such as the nomination of non-gifted students for gifted screening or not nominating potential gifted students for the screening. Not only teachers' knowledge and perceptions but also their beliefs, biases, attitudes, and expectations might affect their referral decisions (Siegle, 2001).

### **Factors Affecting Gifted Referrals**

Previous research has shown that certain factors affect the referral process. Culture and ethnicity (Elhoweris, Mutua, Alsheikh, & Holoway, 2005; Grantham, 2002), gender bias (Bianco, Harris, Garrison-Wade, & Leech, 2011; Siegle & Reis, 1998), the gifted status of teachers (Bégin & Gagné, 1994; Michener, 1980), teachers' knowledge of giftedness (Bianco & Leech, 2010; Morris, 1987), students' personality traits (Alvidrez & Weinstein, 1999; Endepohls-Ulpe & Ruf, 2005; Hunsaker, 1994; Persson, 1998; Siegle et al., 2010), students' socio-economic status (Van Tassel-Baska, Patton, & Prillaman, 1991), teachers' stereotypical views (Grantham, 2002; Miller, 2009; Peterson & Margolin, 1997; Powell & Siegle, 2000), students' ages (Siegle et al., 2010), the twice-exceptionality of a student (Bianco & Leech, 2010), and words describing students (Siegle et al., 2010) are posited as some of the factors affecting teachers' decisions regarding when they refer students for gifted screening.

**Cultural background and socio-economic status (SES).** Although researchers assume that giftedness is randomly distributed across race, gender, and ethnic groups (Eby & Smutny, 1990), the practice of identifying gifted students has shown that minority students have been underrepresented in programs serving the gifted (Ford, 1998; Frasier, Garcia, & Passow, 1995). Previous research has shown that students from different cultural backgrounds either were not referred for gifted identification or had a lower probability of being referred for gifted screening compared to their counterparts from the mainstream culture (Elhoweris, Mutua, Alsheikh, & Holloway, 2005; Masten & Plata, 2000; McBee, 2010; Peterson & Margolin, 1997). For instance, in Elhoweris et al.'s (2005) study, the researcher found that elementary school teachers' referral decisions were influenced by students' ethnic backgrounds when the teachers were provided with three vignettes describing a European American, an African American, and a student with no ethnic background information. Elementary school teachers referred the student with no ethnic background information significantly more than they did the African American student. In addition, McBee (2010) found that the probability of being identified as gifted depended strongly on student race and socioeconomic status (SES) when he investigated the elementary school data of the State of Georgia. Hispanic students had the lowest probability of being identified as gifted even when controlling for the SES.

Cultural background and SES are intertwined concepts and it is hard to differentiate these concepts when investigating lack of referral for students who are not coming from mainstream culture. Because most minority students come from low SES families, it is hard to detect which one of these factors is causing low referral rates and underrepresentation of those groups in gifted education classes. In some studies, cultural background seen as a reason for low referral rates (Elhoweris, Mutua, Alsheikh, & Holoway, 2005; Grantham, 2002; McBee, 2006, 2010) and in another study SES as a reason (Siegle et al., 2010).

**Gender bias.** Gender bias was one of the factors examined in a couple of studies focusing on factors affecting teachers' perceptions of giftedness and their referral decisions (Bianco, Harris, Garrison-Wade, & Leech, 2011; Siegle et al., 2010; Siegle & Powell, 2004; Siegle & Reis, 1998). In two of these studies (Bianco, Harris, Garrison-Wade, & Leech, 2011; Siegle & Reis, 1998), teachers rated male and female students differently. In

Siegle and Reis' (1998) study, gifted students and their teachers were asked to rate students' work quality, effort, and abilities. Teachers of gifted students rated female students significantly higher than they did male students in terms of effort and quality of work. In addition, the teachers rated female students significantly higher than they did male students in language arts. In Mathematics, Science, and Social Studies, teachers rated both groups similarly. In the other study, Bianco et al. (2011) found that students' gender significantly influenced teachers' decisions regarding referral to gifted programs. Teachers rated male students higher than they did female students although the two students, except for their genders, had identical characteristics in the vignettes.

**Gifted status and acquaintance of gifted people.** Teachers' status of being identified as gifted or of having family members or friends who are gifted might affect their perceptions of giftedness and their attitudes toward gifted students (Bégin & Gagné, 1994; Michener, 1980). Bégin and Gagné (1994) found a significant relationship between teachers' and student parents' contact with giftedness, being gifted, or knowing someone who is gifted, and their attitudes toward gifted education. Ten percent of the variance in teachers' and student parents' attitudes toward gifted education was explained by their contact with giftedness.

**Knowledge of giftedness.** Morris (1987) conducted a study with 250 pre-service teachers to investigate the relationship between their knowledge of gifted students and their attitudes toward gifted students. The study's results indicated that pre-service teachers who had more knowledge about giftedness tended to have more positive attitudes toward gifted students. In another study (Bianco & Leech, 2010), the authors found that teachers' decisions regarding the referral process were significantly affected by their credentials in the education of gifted students. Teachers who had more knowledge about giftedness made more accurate referrals.

**Personality traits (characteristics).** Previous research has shown that students' personality traits have influenced teachers' perceptions of giftedness and teachers' referral decisions (Alvidrez & Weinstein, 1999; Endepohls-Ulpe & Ruf, 2005; Hunsaker, 1994; Persson, 1998; Siegle et al., 2010). Leadership ability (Hunsaker, 1994), assertiveness, independence (Endepohls-Ulpe & Ruf, 2005), and willingness to help others (Persson, 1998; Siegle et al., 2010) were considered personal characteristics of gifted students by teachers. For instance, in Siegle et al.'s (2010) study, teachers rated a hypothetical sixth-grade student who was willing to help others higher than they did students who were not willing to help others. These results of noted studies indicate that students' personal characteristics influence teachers' perceptions of giftedness and their referral decisions.

**Stereotypical views.** Previous research has shown that teachers have stereotypical views about students' abilities, gender, and certain characteristics associated with gifted students (Grantham, 2002; Miller, 2009; Peterson & Margolin, 1997; Powell & Siegle, 2000). Students who confirmed these stereotypical views and who came from high socioeconomic groups had a higher chance of being referred for gifted screening (Grantham, 2002; McBee, 2010). According to Grantham (2002), the stereotypical view of students identified as gifted in the U.S has been that gifted children are White, have educated parents, and live in the suburbs. The results from Peterson and Margolin's (1997) study are consistent with the stereotypical views stated by Grantham (2002). In Peterson and Margolin's (1997) study, the authors found that some of the teachers cited a middle- or upper-class home environment as support for their referral decisions. In another study (Grantham, 2002), high academic achievement, goal orientation, and strong verbal abilities were characteristics that many teachers used as the basis for their gifted referral decisions.

In Turkish context, it is hard to find many studies about the stereotypical views of the society about gifted students and giftedness. Sak's (2011) study about Turkish people's misconceptions, dogmas and popular beliefs about giftedness and gifted person provides insights about stereotypical views of Turkish people about gifted

person. Sak (2011) found that lay people have more misconceptions, dogmas and popular beliefs about giftedness and gifted person compared to educated people. The most common stereotypical beliefs about gifted person in Turkish society were gifted person has psychological problems, once gifted he/she is gifted in all areas, and being highly talented not require to be highly intelligent.

In contrast to the aforementioned studies in this section, Powell and Siegle (2000) found that teachers were more likely to nominate students for gifted programs if students displayed a skill or ability considered unusual for their gender. For example, boys who were voracious readers or girls who were skilled at math were more likely to have been nominated for gifted identification. This is another way of confirming teachers' stereotypical views about students' abilities. Because teachers have stereotypical views about students' abilities (e.g., females are voracious readers and males are good at math), students who do not fit these stereotypical views are seen as extraordinary students and nominated for gifted referrals.

**Students' age.** Previous research has shown that a student's age is another factor that should be investigated with respect to teachers' referral decisions (Siegle et al., 2010). The results of Siegle et al.'s (2010) study indicated that educators expected more from older students and rated older students lower than they did younger students who had similar characteristics. Educators rated a fourth-grader higher than they did an eighth-grader who had characteristics similar to those of the fourth-grader. Although pre-service teachers rated older and younger students similarly, in-service teachers expected more from older students and rated older students lower than they did younger students who had the same characteristics.

**Twice-exceptionality of the student.** Essentially, twice-exceptional students can be defined as follows: "students who demonstrate the potential for high achievement and creativity in one or more domains and who manifest one or more disabilities as defined by federal or state eligibility criteria" (Reis, Baum, & Burke, 2014). According to Baum and Owen (2004), approximately 300,000 twice-exceptional students attend schools in the United States. Previous research has shown that twice-exceptional students have had negative school experiences (Reis, Neu, & McGuire, 1995, 1997; Reis, McGuire, & Neu, 2000; Vespi & Yewchuk, 1992) that may cause behaviors such as aggression and hyperactivity; this further masks these students' abilities and may negatively affect a teacher's ability or desire to recommend the placement of a twice-exceptional student in gifted education programs (Burke, 2012). Bianco and Leech's (2010) study is a good example of how a student with an exceptionality label would be evaluated when teachers make referral decisions about these students. According to the authors (Bianco & Leech, 2010), students labeled with learning disabilities and emotional and behavioral disorder were less likely to be referred by teachers than were students who were not given an exceptionality label. Based on the results of the above-mentioned study, twice-exceptionality is a factor influencing teachers' referral decisions.

**Words describing the student.** Previous research has shown that words describing a hypothetical student affect teachers' perceptions of giftedness and their referral decisions (Siegle et al., 2010). A student who was described as "bossy" received lower ratings than did a student who was described as a "natural born leader". In addition, a student who was described as "immature for their age and crying easily" was rated lower than was a student who was described as "highly sensitive and reacting with strong emotions". In these two hypothetical scenarios, except for the aforementioned words, the rest of the scenarios were identical.

### **Turkish Referral System and Studies Related to Referral of Gifted Students**

In Turkey, Science and Art Centers are the institutions responsible for the education of the gifted students in most parts of the country, except rural areas (MEB, 2021). According to Science and Art Centers'

Identification Manual (MEB, 2021), only students in first, second, and third grades should be referred by their elementary school teachers for the identification process. Students who pass a two-steps examination process become eligible to receive gifted education at these centers.

According to the most recent Science and Art Centers Identification Manual (MEB, 2021), teachers play a critical role for the identification of gifted students. When reviewing literature related to referral of gifted students in Turkey, we also see the effects of that critical role. Although the number of studies about referral process is limited, it can be seen that these papers focus mostly on the role of the teachers in this process. The literature review shows that the specific topics of referral studies in Turkey are as follows: teachers' accuracy and effectiveness rates of nominating students to gifted programs (Akar & Uluman, 2013; Biber et al., 2021; Dağlıoğlu, 1995; Sıcak, 2014; Şahin & Çetinkaya, 2015), position papers and research reviews related to referral system (Güçyeter, 2016; Karadağ, 2016; Tarhan & Kılıç, 2014), development of new scales or models for gifted nomination (Bildiren & Bilgen, 2019; Kartal et al., 2020), and effects of trainings on teachers' nomination (Dereli, 2019; Erişen et al., 2015; Şahin & Çetinkaya, 2015).

As seen from the literature review, most of the referral studies conducted in Turkey focused on teachers and topics related to teachers' referral system. Unfortunately, studies focusing on how teachers make referral decisions or what characteristics of a student make teachers to refer a student for gifted identification do not exist. In this study, we focus on forwarding the referral studies one step ahead by looking at some student level characteristics and how these characteristics affect teachers' referral decisions. By using eleven hypothetical scenarios of gifted students, we aim to detect the characteristics that motivate teachers to refer a student for gifted identification. In this aspect, this study is the first study that aims to focus on student level characteristics and how these characteristics affect Turkish pre-service teachers' referral decisions.

### **Purpose and Rationale**

Given the diversity of students who were gifted and the number of factors influencing their referral or lack of referral to programs for the gifted, many students might not have been identified. Educators who were provided with appropriate training in the characteristics and needs of gifted students might have been more likely to identify these children. Understanding the factors that have influenced teachers' referral decisions and the student characteristics that have motivated teachers to refer these students to gifted education programs are the first steps in establishing an appropriate referral process.

To detect factors affecting pre-service and in-service teachers' referral decisions, Siegle et al. (2010) used gifted students' characteristics. They created 11 student profiles, which included gifted students' characteristics. Pre-service and in-service teachers were asked to rate their agreement or disagreement with the inclusion of those students in profiles for gifted education programs. By providing different student profiles and different characteristics of gifted students, the authors determined the characteristics of gifted students that motivated pre-service and in-service teachers to nominate those students for gifted education programs.

In this study, I used Siegle et al.'s (2010) student profiles to detect factors affecting Turkish pre-service teachers' referral decisions. Factors such as pre-service teachers' gender, teachers' knowledge of giftedness, and teachers' gifted status, and characteristics of the students in the profiles were used as independent variables to detect those factors. Because pre-service elementary school teachers have the highest probability of having attended classes about gifted students and because most gifted referrals occur during the elementary school years (McBee, 2006), pre-service elementary school teachers were selected for this study.

The following question guided the study:

*Research Question:* To what extent were Turkish pre-service elementary school teachers' decisions about including students in the profiles to gifted education programs influenced by their gender, their knowledge of giftedness, their gifted status, and the characteristics of the students in the profiles?

## Method

### Research Design

This study employed a *survey research design* (McMillan, 2004) to detect factors affecting Turkish pre-service elementary school teachers' referral decisions by using student profiles from the Siegle et al. (2010) study. In a survey research design, the researcher selects a representative group of respondents from a bigger population, collects data from this group, and analyzes the data in response to the research questions (McMillan, 2004). Because of their appropriateness to the survey research design, pre-service teachers from a university located in the South East of Turkey were selected. Their responses to the Student Profiles Survey were collected and analyzed to detect the factors affecting Turkish pre-service elementary school teachers' gifted referral decisions.

### Participants and Settings

Junior and senior Turkish pre-service elementary school teachers, who were attending two different colleges of education at a university located in the South East of Turkey, were recruited for this study. The university is considered a large university with total of 38000 of students. A total of 204 pre-service elementary school teachers from the two colleges of education participated in the study. The number of pre-service teachers who participated in the study from both colleges was equal. Information regarding pre-service teachers' gender, cohort, and their affiliation was provided in Table 1.

**Table 1.** Information about Turkis Pre-service Elementary School Teachers

Colleges	Gender		Cohort	
	<u>Male</u>	<u>Female</u>	<u>Juniors</u>	<u>Seniors</u>
College of Education				
Main Campus	29	73	57	45
College of Education Out				
of Main Campus	26	76	54	48

### Instrument

Although Siegle et al. (2010) named scenarios in their study as profiles; I named all profiles as Student Profiles Survey in this study. The authors developed the Student Profiles Survey based on their own experiences in gifted and talented programs or on characteristics that the research literature indicated to influence students' selection for gifted and talented programs. As stated in the original study (Siegle et al., 2010), the profiles were presented to a panel of five content-area experts in gifted education and these experts were able to identify correctly the characteristics embedded in the profiles. In total, 11 different profiles were created and the gifted student described in each profile had different characteristics (Siegle et al., 2010). Although 11 different profiles were created, they differed from one another due to the characteristics embedded in each profile. For instance, in Profile 1 (see Table 2 for characteristics embedded in each profile), the researchers describe a quiet and



introspective student but this profile can vary in 8 different ways based on the characteristics of the student in this particular profile – namely, the student’s gender (male and female) and the school subject interests (spelling, history, math, and science). Based on these two characteristics, it was possible to create eight (2×4) different versions of Profile 1. Participants were asked to rate the degree of their agreement or disagreement to include the student in the profile to the gifted education program based on a four-point Likert scale, (1= Definitely NOT include, 2= NOT include with reservations, 3= Include with reservations, and 4= Definitely include).

The original profiles had a lot of cues from American culture. Therefore, I adopted these profiles to make them more appropriate for Turkish pre-service elementary school teachers and the Turkish culture (Erdimez, 2017; 2019). For instance, the American names in the profiles were replaced with Turkish names and information regarding students’ grades in profiles were replaced with only elementary school grades in Turkey (first, second, third and fourth grade). For example, in profile 8 of the original study, the student in the profile was described as someone who memorizes the names of all the US presidents along with the dates they served in the office. In order to make this profile more appropriate for the Turkish culture, the student in profile 8 was described as a person who memorized the names of all Ottoman Sultans along with the dates they ruled the Empire. Another example of the adaptation of the original profiles to the Turkish culture is Profile 11. This profile varied based on family status, economic status, and family history in gifted programs. Family status described whether student lived with one parent or parents. Because this situation is not a very common in Turkey, especially in the areas I collected the data; this factor was eliminated when creating the adopted version of the profiles. Moreover, Table 2 provides the variables embedded in each profile. As can be seen in Table 2, the profiles included several variables, including but not limited to gender, grade level, presence of ability, outside area of passion, length of passion, organizational ability, and so forth. Based on these variables, 64 different profiles were created in total.

**Table 2.** Variables Embedded in Student Profiles Survey

Profiles	Variables
P1	Gender: Kadir/Keriman School Subject Interest: Turkish/Life Sciences/Math/Science
P2	Gender: Betül/Bilal Grade Level: First/Second/Third/Fourth
P3	Gender: Melek/Mustafa Presence of Ability: In Reading/In Math
P4	Gender: Demet/Davut Outside Area of Passion: Dogs/Eagles Length of Passion: Kindergarten/Second Grade
P5	Gender: Sami/Selma Organizational Ability
P6	Gender: Necip/Nalan Area of Ability: Math/Reading Assertiveness
P7	Gender: Gulay/Galip Attention
P8	Gender: Leyla/ Lokman Control Over Students
P9	Gender: Ertan/Eylül Emotion

P10	Gender: Cemal/Canan
	Relationship with Classmates
P11	Socio-economic Status
	Family History in Gifted Programs

## Procedures

First of all, the research materials and research proposal were submitted to the administration of Gaziantep University to get a site authorization. After receiving the authorization, I was able to conduct my research by using my personal networks at both colleges. As a graduate of the university, I had contact with some instructors from both colleges and used these contacts to initiate my research. The announcement of the study was made in the classes of the colleges of education. The lay summary of the study was delivered to the students. The students who agreed to take part in the study received the consent form of the study and Student Profiles Survey. The students were asked to fill out and give it back the survey to the researcher. Approximately, it took 15 to 20 minutes for the pre-service teachers to read and rate the profiles in the survey.

## Reliability/ Validity Issues

To check the accuracy of translated and adopted version of profiles, originally used by Siegle et al. (2010), two doctoral students, one who majored in English Language teaching and the other who majored in Turkish Language teaching reviewed the profiles. In addition, another doctoral student who has expertise in gifted education reviewed the translated and adopted version of the profiles for the accuracy of terminology related to gifted education. We did not run any reliability analysis for the Student Profile Survey because the survey was not considered as a scale and none of the scores were collapsed to calculate a scale score. The score of each profile in the survey was analyzed separately.

## Data Analysis

In order to determine how the pre-service teachers' demographics and the students' characteristics in the profiles affected the pre-service teachers' referral decisions, a three- ( $2 \times 2 \times 4$ ) or four-way ( $2 \times 2 \times 2 \times 2$ ) ANOVA was used for each profile depending on the factors in each profile. Because none of the pre-service teachers had any credentials in gifted education and only one pre-service teacher was identified as gifted, these two factors related to pre-service teachers were eliminated from the analyses. The pre-service teachers' gender was the only independent variable related to the pre-service teachers' demographics in these analyses. The pre-service teacher's gender (male or female) was a common factor to the analyses of all profiles. The student characteristics variations were the other factors of the three-way or four-way ANOVAs. Except for Profile 4 and 6, I conducted three-way ANOVAs for each profile. For Profile 4 and 6, four-way ANOVAs were used to detect factors affecting Turkish pre-service teachers' gifted referral decisions.

## Results

A total of 11 three or four-way ANOVAs were used to respond the research question. The results of each profile were reported separately. Results of the all Profiles, which had significant main or interaction effects and non-significant effects were reported in the text. In addition, results of the all profiles were reported in Table 3.

**Table 3.** Test of Between Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
PTGndr	.950	1	.950	1.414	.236	.00

P rofile 1							7
	SSGndr	.359	1	.359	.534	.466	.003
	Sbjct	3.831	3	1.277	1.901	.131	.029
	PTGndr * SSGndr	4.945	1	4.945	7.361	.007 <sup>a</sup>	.038
	PTGndr * Sbjct	1.394	3	.465	.692	.558	.011
	SSGndr * Sbjct	4.961	3	1.654	2.462	.064	.038
P rofile 2	PTGndr * SSGndr * Sbjct	4.351	3	1.450	2.159	.094	.033
	Grd	2.081	3	.694	.793	.499	.013
	SSGndr	5.431	1	5.431	6.210	.014 <sup>a</sup>	.032
	PTGndr	.002	1	.002	.002	.960	.000
	Grd * SSGndr	.136	3	.045	.052	.984	.001
	Grd * PTGndr	2.059	3	.686	.785	.504	.012
P rofile 3	SSGndr * PTGndr	2.756	1	2.756	3.151	.077	.016
	Grd * SSGndr * PTGndr	3.017	3	1.006	1.150	.330	.018
	Skills	1.864	3	.621	.592	.621	.009
	PTGndr	.005	1	.005	.005	.944	.000
	SSGndr	2.543	1	2.543	2.424	.121	.013
	Skills * PTGndr	1.187	3	.396	.377	.770	.006
P rofile 4	Skills * SSGndr	1.388	3	.463	.441	.724	.007
	PTGndr * SSGndr	.541	1	.541	.516	.473	.003
	Skills * PTGndr * SSGndr	2.594	3	.865	.824	.482	.013
	LnghfPssn	7.901	1	7.901	8.877	.003 <sup>a</sup>	.045
	PssnAr	.029	1	.029	.033	.856	.000
	SSGndr	1.067	1	1.067	1.199	.275	.006
P rofile 4	PTGndr	.074	1	.074	.083	.774	.000
	LnghfPssn * PssnAr	1.371	1	1.371	1.541	.216	.008
	LnghfPssn * SSGndr	1.064	1	1.064	1.195	.276	.006
	LnghfPssn * PTGndr	6.726	1	6.726	7.557	.007 <sup>a</sup>	.039
	PssnAr * SSGndr	1.017	1	1.017	1.143	.286	.006
	PssnAr * PTGndr	1.012	1	1.012	1.137	.288	.006
P rofile 4	SSGndr * PTGndr	.918	1	.918	1.032	.311	.005
	LnghfPssn * PssnAr * SSGndr	.318	1	.318	.357	.551	.002

		LngthfPssn * PssnAr * PTGndr	.876	1	.876	.984	.323	.005
		LngthfPssn * SSGndr * PTGndr	2.071	1	2.071	2.327	.129	.012
		PssnAr * SSGndr * PTGndr	.093	1	.093	.105	.747	.001
		LngthfPssn * PssnAr * SSGndr * PTGndr	1.702	1	1.702	1.912	.168	.010
P rofile 5		Orgnztn	.010	1	.010	.010	.920	.000
		SSGndr	.947	1	.947	.961	.328	.005
		PTGndr	1.371	1	1.371	1.390	.240	.007
		Orgnztn * SSGndr	.072	1	.072	.073	.787	.000
		Orgnztn * PTGndr	3.877	1	3.877	3.932	.049 <sup>a</sup>	.020
		SSGndr * PTGndr	8.188	1	8.188	8.305	.004 <sup>a</sup>	.041
		Orgnztn * SSGndr * PTGndr	.277	1	.277	.281	.597	.001
		Assrtvnss	5.960	1	5.960	6.317	.013 <sup>a</sup>	.033
		Sbjct	.056	1	.056	.059	.808	.000
		SSGndr	2.015	1	2.015	2.135	.146	.011
		PTGndr	12.770	1	12.770	13.534	.000 <sup>a</sup>	.067
P rofile 6		Assrtvnss * Sbjct	.079	1	.079	.083	.773	.000
		Assrtvnss * SSGndr	6.007	1	6.007	6.367	.012 <sup>a</sup>	.033
		Assrtvnss * PTGndr	.013	1	.013	.013	.908	.000
		Sbjct * SSGndr	3.723	1	3.723	3.946	.048 <sup>a</sup>	.021
		Sbjct * PTGndr	4.043	1	4.043	4.285	.040 <sup>a</sup>	.022
		SSGndr * PTGndr	2.028	1	2.028	2.149	.144	.011
		Assrtvnss * Sbjct * SSGndr	1.903	1	1.903	2.017	.157	.011
		Assrtvnss * Sbjct * PTGndr	.279	1	.279	.295	.587	.002
		Assrtvnss * SSGndr * PTGndr	3.084	1	3.084	3.268	.072	.017
		Sbjct * SSGndr * PTGndr	.512	1	.512	.543	.462	.003
		Assrtvnss * Sbjct * SSGndr * PTGndr	1.339	1	1.339	1.419	.235	.007
P rofile 7		Attntn	.527	1	.527	.511	.476	.003
		SSGndr	.052	1	.052	.050	.823	.000
		PTGndr	.057	1	.057	.055	.814	.000
		Attntn * SSGndr	.708	1	.708	.687	.408	.003
		Attntn * PTGndr	1.372	1	1.372	1.331	.250	.000

							7
	SSGndr * PTGndr	.528	1	.528	.512	.475	.003
	Attntn * SSGndr * PTGndr	.598	1	.598	.580	.447	.003
Profile 8	CntrlOvrStdnt	2.935E-05	1	2.935E-05	.000	.996	.000
	SSGndr	.871	1	.871	.731	.394	.004
	PTGndr	.089	1	.089	.075	.785	.000
	CntrlOvrStdnt * SSGndr	.378	1	.378	.317	.574	.002
	CntrlOvrStdnt * PTGndr	1.082	1	1.082	.908	.342	.005
	SSGndr * PTGndr	.000	1	.000	.000	.984	.000
	CntrlOvrStdnt * SSGndr * PTGndr	2.382	1	2.382	1.999	.159	.010
Profile 9	Emtn	.004	1	.004	.004	.950	.000
	SSGndr	.037	1	.037	.040	.842	.000
	PTGndr	3.017	1	3.017	3.255	.073	.016
	Emtn * SSGndr	.453	1	.453	.489	.485	.002
	Emtn * PTGndr	8.769	1	8.769	9.461	.002 <sup>a</sup>	.046
	SSGndr * PTGndr	.743	1	.743	.801	.372	.004
	Emtn * SSGndr * PTGndr	.436	1	.436	.470	.494	.002
Profile 10	RltshpwCllsmts	.134	1	.134	.133	.716	.001
	SSGndr	1.620	1	1.620	1.608	.206	.008
	PTGndr	.015	1	.015	.015	.903	.000
	RltshpwCllsmts * SSGndr	.587	1	.587	.583	.446	.003
	RltshpwCllsmts * PTGndr	.031	1	.031	.031	.860	.000
	SSGndr * PTGndr	.261	1	.261	.259	.612	.001
	RltshpwCllsmts * SSGndr * PTGndr	2.378	1	2.378	2.360	.126	.012
Profile 11	GftdFmlyMmbr	.081	1	.081	.079	.779	.000
	SES	.011	1	.011	.010	.919	.000
	PTGndr	1.892	1	1.892	1.841	.176	.009
	GftdFmlyMmbr * SES	.023	1	.023	.022	.881	.000
	GftdFmlyMmbr * PTGndr	.591	1	.591	.575	.449	.003
	SES * PTGndr	.171	1	.171	.166	.684	.001

GftdFmlyMmbr * SES * PTGndr	.015	1	.015	.014	.905	.00
						0

Note. <sup>a</sup> :  $P < 0.05$ .

### Profile 1

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and subject the student excels in (Sbjct) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects were significant but there was a significant interaction between pre-service teacher's gender and the gender of the student,  $F(1, 188) = 7.36$ ,  $p < .01$ . The female pre-service teachers rated male students significantly (2.82) higher than female students (2.53). Male pre-service teachers rated female and male students similarly. The interaction between pre-service teachers' gender and gender of the student is presented in Figure 1.

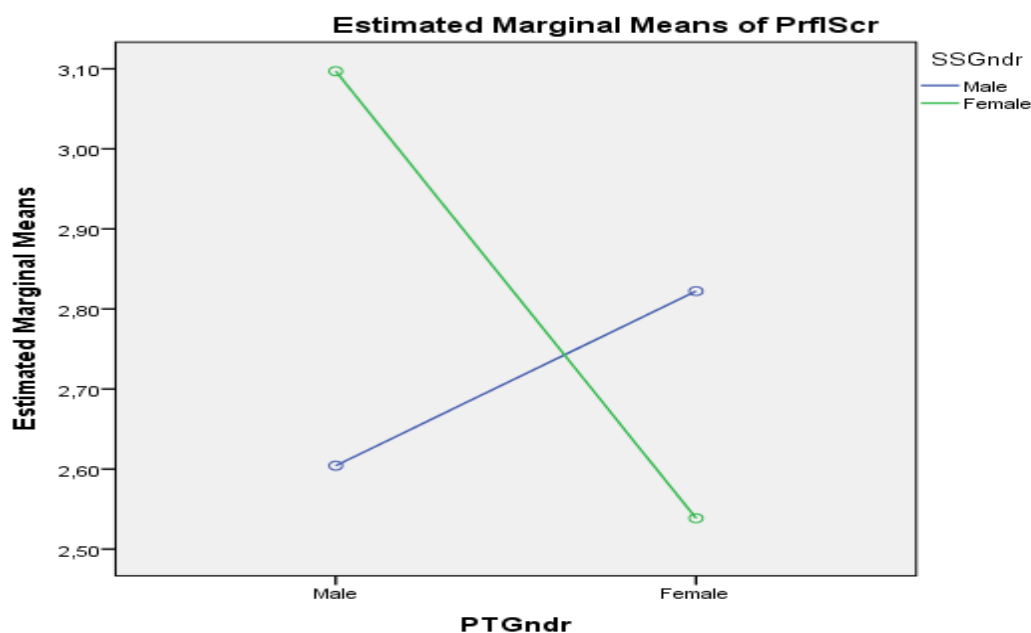


Figure 1. Interaction between Pre-service Teachers' Gender and Students' Gender

### Profile 2

Pre-service teacher's gender (PTGndr), gender of the student in the profile (SSGndr), and Grade level (Grd) were three factors in analyses of this profile. The results of three-way ANOVA indicated that the pre-service teachers' decision of including the student in profile 2 was affected by gender of the student in the profile,  $F(1, 188) = 6.21$ ,  $p < .05$ . Turkish pre-service elementary school teachers rated male student (2.98) significantly higher than female students (2.57) in Profile 2.

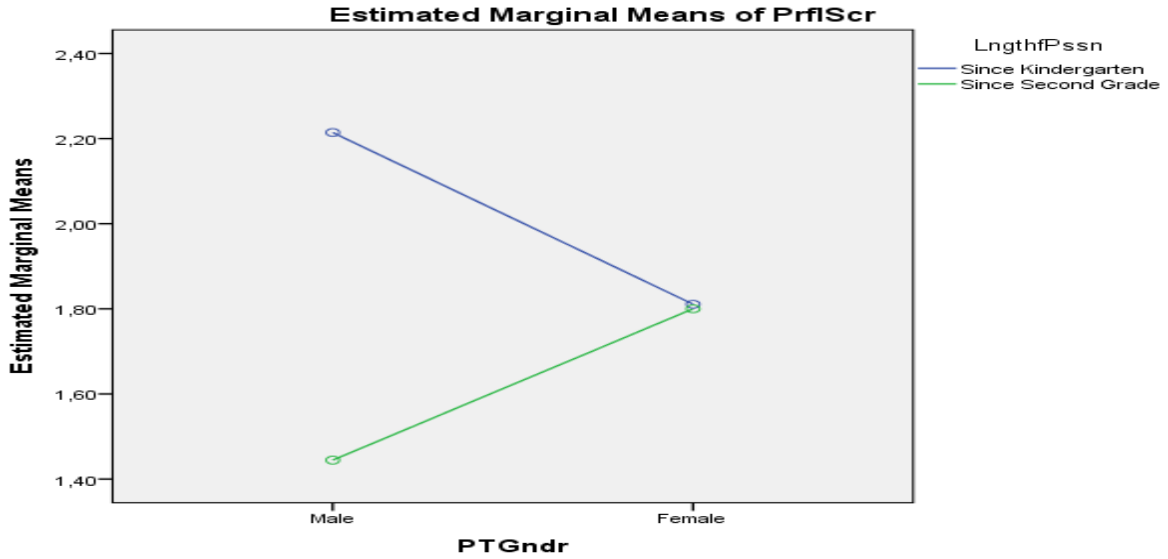
### Profile 3

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and the student's skills in math and reading in math (Skills) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects and interactions was significant (See Table 3 for non-significant results).

### Profile 4

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), students' outside area of passion (PssnAr), and length of passion (LngthfPssn) were four factors in analyses of this profile. The

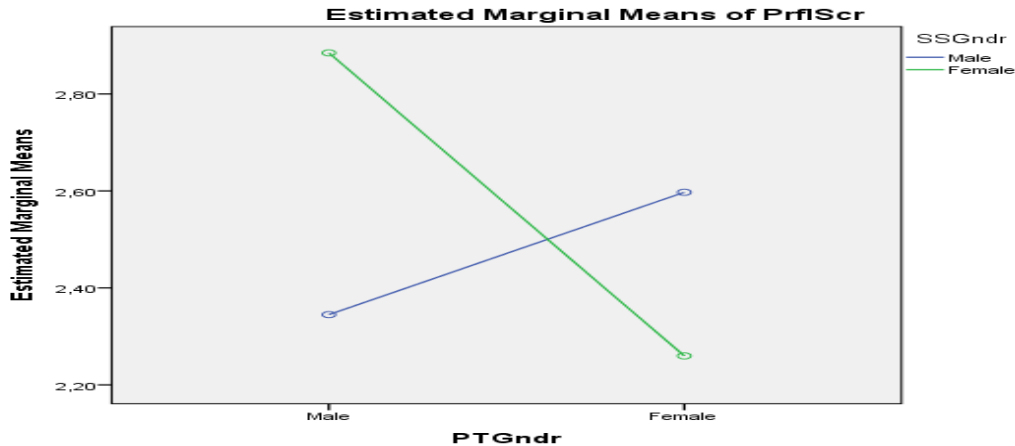
results of four-way ANOVA indicated that there was a significant interaction between pre-service teachers' gender and length of students' passion,  $F(1, 188) = 7.55, p < .01$ . Male pre-service teachers rated students who had passion since kindergarten (2.21) higher than students who had passion since second grade (1.44). The interaction between pre-service teacher's gender and length of passion is presented in Figure 2.



**Figure 2.** Interaction between Pre-service Teachers' Gender and Length of Students' Passion

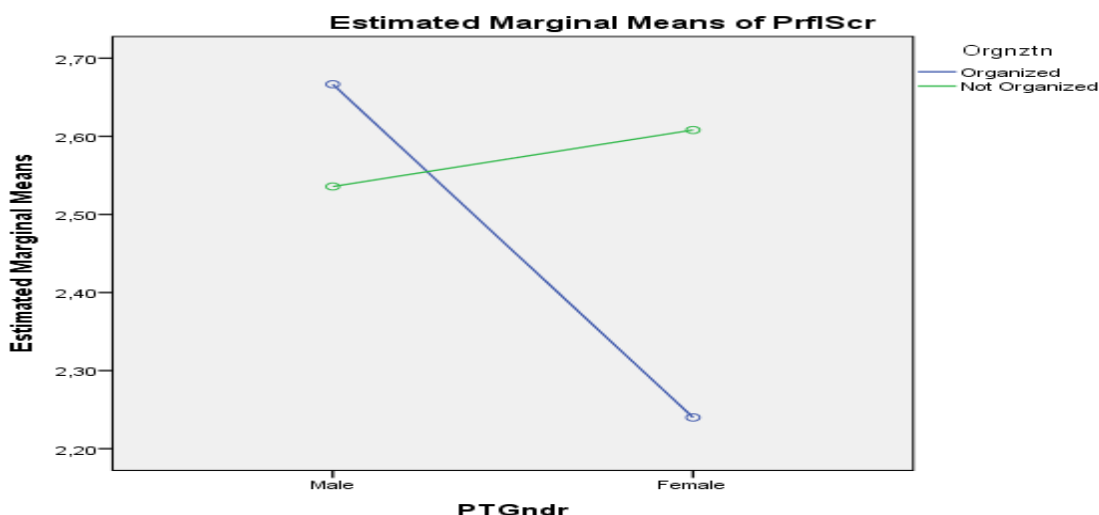
#### Profile 5

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and Organization (Orgnzn) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects were significant but there were two significant interactions between factors of this profile. The first interaction was between pre-service teachers' gender and gender of the student in the profile,  $F(1, 196) = 8.30, p < .01$ . Further analyses indicated that male pre-service teachers rated female students (2.88) significantly higher than male students (2.34) and female pre-service teachers rated male students (2.59) significantly higher than female students (2.26). The interaction between pre-service teacher's gender and student's gender is presented in Figure 3.



**Figure 3.** Interaction between Pre-service Teachers' Gender and Students' Gender (Profile 5)

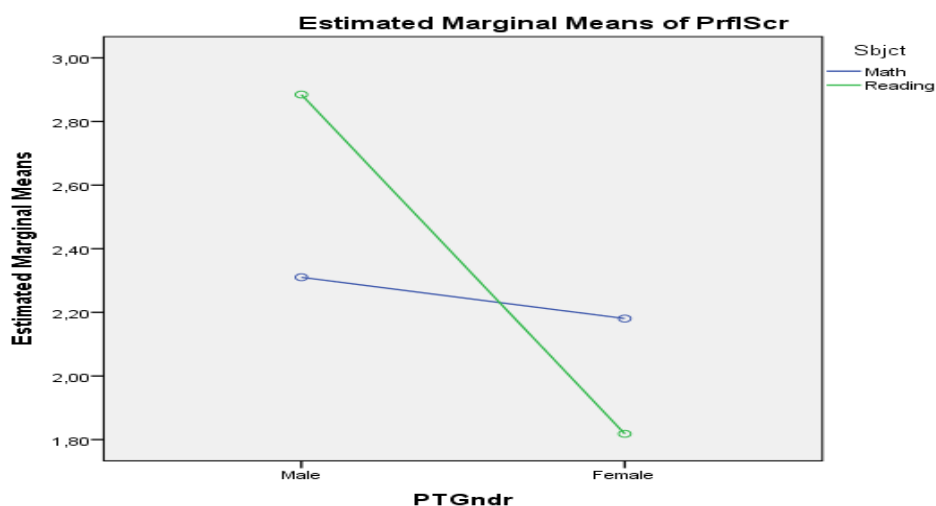
The second interaction was between pre-service teachers' gender and students' organizational skills,  $F(1, 196) = 3.93$ ,  $p < .05$ . Female pre-service teachers rated not organized students (2.60) significantly higher than organized students (2.24) and male pre-service teachers rated not organized students (2.53) similarly to organized students (2.66). The interaction between pre-service teachers' gender and students' organizational skills is presented in figure 4.



**Figure 4.** Interaction between Pre-service Teachers' Gender and Students' Organizational Skills

## Profile 6

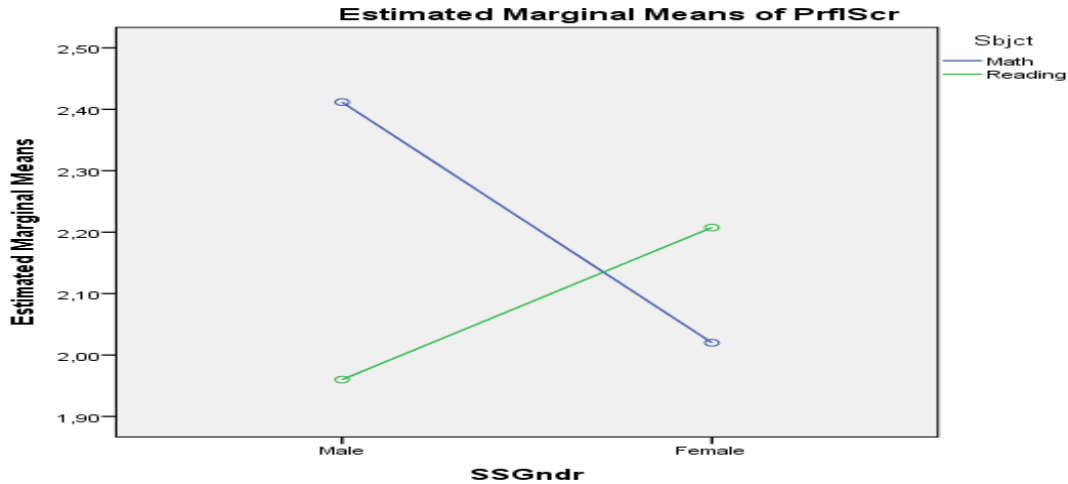
Pre-service teachers' gender (PTGndr), gender of the students in the profile (SSGndr), the subjects student excels in (Sbjct), and Assertiveness (Assrtvns) were four factors in analyses of this profile. Four-way ANOVA results indicated that there were three significant interactions among factors of this profile. The first significant interaction was between pre-service teacher's gender and the subjects the student excels in,  $F(1, 188) = 4.28$ ,  $p < .05$ . Male pre-service teachers rated students who excelled in reading (2.88) significantly higher than students who excelled in math (2.31). In opposition to male pre-service teachers, female pre-service teachers rated students who excelled in math (2.18) significantly higher than students who excelled in reading (1.81). The interaction between pre-service teachers' gender and the subjects student excels in is presented in Figure 5.



**Figure 5.** Interaction between Pre-service Teachers' Gender and the Subjects Student Excels in



The second significant interaction was between students' gender and the subjects student excels in,  $F(1, 188) = 3.94$ ,  $p < .05$ . Pre-service teachers rated the male student who excels in math (2.41) significantly higher than the male students who excel in reading (1.96). Pre-service teachers rated female students who excel in math (2.02) similar to female students who excel in reading (2.20). The interaction between students' gender and the subjects student excels in presented in Figure 6.



**Figure 6.** Interaction between Students' Gender and the Subjects Student Excels in.

The third significant interaction was between students' gender and assertiveness,  $F(1, 188) = 6.36$ ,  $p < .05$ . Pre-service teachers rated male students who were assertive (2.52) significantly higher than male students who were not assertive (1.86). There was not a significant differences between ratings of pre-service teachers for female students who were assertive (2.19) and who were not assertive (2.03). The interaction between students' gender and assertiveness is presented in Figure 7.



**Figure 7.** Interaction between Students' Gender and Assertiveness

## Profile 7

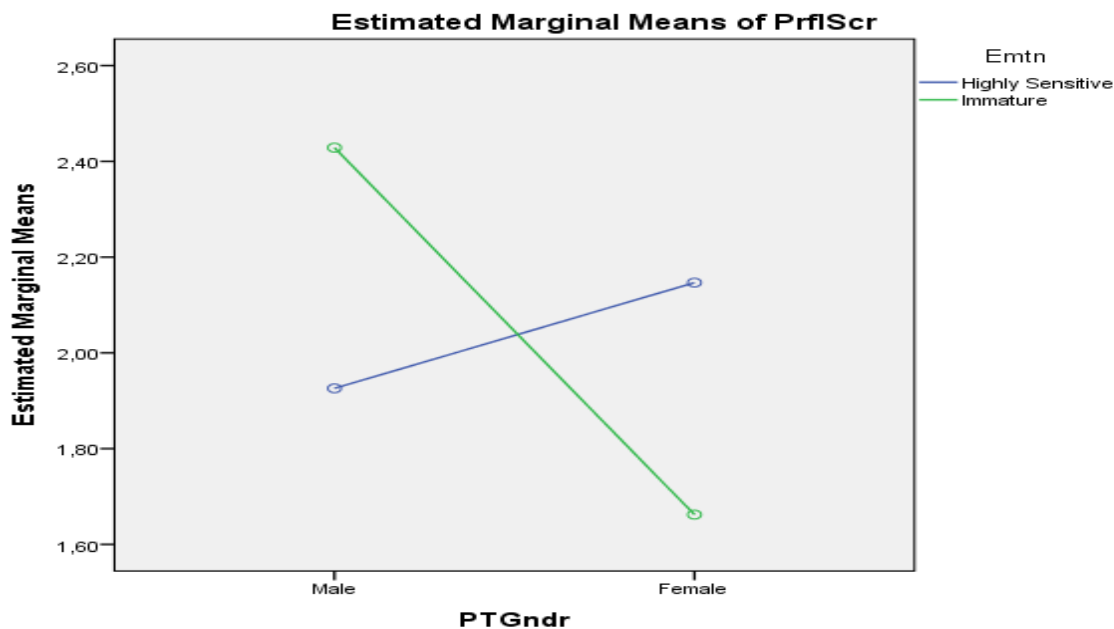
In Profile 7, pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and the student's attention in class (Attntn) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects and interactions was significant (See Table 3 for non-significant results).

## Profile 8

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and the student's control over other students (CntrlOvrStdnt) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects and interactions was significant (See Table 3 for non-significant results).

## Profile 9

Pre-service teachers' gender (PTGndr), gender of the students in the profile (SSGndr), and Emotion (Emtn) were three factors in analyses of this profile. Three-way ANOVA results indicated that there was a significant interaction between pre-service teachers' gender and emotional situation of the student as described in the profile,  $F(1, 196) = 9.46, p < .01$ . Further analyses indicated that female pre-service teachers rated students who were described as highly sensitive (2.14) significantly higher than students who were described as immature (1.66). Male pre-service teachers rated highly sensitive (1.92) and immature (2.42) students similarly. The interaction between pre-service teachers' gender and emotional situation of students is presented in Figure 8.



**Figure 8.** The Interaction between Pre-service Teachers' Gender and Emotional Situation of Student

## Profile 10

Pre-service teachers' gender (PTGndr), gender of the student in the profile (SSGndr), and the student's relationships with classmates (Rltnshpw Clssmts) were three factors in analyses of this profile. The results of

three-way ANOVA indicated that none of the main effects and interactions was significant (See Table 3 for non-significant results).

### **Profile 11**

Pre-service teachers' gender (PTGndr), the student's socio-economic status (SES), and whether the student has a gifted member in their family (GftdFmlyMmbr) were three factors in analyses of this profile. The results of three-way ANOVA indicated that none of the main effects and interactions was significant (See Table 3 for non-significant results).

## **Discussion**

Turkish pre-service teachers' ratings of the profiles created by Siegle et al. (2010) helped us to reveal factors affecting these pre-service teachers' referral decisions regarding gifted education programs. The results of the three-way and four-way ANOVAs indicated that Turkish pre-service elementary school teachers' ratings regarding the inclusion of the students in the profiles were affected by students' and pre-service teachers' gender, students' ability areas, students' personality traits, student's length of the passion, and the words describing the students.

### **Gender Bias**

In six profiles, Profile 1, 2, 4, 5, 6, and 9, Turkish pre-service elementary school teachers' decision of including the students in these profiles was affected by students' gender and/or pre-service teachers' gender. For instance, in Profile 2, pre-service teachers rated male students higher than female students. In another profile, Profile 5, male pre-service teachers rated female students higher than male students. Although in the model study (Siegle et al., 2010) pre-service teachers' gender was not a factor of the study, in this study, I found that pre-service teachers' gender and gender of the students in the profiles were factors affecting Turkish pre-service elementary school teachers' referral decisions. Similar to results of two previous studies (Bianco, Harris, Garrison-Wade, & Leech, 2011; Siegle & Reis, 1998), I found that teachers favor one gender over the other when they make referral decisions and their gender influenced their referral decisions. As a result, it can be concluded that Turkish pre-service elementary school teachers have gender bias when they make referral decisions.

### **Area of Ability and Stereotypical Views about Abilities**

Another factor affecting Turkish pre-service elementary school teachers' decision of including the students in the profiles to gifted education program was the area of ability. In Profile 6, pre-service teachers' decision of including the students in the profile was affected by the students' ability areas. For instance, male pre-service teachers rated students who excelled in reading higher than students who excelled in math. Also, female pre-service teachers rated students who excelled in math higher than students who excelled in reading. These results indicate that both male and female Turkish pre-service elementary school teachers have stereotypical views about students' abilities. Similar to findings of this study, Siegle et al. (2010) found that students who were good at reading were rated higher than students who were good at math by pre-service and in-service teachers. The results related to students' ability areas can be better explained with Powell and Siegle's (2000) findings. They found that teachers were more likely to nominate students for gifted programs if they displayed a skill or ability that was considered unusual for their gender. For example, boys who were voracious readers or girls who were skilled in math were more likely to have been nominated for gifted identification. This is another way of confirmation of teachers' stereotypical views about students' abilities. Because teachers have stereotypical views about students' abilities such as females are voracious readers and males are good at math, students who do not

fit these stereotypical views have seen as extraordinary students and have been nominated for gifted referrals. As a result, it can be concluded that Turkish pre-service elementary school teachers have stereotypical views about students' abilities.

### **Personality Traits**

Previous research has shown that personality traits of students have influenced teachers' referral decisions (Alvidrez & Weinstein, 1999; Endepohls-Ulpe & Ruf, 2005; Hunsaker, 1994; Persson, 1998; Siegle et al. 2010). Leadership ability (Hunsaker, 1994), assertiveness, independence (Endepohls-Ulpe & Ruf, 2005), and willingness to help others (Persson, 1998; Siegle et al. 2010) were considered as personality traits of gifted students by teachers. For instance, in Siegle et al. (2010) study, teachers rated a hypothetical six-grade student who was willing to help others higher than the one who was not willing to help. In this study, being assertive (Profile 6) and being organized (Profile 5) were two personal traits embedded in two different profiles that turned into significant results. Assertive students were rated higher than non-assertive students and not organized students were rated higher than organized students. It can be better understood why "not organized students" were rated higher when we look at the literature about confusion of attention deficit disorder and hyperactivity (ADHD) with giftedness. (Webb & Latimer, 1993; Webb, Amend, Webb, Goerss, Beljan, & Olenchak, 2005). According to Webb and Latimer (1993), gifted students and students with ADHD exhibit some common behaviors. Moreover, some of the gifted students might be identified with dual diagnoses of ADHD and giftedness (Webb, Amend, Webb, Goerss, Beljan, & Olenchak, 2005). Because of these similarities and common behaviors between two diagnoses, it is possible to see teachers get confused and associate some characteristics of ADHD students to gifted students and rate a disorganized student higher than an organized student.

### **The Length of Passion**

Male pre-service teachers rated students who had passion since kindergarten higher than students who had passion since second grade. The longer the passion, the higher the chance of the student to be included in the gifted education programs. Siegle et al. (2010) found that area of passion was a factor affecting teachers' decision for inclusion and in this study length of passion was found as a factor affecting the pre-service teachers' decision of including the students in gifted education programs. Turkish pre-service elementary school teachers' referral decisions were influenced by the length of student's passion.

### **Words Describing the Student**

Previous research has shown that words describing a hypothetical student have influenced teachers' perceptions of giftedness and their referral decisions (Siegle et al. 2010). Student who was described as "bossy" received lower ratings than student who was described as "natural born leader". In addition, student who was described as "immature for their age and crying easily" was rated lower than student who was described as "highly sensitive and reacting with strong emotions". Similar to the model study (Siegle et al. 2010), in this study, I found that students who were described as "highly sensitive" received higher ratings than students who were described as "immature and crying easily". There are two possible explanations for this result. The first one is about teachers' perceptions of giftedness. As Persson (1998) stated, teachers perceive gifted students as more emotionally mature than their peers and would not refer a student who was described as "immature for their age and crying easily". The second explanation comes from the connotations of the words selected to describe the students in the profiles. While "immature for their age and crying easily" has negative connotations, "highly sensitive and reacting with strong emotions" has more positive connotations compared to

words in the first section. As a result, words used to describe a student should be selected carefully and words describing a student which might cause negative and positive connotations should be used together to better investigate teachers' perceptions of giftedness and their referral decisions.

### **Research Implications**

This study is the first study investigating factors affecting Turkish pre-service elementary school teachers' referral decisions. By using the profiles of different gifted students, I was able to detect student characteristics which better fit Turkish pre-service elementary school teachers' perceptions of giftedness and the factors affecting their referral decisions. Although studies focusing on Turkish pre- and in-service teachers' perceptions of giftedness exist, this study is the first to focus on the factors affecting referral process. Future research should use different student profiles to focus on other factors affecting the referral process. The new profiles will provide more insight into factors affecting Turkish pre- and in-service teachers' referral decisions.

### **Practical Implications**

An important finding of this study involves the factors affecting teachers' decisions regarding whether or not they would refer students in the profiles to gifted education programs. The results indicated that students' and pre-service teachers' gender, students' personality traits, the subject in which the student excelled, the words describing the student, and the students' length of passion affected pre-service teachers' decisions regarding inclusion. Detecting these factors is a first and important step for the identification of gifted students in Turkey. These results indicate that Turkish pre-service teachers have gender bias and stereotypical views about students' abilities when those teachers refer a student to gifted education programs. Policymakers should be aware of pre-service teachers' shortcomings with respect to referring students to gifted education programs. To ensure an accurate and fair referral process, more training and education about gifted students' characteristics should be provided to pre-service teachers at college level and to teachers through in-service training programs.

### **Limitations**

The first limitation of this study was the affiliation of the pre-service teachers who participated in the study. The participants were pre-service elementary school teachers attending one of the Turkish universities located in Southeast of Turkey. Because of this fact, generalizing the study's results to all Turkish pre-service elementary school teachers might be problematic.

The second limitation involved the profiles that the study used. Although the profiles originally developed by Siegle et al. (2010) were adapted so that they were more relevant to Turkish culture, they might still have contained cues from American culture and therefore not have been fair to use, from a cultural perspective, with Turkish participants. Considering culture's effects on intelligence (Sternberg, 2004), the use of profiles originally developed by experts from another culture might be problematic when investigating Turkish pre-service teachers' perceptions of giftedness and the factors affecting their referral decisions. Original profiles developed by Turkish experts working in the field of gifted education might provide more accurate results.

The third limitation of the study involved the gifted students that each profile described. Almost every scholar in the field of gifted education defines giftedness in a manner appropriate to his/her perspective (Subotnik, Olszewski-Kubilius, & Worrell, 2011) and uses certain characteristics to describe gifted students. In this study, I used profiles originally created by five experts in gifted education. Therefore, the characteristics embedded in the profiles reflected these experts' definition of giftedness and the characteristics they associated

with gifted students. Other experts in the field of gifted education might not agree that the students described in these profiles are gifted or might not associate some of the characteristics embedded in the profiles with gifted students.

### **Conclusion**

The results of this study indicate that Turkish pre-service elementary school teachers have shortcomings with respect to their ability to recognize the characteristics of gifted students. Their decisions regarding whether or not they would refer students to gifted education programs are affected by gender bias or stereotypical views about students' abilities. Therefore, they might make incorrect referrals or refer students who are not gifted. To ensure a fair and proper referral process for all gifted students, Turkish pre-service teachers should be equipped, at the college level, with training required to recognize gifted students and their characteristics.

## REFERENCES

- Akar, I. & Uluman, M. (2013). Elementary education teachers' accuracy in nominating the gifted students. *Journal of Gifted Education Research*, 1 (3), 199-212
- Alvidrez, J. & Weinstein, S. R. (1999). Early teacher perceptions and later student academic achievement. *Journal of Educational Psychology*, 91(4), 731-746
- Baum, M. S. & Owen, V. S. (2004). *To be gifted and disabled: Strategies for helping bright students with LD, ADHD, and more*. Waco, TX: Prufrock Press Inc.
- Bégin, J., & Gagné, F. (1994). Predictors of general attitude toward gifted education. *Journal for the Education of the Gifted*, 18 (1), 74-86.
- Bianco, M., Harris, B., Garrison-Wade, D., & Leech, N. (2011). Gifted girls: Gender bias in gifted referrals. *Roeper Review: A Journal on Gifted Education*, 33(3), 170-181. <https://doi.org/10.1080/02783193.2011.580500>
- Bianco, M. & Leech, N. (2010). Twice-exceptional learners: effects of teacher preparation and disability labels on gifted referrals. *Teacher Education and Special Education*, 33 (4), 319-334.
- Biber, M., Biber, K. S., Fossa, O. M., Kartal, E., Can, T., & Simsek, I. (2021). Teacher nomination in identifying gifted and talented students: Evidence from Turkey. *Thinking Skills and Creativity*, 39 (14), <https://doi.org/10.1016/j.tsc.2020.100751>
- Bildiren, A., & Bıkmaz Bilgen, Ö. (2019). Okul öncesi dönem üstün yetenekli çocuklar için aday bildirim ölçeği: Geçerlik ve güvenirlik çalışması. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 20 (2), 269-285
- Burke, M. E. (2012). *The traits of children viewed as gifted: The teachers' perspectives*. Unpublished manuscript, University of Arizona, Tucson, AZ
- Dağlıoğlu, H. E. (1995). *İlkokul 2.-5. sınıflara devam eden çocuklar arasında üstün yetenekli olanların belirlenmesi*. Yayımlanmamış yüksek lisans tezi, Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü.
- Dereli, F. (2019). *Okul öncesi dönemdeki üstün yetenekli çocukların aday gösterilmelerine yönelik geliştirilen eğitim programının etkililiği*. Yayımlanmamış yüksek lisans tezi, Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü.
- Eby, J. W., & Smutny, J. F. (1990). *A thoughtful overview of gifted education*. New York, NY: Longman.
- Elhoweris, H., Mutua, K., Alsheikh, N., & Holloway, P. (2005). Effect of children's ethnicity on teachers' referral and recommendations decisions in gifted and talented programs. *Remedial and Special Education*, 26 (1), 25-31. doi:10.1177/07419325050260010401
- Endepohls- Ulpe, M., & Ruf, H. (2005). Primary school teachers' criteria for the identification of gifted pupils. *High Ability Studies*, 16 (2), 219-228
- Erdimez, O. (2017). Turkish Pre-service Elementary School Teachers' Perceptions of Giftedness and Factors Affecting their Referral Decisions (Unpublished doctoral dissertation). The University of Arizona, Tucson, Arizona.
- Erdimez, O. (2018, November). Factors affecting Turkish Pre-service Elementary School Teachers' Referral Decisions. Paper presented at International Congress on Gifted and Talented Education, Malatya, Turkey.
- Erdimez, O. (2019). What characteristics of a student motivate Turkish pre-service elementary

school teachers to include or not include the student to gifted education programs? *Turkish*

*Journal of Giftedness and Education*, 9(2), 80-101.

Erişen, Y., Birben, Y. F., Yalın, S. H., & Ocak, P. (2015). Üstün yetenekli çocukları fark edebilme ve destekleme eğitiminin öğretmenler üzerindeki etkisi. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, 4 (2), 586-602.

Ford, Y. D. (1998). The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention. *The Journal of Special Education*, 32(1), 4-14. doi: 10.1177/002246699803200102

Frasier, M. M., García, J. H., & Passow, A. H. (1995). *A review of assessment issues in gifted education and their implications for identifying gifted minority students* (RM95204). Storrs: University of Connecticut, The National Research Center on the Gifted and Talented. Retrieved from <http://files.eric.ed.gov/fulltext/ED388024.pdf>

Grantham, T. C. (2002). Underrepresentation in gifted education: How did we get here and what needs to change? Straight talk on the issue of the underrepresentation: An interview with Dr. Mary Fraiser. *Roeper Review*, 24 (2), 50–51. doi:10.1080/02783190209554128

Gücyeter, Ş. (2016). Türkiye’de üstün yeteneklileri tanılama araştırmaları ve tanılamada kullanılan ölçme araçları. *Turkish Journal of Education*, 5 (4), 235-254.

Hunsaker, S. L. (1994). Creativity as a characteristic of giftedness: Teachers see it, then they don’t. *Roeper Review*, 17 (1), 11-15

Karadağ, F. (2016). Özel yeteneklilerin tanınması ve tanılamaya yönelik alternatif değerlendirme araçları. *The Journal of International Research*, 9 (46), 561-571

Kartal, E., Özyaprak, M., Özen, Z., Şimşek, I., Biber, K. S., Biber, M., & Can, T. (2020). Bir öğrenciyi üstün zekalı ve yetenekli olarak aday göstermek için doğru soruları sormak: Bir makine öğrenmesi yaklaşımı. *Bilişim Teknolojileri Dergisi*, 13 (4), 385-400.

Masten, W.G. & Plata, M. (2000). Acculturation and teacher ratings of Hispanic and Anglo-American students. *Roeper Review*, 23 (1), 45-46. doi:10.1080/02783190009554061

McBee, T. M. (2006). A descriptive analysis of referral sources for gifted identification screening by race and socioeconomic status. *The Journal of Secondary Gifted Education*, 17(2), 103-111.

McBee, T. M. (2010). Examining the probability of identification for gifted programs for students in Georgia elementary schools: A multilevel path analysis study. *Gifted Child Quarterly*, 54 (4), 283-297

McMillan, H. J. (2004). *Educational research: Fundamentals for the consumer* (4<sup>th</sup> ed.). Boston, MA: Pearson.

MEB (2021). Science and art centers identification manual. Retrieved from

[https://orgm.meb.gov.tr/meb\\_iys\\_dosyalar/2019\\_11/15173608\\_TanYlama\\_KYlavuzu\\_\\_YeYitek\\_Ekli\\_2.pdf](https://orgm.meb.gov.tr/meb_iys_dosyalar/2019_11/15173608_TanYlama_KYlavuzu__YeYitek_Ekli_2.pdf)

Michener, L. A. (1980). *A survey of the attitudes of administrators, teachers and community members toward the education of gifted children and youth* (Educational doctorate dissertation). Retrieved from Dissertations&Theses: Full Text. (Publication No. AAT 8109558).

Miller, E.M. (2009). The effect of training in gifted education on elementary classroom teachers' theory-based reasoning about the concept of giftedness. *Journal for the Education of the Gifted*, 33 (1), 65-105.

Morris, S.K. (1987). Student teachers' attitudes toward gifted students. *Creative Child and Adult*

*Quarterly*, 12 (2), 112-114.




- Persson, R. S. (1998). Paragons of virtue: Teachers' conceptual understandings of highability in an egalitarian school system. *High AbilityStudies*, 9 (2), 181-196.
- Peterson, J., & Margolin, L. (1997). Naming gifted children: An example of unintended "reproduction." *Journal for the Education of the Gifted*, 21 (1), 82-100.
- Powell, T., & Siegle, D. (2000). Teacher bias in identifying gifted and talented students. The National Research Center on the Gifted and Talented Newsletter, Spring, 13-15.
- Reis, S., Baum, S. M., & Burke, E. (2014). An operational definition of twice-exceptional learners: Implications and applications. *Gifted Child Quarterly*, 58 (3), 217-230.
- Reis, S. M., Neu, T. W., & McGuire, J. M. (1995). *Talents in two places: Case studies of high ability students with learning disabilities who have achieved* (Research Monograph 95114). Storrs, CT: The National Research Center on the Gifted and Talented.
- Reis, S. M., McGuire, J. M., & Neu, T. W. (2000). Compensation strategies used by high-ability students with learning disabilities who succeed in college. *Gifted Child Quarterly*, 44 (2), 123-134. doi:10.1177/001698620004400205
- Sak, U. (2011). Prevalance of misconceptions, dogmas, and poular views about giftedness and intelligence: a case from Turkey. *High Ability Studies*, 22 (2), 179-197.
- Sıcak, A. (2014). Üstün yetenekli öğrencilerin aday gösterme sürecinde öğretmen gözlem puanlarının TKT7-11 ve WICS-R puanlarını yordayıcılık gücünün incelenmesi. *Üstün Zekalılar Eğitimi ve Yaratıcılık Dergisi*, 1 (1), 7-12.
- Siegle, D. (2001). *Teacher bias in identifying gifted and talented students*. Paper presented at the Annual Meeting of the Council for Exceptional Children (80th, Kansas City, MO, April 18-21, 2001).
- Siegle, D., Moore, M., Mann, L R., & Wilson, E H. (2010) Factors that influence in-service and pre-service teachers' nominations of students for the gifted and talented programs. *Journal for the Education of the Gifted*, 33 (3), 337-360.
- Siegle, D., & Powell, T. (2004). Exploring teacher biases when nominating students for gifted programs. *Gifted Child Quarterly*, 48 (1), 21-29.
- Siegle, D. & Reis, M. S. (1998). Gender differences in teacher and student perceptions of gifted students' ability and effort. *Gifted Child Quarterly*, 42 (1), 39-47
- Sternberg, J. R. (2004). Culture and intelligence. *American Psychologist*, 59 (5), 325-338
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, 12 (1), 3-54.
- Şahin, F. & Çetinkaya, Ç. (2015). An Investigation of the effectiveness and efficiency of classroom teachers in the identification of gifted students. *Turkish Journal of Giftedness and Education*, 5 (2), 133-146
- Tarhan, S. & Kılıç, Ş. (2014). Üstün bireylerin tanılanması ve Türkiye'deki eğitim modelleri. *Journal of Gifted Education Research*, 2 (2), 27-43
- Van Tassel-Baska, J., Patton, J., & Prillamon, D. (1991). *Gifted youth at risk: A report of a national study*. Reston, VA: The Council for Exceptional Children.
- Vespi, L., & Yewchuk, C. (1992). A phenomological study of the social/emotional characteristics of gifted learning disabled children. *Journal for the Education of the Gifted*, 16(1), 55-72.


- Webb, T. J. & Latimer, D. (1993). ADHD and children who are gifted (ED358673). ERIC. <https://files.eric.ed.gov/fulltext/ED358673.pdf>
- Webb, T. J., Amend, R. E., Webb, E. N., Goerss, J., Beljan, P., & Olenchak, R. F. (2005). *Misdiagnosis and dual diagnoses of gifted children and adults: ADHD, bipolar, OCD, asperger's, depression, and other disorders*. Scottsdale, AZ: Great Potential Press.

# Development of Accountability Behavior Scale for School Administrators: A Validity and Reliability Study\*

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 24.07.2022</p> <p>Available online: 03.11.2022</p>	<p>The aim of this study was to develop a valid and reliable data collection tool in order to measure the accountability of school administrators. In data collection, Accountability Behavior Scale for School Administrators (ABSSA) was used. Exploratory sequential mixed method design was used in the development of ABSSA. In sample selection, maximum variation method was used in the qualitative stage and simple random sampling was used in the quantitative stage. The data were collected from three different teacher groups working in Erzurum, Turkey in the 2021-2022 academic year. 41 teachers participated in semi-structured interviews, 278 teachers in Exploratory Factor Analysis (EFA) and 223 teachers in Confirmatory Factor Analysis (CFA). Qualitative procedures were followed during the development of the item pool. Content analysis was used to analyze qualitative data. The scale items were developed based on the themes and codes that emerged in the content analysis. The psychometric properties of the ABSSA were investigated using quantitative procedures. EFA revealed a structure consisting of 16 items and four factors, which explained 61.90% of the total variance. These factors were as follows: Accountability towards Students, Accountability towards Teachers, Accountability towards Parents, and Accountability towards Superiors. The structure revealed by EFA was confirmed using CFA. The fit indices of the obtained model were as follows: <math>\chi^2/sd=1,98</math>, CFI=0.98, NFI=0.96, GFI= 0.90, AGFI= 0.86, RMSEA=0.06, SRMR=0.05. The structure of the scales was confirmed by CFA. The validity and reliability analysis of ABSSA showed that it was a valid and reliable measurement tool with four factors and 16 items.</p>
	<p>© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> Accountability, school administrators, teacher, scale development.</p>

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## **Introduction**

The quality of education and educational organizations, which plays a significant role in the development of countries has been at the center of the discussions. In countries that compete in the quality of education as in every field, both policy makers and society require schools to demonstrate their success. Expectations in national and international exams especially prioritize the role of school administrators in meeting these demands, holding them accountable.

Accountability is the responsibility of individuals and organizations for their behavior towards an authority and informing this authority (Edwards & Hulme, 1996, p.9). In other words, accountability is the obligation of politicians and public officials to periodically respond to questions about their activities and to be held accountable for the use of the authority entrusted to them (Organization for Economic Cooperation and Development [OECD], 2000, p.5). In addition, Ackerman (2005, p.6) defines accountability as a proactive process in which public officials inform and justify their action plans, behaviors and results, for which they are sanctioned. In other words, accountability is the explanation of the behavior of an individual in the society or in the organizational to the superiors (Shafritz, Russel, & Borick, 2017, p.188), the obligation of individuals to respond to other people or groups (Himmetoğlu, Ayduğ, & Bayrak, 2017, p. .42), or an individual's statement to another individual or authority because of what his/her actions (Ciğerci, 2007, p.2). Furthermore, Ruffner and Sevilla (2004, p.126) defines accountability as the obligation of those who are given responsibility to respond and provide accountability in order to fulfill these responsibilities. Similarly, Tutar and Altınöz (2017, p.228) describes accountability as the responsibility of those who use public resources to the authority that certified them for what they did not do when they should have done, what they did when they should not have done or why they could not have done. Accountability, which is necessary to ensure values such as efficiency, effectiveness, reliability and predictability of public administration, refers to the explanation and justification of the actions of one individual or authority to another (OECD, 1999, p.12-13). There are some reasons for holding organizations and public officials accountable.

The aims of accountability are basically threefold. First, it controls the abuse of public authority. Second, it provides assurance of adherence to law and public service values in the use of public resources. Third, it supports and encourages learning on the heels of continuous improvement in public administration (Aucoin & Heintzman, 2000, p.45). The only way to ensure a decent administration is to institutionalize a strong accountability structure that holds every public official accountable for their actions (World Bank, 2004. p.7). Accountability, which is the most basic way of ensuring that politicians and public officials use the power they have over the resources they control and the institutions they manage in line with public interest based on laws and regulations (Yüksel, 2005, p.201) is a requirement of democratic administration. In an environment where there is no accountability, the reliability of financial and non-financial data presented to the public by enterprises is questioned (Çıtak, 2015, p.16). Insufficient accountability may lead to inefficient and ineffective use of resources or to make decisions in favor of certain individuals or groups (Kluvers, 2003, p.57). As in all organizations, educational organizations also have to be accountable.

Accountability mechanisms refer to the fact that individuals in schools give account of their actions to someone who is in a position of official authority, inside or outside the school, through a number of formal and informal ways (Abelmann, Elmore, Even, Kenyon, & Marshall, 1999, p.4). Behn (2003, pp.60-61) argues that parents, legislators, governors, supervisors, civil leaders and ultimately everyone is stakeholder of education; however, although they may have a negative effect on the education of children, they are not held accountable. In this case, the easiest way is to focus on schools, principals and teachers. Accordingly, it can be put forward that school administrators are considered as the primary interlocutor in accounting for student success/failure.

School administrators maintain their attraction in terms of the vital role they play in the success performance of the school (Friedman, 2002, p.229). In an age of high-risk test-driven accountability in public education, academic achievement of students plays a significant role. As a result, school principals are put under the pressure to demonstrate increased student achievement. The role of school principals in establishing a learning environment in which students' academic achievement is ensured is of crucial importance, which is directly linked to strong school leadership (Hermann, 2016, p.6). School administrators are hold accountable for the improvement of student performance and cooperate with several groups and teams to achieve this goal (Marks & Louis, 1997; Peterson del Mar, 1994; cited in Marks & Nance, 2007, p.5). School administrators have obligations such as being in a constant communication with internal and external stakeholders about setting clear goals for school success, collaborating with families, teachers and other stakeholders to achieve these goals, the rate at which goals are achieved, what kind of deficiencies there are, and what kind of measures are taken against these deficiencies, and to include them in the vision, mission and strategy setting and evaluation process, and to establish success standards (Himmetoğlu et al., 2017, p.47). Kalman and Gedikoğlu (2014, p.117) argues that accountable school administrators should be able to take on their responsibilities, provide clear information to school stakeholders when necessary, and answer questions about school-related issues. Accountable school administrators can develop good relations with teachers and gain their trust through their behaviors, which paves the way to a healthy school climate.

The examination of the studies in Türkiye reveals that a measurement tool for the accountability of school administrators has not been developed. One exception is that the tool adapted to Turkish by Celep and Öztürk (2009) which has dimensions regarding the concepts of accountability (openness, responsibility, responsiveness). However, there is especially a need for a valid and reliable measurement tool regarding the accountability behaviors of school administrators towards their interlocutor. Therefore, this study aimed to develop a tool to measure the accountability behaviors of school administrators.

### **Method**

In order to develop an accountability behavior scale for school administrators based on teachers' perspectives and literature, exploratory sequential mixed method design was used in the scale development process. In the exploratory sequential design, a quantitative measurement tool is developed based on qualitative data (Creswell & Plano-Clark, 2014, s.96).

#### **Study Groups**

The data were collected from three different participant groups working in Erzurum, Turkey. These study groups consisted of 41 teachers for semi-structured interviews, 278 for Exploratory Factor Analysis (EFA), and 223 for Confirmatory Factor Analysis (CFA).

#### **The Interview Group (Qualitative)**

41 teachers working in elementary schools in the central districts of Erzurum (Aziziye, Palandöken and Yakutiye) participated in the interview group. Preliminary interviews were conducted with the teachers and as a result 41 teachers were included using the maximum variation sampling method. In maximum variation sampling method, homogeneous situations are identified in the universe based the research question and the study is carried out on these situations (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2013, p.90).

The demographic characteristics of the participants who were interviewed in the qualitative part of the study are presented in Table 1.

**Table 1.** Demographic Characteristics of the Participants in Qualitative Part

Demographic characteristics		f
Gender	Female	24
	Male	17
Work Experience	1-5 years	11
	6-10 years	10
	11-15 years	10
	16-20 years	6
	21 years and above	4
Working time at school	1-5 years	15
	6-10 years	12
	11-15 years	8
	16-20 years	5
	21 years and above	1
Discipline	Turkish	7
	Mathematics	6
	Science	5
	Social Studies	4
	Religion	4
	English	3
	Information Technologies	2
	Physical Education	2
	Technology and Design	2
	Visual Arts	2
	Music	2
	Arabic	1
	Guidance and Psychological Counseling	1
Total		41

Table 1 revealed that of the participants in the first study group, 24 were female and 17 were male. 11 of the participants had 1-5 years of work experience, 10 had 6-10 year of work experience, 10 had 11-15 years of work experience, six had 16-20 years of work experience and four had 21 years or more work experience. In terms of working time at the same school, 15 were working at the same school for 1-5 years, 12 for 6-10 years, eight for 11-15 years, five for 16-20 years and one for 21 years or more. In addition, of the participants, seven were Turkish teacher, six were Mathematics teacher, five were Science teacher, four were Social Studies teacher, four were Religion teacher, three were English teacher, two were Information Technologies Teacher, two were Physical Education teacher, two were Technology and Design teachers, two were Visual Arts teacher, one was Music teacher, one was Arabic teacher and one was Guidance and Psychological Counseling teacher.

### The EFA Group (Quantitative)

The quantitative data were collected in two stages. At these stages, it was ensured that the study groups consisted of different participants. Accordingly, 278 elementary school teachers in Yakutiye participated in EFA study, and 223 elementary school teachers in Palandöken participated in CFA study. The participants in the EFA group were selected using the simple random sampling method. In this method, all elements in the universe have an equal and independent chance to be selected for sampling (Özen and Gül, 2007, p.399). The demographic characteristics of the participants in the EFA group are presented in Table 2.

**Table 2.** Demographic Characteristics of the Participants in the EFA Group

Demographic Characteristics		f	%
Gender	Female	165	59.4
	Male	113	40.6
Work Experience	1-5 years	43	15.5
	6-10 years	98	35.3
	11-15 years	67	24.1
	16-20 years	28	10.1
	21 years and above	42	15.1
Working time at school	1-5 years	142	51.1
	6-10 years	77	27.7
	11-15 years	39	14.0
	16-20 years	14	5.0
	21 years and above	6	2.2
Discipline	Turkish	40	14.4
	Mathematics	35	12.6
	Science	31	11.2
	Social Studies	30	10.8
	Religion	33	11.9
	English	30	10.8
	Information Technologies	10	3.6
	Physical Education	21	7.6
	Technology and Design	6	2.2
	Visual Arts	10	3.6
	Music	9	3.2
	Arabic	5	1.8
	Guidance and Psychological Counseling	18	6.5
Total		278	100

Table 2 revealed that of the participants in the EFA group, 165 (% 59.4) were female and 113 (% 40.6) were male. 43 (% 15.5) of the participants had 1-5 years of work experience, 98 (% 35.3) had 6-10 year of work experience, 67 (% 24.1) had 11-15 years of work experience, 28 (% 10.1) had 16-20 years of work experience and 42 (% 15.1) had 21 years or more work experience. In terms of working time at the same school, 142 (% 51.1) were working at the same school for 1-5 years, 77 (% 27.7) for 6-10 years, 39 (% 14.0) for 11-15 years, 14 (% 5.0) for 16-20 years and six (2.2) for 21 years or more. In addition, of the participants, 40 (% 14.4) were Turkish teacher, 35 (% 12.6) were Mathematics teacher, 31 (% 11.2) were Science teacher, 30 (% 10.8) were Social Studies teacher, 33 (% 11.9) were Religion teacher, 30 (% 10.8) were English teacher, 10 (% 3.6) were Information Technologies Teacher, 21 (% 7.6) were Physical Education teacher, 6 (% 2.2) were Technology and Design teachers, 10 (% 3.6) were Visual Arts teacher, nine (% 3.2) were Music teacher, five (% 1.8) were Arabic teacher and 18 (% 6.5) were Guidance and Psychological Counseling teacher.

The demographic characteristics of the participants in the CFA group are presented in Table 3.

**Table 3.** Demographic Characteristics of the Participants in the CFA Group

Demographic Characteristics		f	%
Gender	Female	151	67.7
	Male	72	32.3
Work Experience	1-5 years	29	13.0
	6-10 years	88	39.5
	11-15 years	54	24.2

	16-20 years	38	17.0
	21 years and above	14	6.3
Working time at school	1-5 years	134	60.1
	6-10 years	65	29.1
	11-15 years	15	6.7
	16-20 years	7	3.1
	21 years and above	2	0.9
Discipline	Turkish	32	14.3
	Mathematics	25	11.2
	Science	28	12.6
	Social Studies	22	9.9
	Religion	23	10.3
	English	25	11.2
	Information Technologies	7	3.1
	Physical Education	19	8.5
	Technology and Design	5	2.2
	Visual Arts	11	4.9
	Music	8	3.6
	Arabic	4	1.8
	Guidance and Psychological Counseling	14	6.3
Total		223	100

Table 3 showed that of the participants in the CFA group, 151 (% 67.7) were female and 72 (% 32.3) were male. 29 (% 13.0) of the participants had 1-5 years of work experience, 88 (% 39.5) had 6-10 year of work experience, 54 (% 24.2) had 11-15 years of work experience, 38 (% 17.0) had 16-20 years of work experience and 14 (% 6.3) had 21 years or more work experience. In terms of working time at the same school, 134 (% 60.1) were working at the same school for 1-5 years, 65 (% 29.1) for 6-10 years, 15 (% 6.7) for 11-15 years, seven (% 3.1) for 16-20 years and two (% 0.9) for 21 years or more. In addition, of the participants, 32 (% 14.3) were Turkish teacher, 25 (% 11.2) were Mathematics teacher, 28 (% 12.6) were Science teacher, 22 (% 9.9) were Social Studies teacher, 23 (% 10.3) were Religion teacher, 25 (% 11.2) were English teacher, 7 (% 3.1) were Information Technologies Teacher, 19 (% 8.5) were Physical Education teacher, 5 (% 2.2) were Technology and Design teachers, 11 (% 4.9) were Visual Arts teacher, eight (% 3.6) were Music teacher, four (% 1.4) were Arabic teacher and 14 (% 6.3) were Guidance and Psychological Counseling teacher.

### Data Collection Tool

The "Accountability Behavior Scale for School Administrators", developed by the researcher, was used in data collection.

**The Development of Data Collection Tool:** During the development of ABSSA, first of all, a literature review on accountability was conducted and scale items were developed in line with the codes and themes that emerged as a result of the interviews. In addition, existing accountability scales (Celep & Öztürk, 2009) were used. Consequently, an item pool consisting of 32 items was arranged.

Lawshe (1975) technique was used for the content validity of the scale. Eight faculty members, three from Educational Administration Department, two from Educational Curriculum Department, one from Computer Education and Instructional Technologies Department, and two from Turkish Education Department, were selected as the expert group. Then, an expert evaluation form was used to obtain expert opinion about the items in the scale. The form consisted of the following statements next to each item: "the



item measures the targeted structure”, “the item is related to the structure but is unnecessary” and “the item does not measure the targeted structure”. Accordingly, the Content Validity Ratio (CVR) of each item was calculated. The content validity ratio is calculated by the ratio of the number of experts indicating that “the item measures the targeted structure” regarding any item to the total number of experts indicating an opinion on that item, minus one. If KVR equals zero or has a negative value, the item must be removed from the scale. Lawshe (1975) stated that for each item with a positive value, the Content Validity Criterion ( $CVC = CVR_{critical} = \text{critical CVR}$ ) at the  $\alpha=0.05$  significance level should be taken into consideration. In this study, the CRS values revealed by Ayre and Scally (2014) were taken as basis, and it was determined that the  $CVC = CVR_{critical}$  value was 0.750 for eight experts at the  $\alpha=0.05$  significance level. Accordingly, items with KVR values lower than the recommended values (0.750) were removed from the scale. Two items with a CVR ratio of zero or negative (Items 4 and 7 items) were directly removed from the scale. It was found that the KVR values of four items (Items 11, 15, 19 and 30) were lower than the KVC value (0.750). Thus, the four items with a value below the critical value were removed from the draft scale. As a result, the content validity study of the scale was completed and the draft scale consisted of 26 items. In addition to the content validity, the scale items were also checked by three Turkish language teachers in terms of language and expression. After the revisions, the scale was made ready for use.

### Data Collection

Qualitative data were collected using a semi-structured interview form developed by the researcher. Quantitative data were collected at different times and from different participants in two stages: EFA and CFA.

### Data Analysis

Content analysis was used in the analysis of qualitative data. Content analysis aims to find out how often what is written or said is used based on a prepared explanatory directive (Aziz, 2011, p.131). In the quantitative part, EFA was used to examine the construct validity of the scale, and then CFA was performed to test the structure of the scale. Exploratory factor analysis used for determining factors based on the relationships between variables, and confirmatory factor analysis tests a predetermined hypothesis or theory regarding the relationship between variables (Büyüköztürk, 2015, p.133). In order to test the consistency of the scale items with each other, the Cronbach’s alpha ( $\alpha$ ) coefficient was calculated. There are several opinions in the literature regarding sample size in scale development studies. It is stated in the literature that the sample size should be at least five or even ten times the number of items (Bryman & Cramer, 2001; cited in Tavşancıl, 2002, p.17). Accordingly, the sample size criteria were met for both EFA and CFA.

## Findings

### Qualitative Findings

The themes and codes related to the accountability behaviors of school administrators that emerged as a result of content analysis are presented in Table 4.

**Table 4.** Dimensions of Accountability Behaviors of School Administrators

Sub-themes	Codes	f
Accountability Behaviors towards Students	Organizing the physical environment of the school	11
	Making school facilities available to students	6
	Dealing with student problems	5
	Informing students about issues that interest them	5
	Providing information about educational outcomes	4
	Ensuring that the educational activities continues on a regular basis	3

Accountability Behaviors towards Teachers	Providing the necessary materials for education	11
	Informing teachers about school-related issues	7
	Distributing tasks fairly to teachers	6
	Supporting teachers' professional development	4
	Supporting social activities that teachers are willing to do	3
	Giving teachers tasks based on their area of expertise	3
Accountability Behaviors towards Parents	Being in constant contact with parents	11
	Informing parents about educational activities	7
	Guiding parents about how they contribute to the academic development of students	5
	Involving parents in decision-making processes	4
	Ensuring that parents have access to the information they request	2
Accountability Behaviors towards Superiors	Doing school work on time in accordance with the legislation	14
	Determining the existing achievement status of the school	12
	Being transparent in school expenses	5
	Making an effort to keep the school clean	4
	Making efforts to reduce student absenteeism	3
	Taking responsibility for school success/failure	2
	Explaining the reason for the failure of the school to the provincial/district directorate of MoNE	2
	Achieving school safety	2
	Informing the provincial/district directorate of MoNE about how much of the educational outcomes have been achieved.	2

As seen in Table 4, the opinions of the participants regarding the accountability behaviors exhibited by the school administrators were categorized under four themes: Accountability Behaviors towards Students, Accountability Behaviors towards Teachers, Accountability Behaviors towards Parents and Accountability Behaviors towards Superiors. There are six codes in the theme of accountability behaviors towards students, six codes in the theme of accountability behaviors towards teachers, five codes in the theme of accountability behaviors towards parents, and nine codes in the theme of accountability behaviors towards superiors.

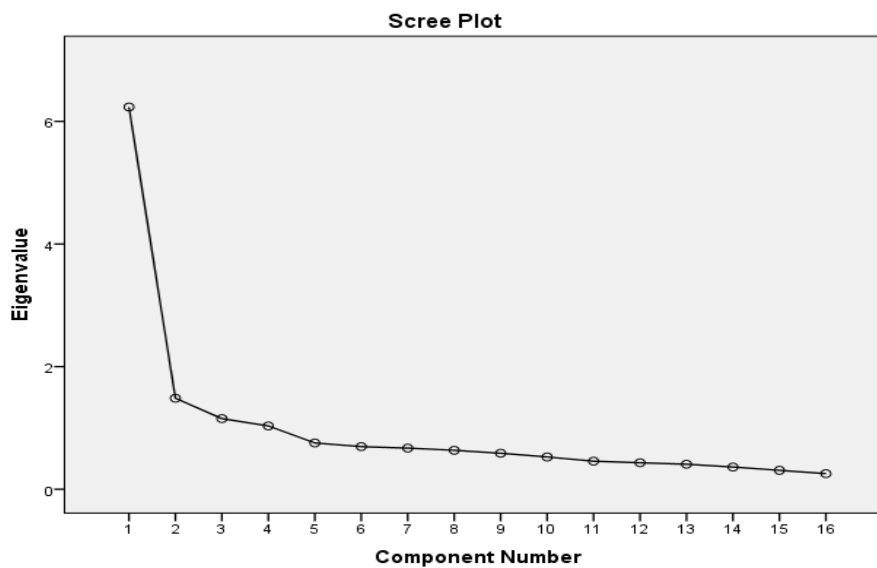
### Quantitative Findings

Exploratory Factor Analysis was performed to determine the construct validity of the scale. Items were analyzed with principal component analysis using the Varimax Rotation Technique. In the factor analysis phase, the items with the difference in the load values of the two factors below .10 were removed from the scale. At this stage, the items with the least difference were removed sequentially and the process was repeated. Accordingly, Items 9, 23, 12, 6, 18, 25, 19, 7, 26 and 17 were removed from the scale. As a results, it was found that the scale consisted of four dimensions and 16 items.

The Kaiser-Meyer-Olkin (KMO) value of the scale was found to be .897. Barlett's Test of Sphericity values were calculated as (1718.3:  $p = .000$ ). It is stated in the literature that in order for factor analysis to be considered appropriate, the Bartlett's test should be significant ( $p < .05$ ) and the KMO value should be greater than .6 (Pallant, 2006, p.201). The values in the study showed that the data set was suitable for factor analysis. Item loads and dimensions are presented in Table 5, and the scree plot is in Figure 1.

**Table 5.** Item Loads and Dimensions of ABSSA

Item No	1. Factor	2. Factor	3. Factor	4. Factor
I14	.750			
I15	.732			
I16	.700			
I13	.574			
I1		.764		
I2		.738		
I3		.713		
I4		.600		
I5		.575		
I21			.825	
I20			.802	
I24			.695	
I22			.531	
I8				.808
I10				.632
I11				.543
Eigenvalues	6.235	1.485	1.152	1.033
Explanation of Variance (%)	38.96	48.24	55.45	61.90
Total (%)	61.90			

**Figure 1.** Scree Plot of ABSSA

The studies in the literature reveals that in order for an item to be included in a factor, it needs to give a load of .40 to that factor (DeVellis, 2003; Field, 2005). It was found in the study that the lowest item factor load was .53, indicating that the items met the required factor load criteria. The Accountability Behavior Scale for School Administrators consisted of 16 items and a four-factor structure. The first factor, "Accountability Behaviors Towards Parents" included four items, the second factor "Accountability Behaviors towards Students" had five items, the third factor "Accountability Behaviors towards Superiors" consisted of four items, and the fourth factor "Accountability towards Teachers" had three items. The factor loads of the items in the Accountability Behaviors towards Parents sub-factor varied between .574 and .750 and explained 38.96% of the total variance. In addition, the factor loads of the items in the Accountability Behaviors towards Students

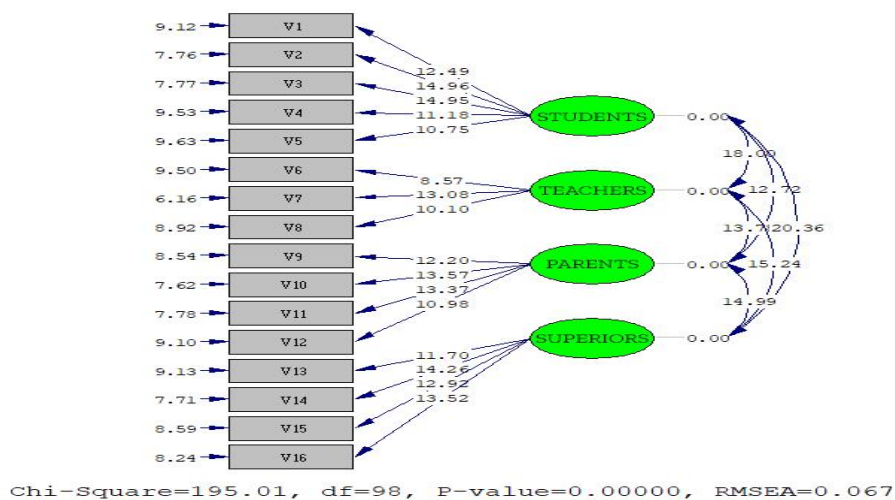
sub-factor ranged from .575 to .764 and explained 48.24% of the total variance. Furthermore, the factor loads of the items in the Accountability Behaviors for Superiors sub-factor differed between .531 and .825 and explained 55.45% of the total variance. Finally, the factor loads of the items in the Accountability Behaviors towards Teachers sub-factor ranged from .543 to .808 and explained 61.90% of the total variance. Overall, four factors explained 61.90% of the total variance. Internal consistency coefficients for the reliability of the Accountability Behavior Scale for School Administrators were also calculated. The Cronbach's Alpha coefficient, which indicates the internal consistency of the scale, was found as .893 for the total scale, .775 for the accountability towards for students sub-factor, .721 for the accountability behaviors towards teachers sub-factor, .792 for the accountability behaviors towards parents sub-factor, and .817 for accountability behaviors towards superiors sub-factor was calculated.

After the EFA, CFA was performed to test the accuracy of the revealed structure. CFA results indicated that the t values of the items in the ABSSA ranged between 8.57 and 14.96. In addition, all of the paths regarding the 16 items in the scale were found to be statistically significant at the .001 level. The fit index values of ABSSA in the First Level CFA showed that  $\chi^2/df$  value was  $195.01/98=1.98$ . In addition, other values (GFI=.90, CFI=.98, NFI=.96, RMSEA=.067, SRMR=.053) indicated that the scale had an acceptable fit value (Table 6). Table 6 presents the fit index values of ABSSA SSPS.

**Table 6.** The fit index values of ABSSA in the First Level CFA

Fit Index	Perfect Fit Values	Acceptable Fit Values	Reference	Measur ement	Result
$\chi^2/df$	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 5$	Meydan & Şeşen, 2011	1.98	Perfect Fit
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$	Çokluk, Şekercioğlu & Büyüköztürk, 2010	.90	Acceptable Fit
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	Schermelleh-Engel, Moosbrugger & Müller, 2003	.86	Acceptable Fit
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI \leq .97$	Çokluk vd., 2010	.98	Perfect Fit
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	Çokluk vd., 2010	.96	Perfect Fit
IFI	$.95 \leq IFI \leq 1.00$	$.90 \leq IFI \leq .95$	Çokluk vd., 2010	.98	Perfect Fit
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	Tabachnick & Fidell, 2007	.067	Acceptable Fit
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	Tabachnick & Fidell, 2007	.053	Acceptable Fit

The model and numerical data of the First Level Confirmatory Factor Analysis of ABSSA are shown in Figure 2.



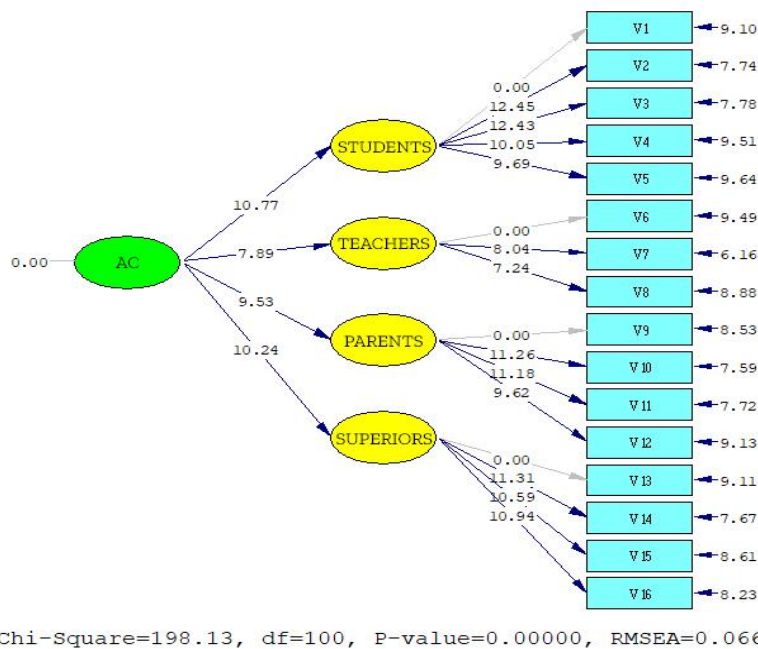
**Figure 2.** The model and numerical data of the First Level Confirmatory Factor Analysis of ABSSA

In the Second Level CFA,  $\chi^2/sd$  value of ABSSA was found as  $198.13/100=1.98$ . Other values ( $GFI=.90$ ,  $CFI=.98$ ,  $NFI=.96$ ,  $RMSEA=.066$ ,  $SRMR=.054$ ) revealed that the scale had an acceptable fit value. These results confirmed the model of the Scale consisting of 16 items and four dimensions. The fit index values of the scale as a result of the CFA analysis are presented in Table 7. The scale had the required fit indices in the Second Level CFA.

**Table 7.** The fit index values of ABSSA in the Second Level CFA

Fit Index	Perfect Fit Values	Acceptable Fit Values	Measurement	Result
$\chi^2/sd$	$0 \leq \chi^2/sd \leq 2$	$2 \leq \chi^2/sd \leq 5$	1.98	Perfect Fit
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$	.90	Acceptable Fit
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.86	Acceptable Fit
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI \leq .97$	.98	Perfect Fit
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.96	Perfect Fit
IFI	$.95 \leq IFI \leq 1.00$	$.90 \leq IFI \leq .95$	.98	Perfect Fit
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	.066	Acceptable Fit
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	.054	Acceptable Fit

The model and numerical data of the Second Level Confirmatory Factor Analysis of ABSSA are shown in Figure 3.



**Figure 3.** The model and numerical data of the Second Level Confirmatory Factor Analysis of ABSSA

The reliability coefficients for the total of ABSSA and its dimensions after the CFA analysis are presented in Table 8.

**Table 8.** Cronbach's Alpha Reliability Results of ABSSA

Dimensions	Cronbach's Alpha
Accountability Behaviors towards Students	.862
Accountability Behaviors towards Teachers	.721
Accountability Behaviors towards Parents	.834
Accountability Behaviors towards Superiors	.853
Total	.922

Table 8 showed that the reliability coefficient was found as .862 for the Accountability Behaviors towards Students sub-dimension, .721 for the Accountability Behaviors towards Teachers, .834 for the Accountability Behaviors towards the Parents sub-dimension, .853 for the Accountability Behaviors towards the Parents sub-dimension and .922 for the total scale.

The final form of ABSSA consisted of 16 items, which were scaled as follows: "1-never (1.00-1.80)", "2-rarely (1.81-2.60)", "3-sometimes (2.61-3.40)", "4-often (3.41-4.20)" and "5-always (4.21-5.00)".

### Conclusion, Discussion and Recommendations

The aim of this study was to develop a valid and reliable scale to examine the accountability levels of school administrators. In the development of the Accountability Behaviors Scale for School Administrators (ABSSA), first, interviews were conducted with 41 elementary school teachers regarding the accountability behaviors of school administrators. The scale items were developed based on the themes and codes that emerged in the content analysis. Initially, the item pool consisted of 32 items. Then, six items were removed from the scale in line with expert opinion. Accordingly, the validity and reliability analyzes of the 26-item scale were performed. The analysis revealed that the scale should have 16 items and four dimensions. The scale ranked from (1) never to (5) always. There were five items in "Accountability Behaviors towards Students" dimension, three items in "Accountability Behaviors towards Teachers" dimension, four items in "Accountability Behaviors towards Parents" dimension and four items in "Accountability Behaviors towards Superiors" dimension. Each dimension of the scale and the sum of all items in the scale can be scored. The increase in the score indicates that accountability level of school administrators increases.

Accountability can be upward, downward, inward and outward. Vidovich and Slee (2000) defines these terms as follows (cited in Burke, 2005, p.3): (1) *Upward accountability* represents the traditional relationship between subordinate and superior. It covers procedural, bureaucratic, legal or vertical accountability. (2) *Downward accountability* refers to the managers' responsibility towards their colleagues or their responsibilities to subordinates in participatory decision making. (3) *Inward accountability* covers professional or ethical standards in organizations where expertise is dominant, such as universities. This kind of accountability emerges as professional accountability. (4) *Outward accountability* refers to responsiveness to external customers, stakeholders, supporters and the general public in a democratic society. It includes market and political accountability. Based on the definitions above, it can be argued that accountability is an act of responding to the relevant parties. School administrators play a pivotal role in accountability in schools and they have to be accountable to their interlocutors. Kantos (2010) examined the views of administrators and teachers and found that the view that administrators should be accountable in public and private primary schools was generally expressed by the participants. The accountability of school administrators is multidimensional and school administrators are accountable for their school-related duties, responsibilities and all their students (Kantos, 2013, p.107). In this sense, Argon (2015) found that the most frequently expressed opinions of teachers regarding the people to whom school principals should be held accountable were superiors, teachers, parents and students, assistant principals, all relevant parties, education inspectors and other school administrators, respectively. On the other hand, school principals the most frequently expressed opinions about the people to whom they have to be accountable as supervisors, parents, students, teachers and their own conscience, respectively. Çetin and Demirbilek (2018) found that the majority of school principals gave account to superiors, parents and teachers in various environments and with various methods. In addition, it was reported that the majority of school administrators were held accountable in financial, academic success and educational terms. Furthermore, Göksoy and Çakır (2021) found that school administrators were accountable to the superiors, consisting of national education officials, governor, district governor, ministry, and general directorate officials. Also it was stated that school administrators were mostly accountable for financial affairs, every issue related to school, issues within their area of responsibility and

academic success, respectively. It was found in the present study that school administrators should be held accountable towards students, teachers, parents and superiors. It can be said that the findings of the present study were in line with those in the literature regarding accountability of school administrators.

The examination of the studies in Türkiye reveals that a measurement tool for the accountability of school administrators has not been developed. There is only one measurement tool adapted to Turkish by Celep and Öztürk (2009). This scale consists of three sub-dimensions (openness, responsibility, responsiveness) and 46 items. In addition, while this scale based on the concepts related to accountability (openness, responsibility, responsiveness), ABSSA focused on the interlocutor of school administrators. Reliability and validity studies on ABSSA and its psychometric properties showed that it can be used to examine accountability level of school administrators. Therefore, it can be used in future studies. Validity and reliability studies of the scale can be conducted at different education levels.

**APPENDICE: Accountability Behavior Scale for School Administrators**

Okul Yöneticilerinin Hesap Verebilirlik Davranışları Ölçeği						
Lütfen her ifadeyi okuduktan sonra, bu ifadeye katılma derecenizi gösteren sütundaki ilgili seçeneği (X) işareti koyarak işaretleyiniz.		Her Zaman	Çoğunlukla	Bazen	Nadiren	Hiçbir Zaman
<b>ÖĞRENCİLERE YÖNELİK HESAP VEREBİLİRLİK DAVRANIŞLARI</b>						
1	Okul müdürü eğitim-öğretim ortamının fiziksel olarak düzenlenmesini sağlar.	5	4	3	2	1
2	Okul müdürü okul imkânlarını öğrencilerin kullanımına sunar.	5	4	3	2	1
3	Okul müdürü eğitim-öğretim sürecinin düzenli olarak devam etmesini sağlar.	5	4	3	2	1
4	Okul müdürü öğrencilere eğitim hedefleriyle ilgili bilgi sunar.	5	4	3	2	1
5	Okul müdürü öğrencilerin sorunlarıyla ilgilenir.	5	4	3	2	1
<b>ÖĞRETMENLERE YÖNELİK HESAP VEREBİLİRLİK DAVRANIŞLARI</b>						
6	Okul müdürü öğretmenlere adil görev dağılımı yapar.	5	4	3	2	1
7	Okul müdürü öğretmenleri mesleki gelişimleri doğrultusunda destekler.	5	4	3	2	1
8	Okul müdürü öğretmenlerin yapmak istedikleri sosyal etkinlikleri destekler.	5	4	3	2	1
<b>VELİLERE YÖNELİK HESAP VEREBİLİRLİK DAVRANIŞLARI</b>						
9	Okul müdürü okuldaki eğitim-öğretim faaliyetleri hakkında velileri bilgilendirir.	5	4	3	2	1
10	Okul müdürü velilerin karar verme süreçlerine katılımını sağlar.	5	4	3	2	1
11	Okul müdürü velilerin talep ettiği bilgilere ulaşmasını sağlar.	5	4	3	2	1
12	Okul müdürü öğrencilerin akademik gelişimine ne şekilde katkı sağlandığının bilgisini velilere sunar.	5	4	3	2	1
<b>ÜST BİRİMLERE YÖNELİK HESAP VEREBİLİRLİK DAVRANIŞLARI</b>						
13	Okul müdürü okulun başarı/başarısızlığının sorumluluğunu alır.	5	4	3	2	1
14	Okul müdürü okulun başarısızlığının gerekçesini il/ilçe MEM'e açıklar.	5	4	3	2	1
15	Okul müdürü öğrenci devamsızlığını azaltmak için çaba gösterir.	5	4	3	2	1
16	Okul müdürü eğitim-öğretim hedeflerinin ne kadarına ulaşıldığı konusunda il/ilçe MEM'e bilgi verir.	5	4	3	2	1



## REFERENCES


- Abelmann, C., Elmore, R., Even, J., Kenyon, S. and Marshall, J. (1999). *When accountability knocks, will anyone answer?*, CPRE Policy Briefs. Philadelphia: University of Pennsylvania.
- Ackerman, J. M. (2005). *Social accountability in the public sector: A conceptual discussion*. Social Development Papers, Paper No. 82. Washington, D.C.: World Bank.
- Argon, T. (2015). Teacher and administrator views on school principals' accountability. *Educational Sciences: Theory and Practice*, 15(4), 925-944.
- Aucoin, P. and Heintzman, R. (2000). The Dialectics of Accountability for Performance in Public Management Reform. *International Review of Administrative Sciences*, 66(1), 45-55.
- Ayre, C. and Scally A. J. (2014). Critical values for Lawshe's content validity ratio: Revisiting the original methods of calculation. *Measurement and Evaluation in Counseling and Development*, 47 (1), 79-86. doi: 10.1177/0748175613513808.
- Aziz, A. (2011). *Sosyal bilimlerde araştırma yöntemleri ve teknikleri* (6. Baskı). Ankara: Nobel Akademik Yayıncılık.
- Behn, R. D. (2003). Rethinking accountability in education: How should who hold whom accountable for what. *International Public Management Journal*, 6(1), 43-73.
- Burke, J. C. (2005). The many faces of accountability. In J. Burke (Ed.), *Achieving accountability in higher education: Balancing public, academic and market demands* (pp. 1-24). San Francisco, CA: Jossey-Bass.
- Büyüköztürk, Ş. (2015) *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni SPSS uygulamaları ve yorum* (Genişletilmiş 21. Baskı). Ankara: Pegem Akademi.
- Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş. ve Demirel, F. (2013). *Bilimsel araştırma yöntemleri* (15. Baskı). Ankara: Pegem Akademi.
- Celep, C. ve Öztürk, N. (2009). Lider olarak okul müdürünün hesap verebilirliği ("cevap verebilirlik", "açıklık" ve "sorumluluk" ölçeklerinin geçerlik ve güvenirlik çalışması). IV. Ulusal Eğitim Yönetimi Kongresi Bildiriler Kitabı (ss. 376-384), Pamukkale Üniversitesi, Denizli.
- Cığerci, İ. (2007). *Kamu mali yönetiminde hesap verme sorumluluğu ve iç denetim*. Yayımlanmamış Yüksek Lisans Tezi. Afyon Kocatepe Üniversitesi Sosyal Bilimler Enstitüsü, Afyonkarahisar.
- Creswell, J. W. and Plano-Clark, V. L. (2014). *Karma yöntem araştırmaları* (Y. Dede ve S. B. Demir, Çev. Ed.). Ankara: Anı Yayıncılık.
- Çetin, M. ve Demirbilek, M. (2018). Okul Müdürlerinin eşitlik ve hesapverebilirlik görüşlerinin incelenmesi. *Kocaeli Üniversitesi Eğitim Dergisi*, 1(2), 107-134. <http://dx.doi.org/>
- Çıtak, N. (2015). *Hesap verebilirlik: Accountability-AA1000 güvence standartları serileri*. İstanbul: Türkmen Kitabevi.
- Çokluk, Ö., Şekercioğlu, G. ve Büyüköztürk Ş. (2010). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve Lisrel uygulamalı*. Ankara: Pegem Yayınları.
- DeVellis, R. (2003). *Scale Development: Theory and applications*. Thousand Oaks: CA: Sage.
- Edwards, M. and Hulme, D. (1996). Too close for comfort? The impact of official aid on nongovernmental organizations. *World Development*, 24(6), 961-973.
- Field, A. (2005). *Discovering statistics using SPSS* (3rd Edition). California: SAGE.
- Friedman, I. A. (2002). Burnout in school principals: Role related antecedents. *Social Psychology of Education*, 5(3), 229-251.
- Göksoy, S. ve Çakır, S. (2021). Okul yöneticilerinin görev ve sorumlulukları ile ilgili hesap verebilirliği. N. Tüfekçi vd. (Ed.), *11th ECLSS Conferences on Language and Social Sciences* (s. 870-888) içinde. Kosovo: Gjakova.

- Hermann, K. R. (2016). *The Principal's role; distributed leadership*. Unpublished doctoral dissertation. Old Dominion University, USA.
- Himmetoğlu, B., Ayduğ, D. ve Bayrak, C. (2017). Eğitim örgütlerinde hesap verebilirliğe ilişkin okul yöneticilerinin görüşleri. *Turkish Online Journal Of Qualitative Inquiry*, 8(1), 39-68.
- Kalman, M. ve Gedikoğlu, T. (2014). Okul yöneticilerinin hesap verebilirliği ile örgütsel adalet arasındaki ilişkinin incelenmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 29(2), 115-128.
- Kantos, Z. E. (2010). *İlköğretim okulu yönetici ve öğretmenlerinin görüşlerine göre kamu ve özel ilköğretim okulları için bir hesap verebilirlik modeli*. Yayınlanmamış Doktora Tezi. Ankara Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Kantos, Z. E. (2013). *Eğitimde hesap verebilirlik*. Ankara: Berikan Yayınevi.
- Kluvers, R. (2003). Accountability for performance in local government. *Australian Journal of Public Administration*, 62(1), 57-69.
- Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel psychology*, 28(4), 563-575.
- Meydan, C. H. ve Şeşen, H. (2011). *Yapısal eşitlik modellemesi AMOS uygulamaları*. Ankara: Detay Yayıncılık.
- Marks, H. M. and Nance, J. P. (2007). Contexts of accountability under systemic reform: Implications for principal influence on instruction and supervision. *Educational Administration Quarterly*, 43(1), 3-37.
- Organisation for Economic Co-operation and Development. (1999). *European principles for public administration*, SIGMA PAPERS, No: 27. Erişim Tarihi: 21.11.2020, [https://www.oecd-ilibrary.org/governance/european-principles-for-public-administration\\_5kml60zwd7h-en](https://www.oecd-ilibrary.org/governance/european-principles-for-public-administration_5kml60zwd7h-en)
- Organisation for Economic Co-operation and Development. (2000). *Sigma external auditing & financial glossary*. Erişim Tarihi: 20.11.2020, <http://www.sigma web.org/ publicationsdocuments/35079748.pdf>
- Özen, Y. ve Gül, A. (2007). Sosyal ve eğitim bilimleri araştırmalarında evren-örneklem sorunu. *Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Dergisi*, (15), 394-422.
- Pallant, J. (2006). *SPSS kullanım kılavuzu* (Çev. S. Balcı ve B. Ahi). Ankara: Anı Yayıncılık.
- Ruffner, M. and Sevilla, J. (2004). Public sector modernisation: Modernising accountability and control, *OECD Journal on Budgeting*, 4(2), 123-141.
- Schermelleh-Engel, K., Moosbrugger, H. and Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74.
- Shafritz, J. M., Russel, E.W. and Borick, C. P. (2017). *Kamu yönetimini tanımak* (N. Öztaş, Çeviri Editörü). Ankara: Nobel Akademik Yayıncılık.
- Tabachnick, B., G. and Fidell, L., S. (2007). *Using multivariate statistics* (5th Edition). Pearson Education.
- Tavşancıl, E. (2002). *Tutumların ölçülmesi ve SPSS ile veri analizi*. Ankara: Nobel Yayıncılık.
- Tutar, H. ve Altınöz, M. (2017). Hesap verebilirlik bağlamında iç denetim ve sorun alanları: Eleştirel bir analiz. *Bartın Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 8(15), 225-248.
- World Bank (2004). *State-society synergy for accountability: Lessons for the World Bank*, World Bank Working Papers No: 30, Washington D.C. Erişim Tarihi: 28.05.2020, <http://documents.worldbank.org/curated/en/391351468763756949/pdf/297010PAPER0State1society0synergy.pdf>
- Yüksel, C. (2005). *Devlette etikten etik devlete: Kamu yönetiminde etik (Kavramsal çerçeve ve uluslararası uygulamalar)*. TÜSİAD Devlette Etik Alt Yapı Dizisi 1. İstanbul: TÜSİAD Yayınları. Erişim Tarihi: 08.05.2020, <https://tusiad.org/tr/ yayinlar/ raporlar/item/1922-devlette-etikten-etik-devlete-kamu-yonetiminde-etik-kavramsal-cerceve-ve-uluslararasi-uygulamalar-cilt---1>

# SEL in the Deveopmental Context: The Youth Assets as Promoting Factors for the Social-Emotional Learning

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 23.08.2022</p> <p>Available online: 11.12.2022</p>	<p>The strengths of young people should be addressed in the context of family and social assets as well as individual characteristics from an early age. It is thought that social-emotional learning (SEL) skills, one of the individual competency areas during adolescence, can be developed better when considering their ecological development levels. More emphasis was put on measurement, benefits, and increasing SEL in studies. However, more research is needed to understand the environmental factors influencing these skills. Examining the interaction of various youth developmental assets at the individual, family, and societal levels with SEL skills while accounting for demographic factors is also thought to be beneficial in several developmental study fields. This study aimed to examine the profile of youth developmental assets and SEL skills of young people in the preadolescent, their relationship with each other, and the level of difference according to some demographic variables. In addition, it aims to uncover youth assets that predict SEL skills at the individual, family, and social levels. The study included six hundred forty middle school students. Data was gathered using the SEL Skills Scale, the Youth Assets Survey, and a demographic sheet. Data were analyzed using correlational and regression analyses. The findings show that the participants' developmental assets, SEL skills, and demographics are related. Furthermore, it has been revealed that youth developmental assets significantly predict SEL skills. The findings are expected to contribute to research and practice studies in the areas of positive youth development, developmental systems, and resilience.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> SEL, youth assets, adolescent, positive youth development, social-emotional</p>

## Introduction

Overemphasis on developmental problems and pathologies during adolescence has been criticized, and positive youth development has emerged as an alternative approach. For this, integrated youth development was deemed necessary, focusing on developmental opportunities rather than dealing with a single youth

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problem. This approach emphasizes developmental models and the person-in-environment perspective of how young people learn, change and grow (Catalano et al., 2002). All young people, not just those with problematic behaviors, need to establish positive connections with family, school, and other institutions for healthy development (Vimont, 2012). Emphasizing social-emotional development within these connections is seen as a necessity rather than a privilege (Kline, 2022; Pearson, 2022).

SEL is one of the most important experiences for young people's social-emotional development. This process encompasses their health motivation, moral development, citizenship, academic learning, and achievement (Shek, Sun & Merrick, 2012). There is no agreement on which SEL skills are necessary or how they should be named and related to one another. SEL objectives may differ between schools, school districts, and even teachers. Rather than being a problem, this distinction highlights the compatibility of classifications in studies conducted for various purposes. It offers a rich and vibrant workspace in which to multiply options for the specific needs of a specific population and setting (Brush et al., 2021; Newman & Dusenbury, 2015). Although different approaches emphasize different competencies (Collaborative for Academic, Social, and Emotional Learning-CASEL, 2005; Elias et al. 1997), it can be said that these competencies are generally grouped in four areas (Korkut Owen, 2020), namely communication, problem solving, stress coping, and self-esteem enhancing skills. These skills can be defined as both protective factors and personal strengths/assets.

Social-emotional skills are critical to human development and long-term well-being. Investing in effective SEL programs has both economic and public health benefits (Jones, Crowley & Greenberg, 2017). SEL interventions improve social-emotional attitudes and behaviors, boost academic performance and happiness, and reduce risk and lawbreaking (Durlak et al., 2011; Kasikci & Ozhan, 2021; Taylor et al., 2017). Other studies that emphasize the benefits of SEL and scale development (Durlak et al., 2011; Mahoney, Durlak, & Weissberg, 2018; Mondy & Reynolds, 2021; Newman & Dusenbury, 2015) predominate in the literature. It is worth noting that studies are required to understand the factors that determine SEL and are associated with its emergence in order to make practical SEL applications.

In addition to the subject's importance, according to the most recent reports (Pearson, 2022), while 80% of teachers believe social-emotional development is as necessary as academic development, they believe the time allotted to it in schools is insufficient. Due to the intensive nature of curriculum applications, educators may not have time for this process. Perhaps there is a need for greater awareness of the indirect and environmental factors associated with SEL, as well as increased collaboration efforts to improve these factors. Furthermore, according to similar report of The National Institute for Health and Care Excellence (NICE, 2022), involving parents and families in the whole-school approach may result in better SEL development outcomes.

Since young individuals encounter developmental tasks in the context of SEL from early childhood (Newman & Dusenbury, 2015), they need to develop social-emotional skills, attitudes/behaviors, and academic skills (Durlak et al., 2011). Early childhood education and experiences may impact future positive outcomes and SEL (Hammer, Melhuish & Howard, 2018; Mondy & Reynolds, 2021). Therefore, the need to investigate SEL needs as early as possible (Mondy & Reynolds, 2021) has been emphasized more recently. Secondary school years are the most vulnerable period for young individuals encounter learning barriers regarding risky behaviors (Bosworth, 2015). In this regard, it is essential to conduct more research on middle school years to clarify the factors associated with SEL and risky behaviors.

When addressing young people's risk behaviors, prevention science integrates both protective and risk factors (Shek, Sun & Merrick, 2012). Despite conceptual differences (Vimont, 2012), developmental competencies regarded as protective factors contribute to both risky behavior prevention (Haegerich, 2016) and well-being (Catalano, 2004). A well-known youth assets model is the Forty Developmental Assets Model (Benson, 1997). Oman et al. (2010) established one of the more recent youth asset classifications. This

classification determined 17 assets at the individual, family, and social levels. In comparison to previous similar classifications, Youth Assets Survey (YAS) stands out because it meets the need for more valid and reliable outcome assessment tools, the asset dimensions are established based on large-sample studies, it offers higher reliability coefficients than its peers, and it is developed concurrently with developmental theories (Vimont, 2012). The Youth Assets Survey must be implemented in other societies in order to develop proactive interventions for young people because there is a greater need for research to understand the cultural and social bond of SEL, particularly in non-western societies (Brush et al., 2021).

Negative peer influences, misperceptions of social norms, academic difficulties in school, or an inability to manage negative emotions are all examples of social-emotional development issues that can lead to risky behavior (Center for Health and Safety Culture, 2018). It is arguable that the social-emotional competence domains of SEL, which are critical in overcoming these challenges, conceptually overlap with the majority of developmental assets' purposes (Taylor et al., 2017). Developmental youth assets provide a positive framework for young people's needs as they reach the challenging years of adolescence. This is a perspective that practitioners involved in community development and basic prevention studies will find very interesting (Vimont, 2012).

Environmental factors such as peer mentoring, school-wide policies, and family, and community connections should be addressed in studies to increase the SEL in adolescents (Domitrovich, Syvertsen & Calin, 2017). Again, it is believed that dealing with these skills is impossible in the absence of parental attitudes and peer perceptions (Bozkurt Yukcu et al., 2021). Furthermore, it is emphasized that school climate and safety, which may influence school engagement as well as individual-level competencies, should be considered (Hoskins & Schweig, 2022). Again, increasing family and community involvement is an important component of SEL applications. Beyond skill teaching in programs, generalization and reinforcement of SEL skills may be possible in a variety of settings in daily life, family, school, and society (Newman & Dusenbury, 2015). As a result, developmental assets are contexts that can improve SEL. While SEL is characterized by more individual characteristics, developmental assets are influenced by both environmental and individual factors.

Developmental relationships underpin the growth of social-emotional competence. These relationships are founded on the give-and-take experience of all parties involved, in accordance with the principle of reciprocity (Domitrovich, Syvertsen & Calin, 2017). Understanding social-emotional development in schools from a socio-ecological point of view is essential. To promote this growth, educators must understand and learn to work with multiple systems at the family, school, and community levels (Dysona, Howley, Shenc & Baekd, 2021; Theokas, 2005). Although there are some topics related to SEL, such as peer relationships and school climate, it is necessary to thoroughly examine its relationship with factors corresponding to ecological levels (Xu et al., 2022). Bronfenbrenner's (1986) ecological model has been widely used to study the factors affecting an individual's immediate and distant environment. According to the ecological model, social-emotional skills are one of the microsystem's protective-enhancing promotive factors. It covers features like coping, self-control, and self-esteem. Supportive parents for the mesosystem; a positive environment, supportive schools and peers for the ecosystem; and social participation are assets that correspond to the macro system (Alonso-Castrillo, 2021). It is stunning that SEL skills and developmental assets can be linked to almost every aspect of the ecological model. Individual, family, and social factors are both developmental assets and common features in the ecological model, and it is believed that these three levels can influence SEL skills.

Positive youth development (PYD) and resilience share characteristics with developmental youth assets. Educators and schools want students to develop internal strengths as resilience factors and external strengths as protective factors (Kline, 2022). Moreover, individual, familial, and non-familial factors that shape SEL skills, which are considered resilient child characteristics, correspond to levels of developmental assets

(Masten & Coatsworth, 1998). PYD structures such as increasing emotional and social intimacy-bonding and competence, developing mental-cognitive and moral competence, improving spirituality, hope, and social participation can be said to be developed for both YAS and SEL (Catalano et al., 2004). Again, the approaches to positive youth development and internal-external developmental factors share a common focus in terms of social skills, developmental assets growth, positive relationships, social support, and opportunities that strengthen assets (Taylor et al., 2017).

The fact that character structure, which contains a set of social-emotional skills, is context-specific and develops through relationships (Thomas, da Cunha, Santo, 2022). It must also be examined from the perspective of developmental systems (Lerner & Callina, 2014; Nucci, 2018). The effect of the macro system on adolescent development is highlighted by developmental systems theory, which emphasizes the complexity of human behavior rather than reducing it to a cause and effect relationship (Vimont, 2012). New research is needed in this field to increase mutually beneficial individual-context relationships (Lerner & Callina, 2014). Positive human development can occur in the intended way with the application of developmental science (Jelicic et al., 2007; Cited Vimont, 2012), which aims to increase strengths in individuals and contexts.

Demographic factors influence the level of developmental assets of young people in addition to social-emotional development (Davies, Crosby & Diclemente, 2009; Oman et al., 2017). Related research looks at the relationship between SEL and demographic factors like parental relationships, parent education, perceived income, gender, and age (Bozkurt Yukcu et al., 2021; Davies, Crosby, & Diclemente, 2009; Yldz & Kahraman, 2021). Among these, the difference of assets and SEL by school and gender stands out (Messer et al., 2021; Mondri & Reynolds, 2021). Girls and boys, in particular, are exposed to a variety of socialization environments that contribute to the development of gender-specific behaviors and cognitions (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). Additionally, because little-changing demographic characteristics such as socioeconomic status are regarded as important in the development of these competencies (Davies, Crosby, & Diclemente, 2009), it is worth looking into the school type variable related to the school life that young people attend for an extended period of time. It is regarded as critical to comprehending the relationship between relatively new secondary school-type phenomenon in Türkiye and the existence of both SEL and assets. As a result, the study included two consistent demographic variables in both the individual (gender) and contextual (school type) dimensions.

As a result, it is worth noting that SEL skills and the developmental assets surrounding these skills are related to comprehensive approaches such as positive youth development, resilience, and developmental systems as well as demographic factors. As previously stated, in addition to studying the consequences of SEL, it is necessary to reveal the possible developmental factors that influence these skills in greater detail. Therefore, the purpose of this study was to investigate the profile of developmental assets and SEL skills in young people, their relationship with one another, and the level of differentiation based on some demographic variables. Furthermore, it aims to reveal youth developmental assets at the individual, family, and social levels that predict SEL skills.

### **Methodology**

The method of the research process is described in this section. The study group, research model, data collection tools, and data analysis were all introduced, respectively.

#### **Model**

The study's quantitative correlational research model (Cherry, 2000) was purposed to investigate the degree to which variations in one or more variables correspond with changes in another variable. Surveys were used to collect statistical data that was included in the analysis.

## Study group

The data were collected through convenience sampling, a non-probability method, since the specific middle school students were readily available to the researcher's field study. It was aimed at reaching both the school types at the middle school level of the national education system in Türkiye. 673 middle school students attending 6-8th grades at five different middle and imam hatip middle schools in the city center were recruited for the study. The data analysis included 640 survey responses, with 33 answer sheets being excluded due to missing values. 288 (45%) of the research participants were female, while 349 (55%) were male. The research group included 203 sixth-grade students (31.7%), 219 seventh-grade students (34.2%), and 207 eighth-grade students (32.3%). 30 participants (4.7%) were aged 11, 162 participants (25.3%) were aged 12, 216 participants (33.8%) were aged 13, 199 participants (31.1%) were aged 14, and 17 participants (2.7%) were aged 15. The mean age was 13.02 (Sd=.94). The study was approved by the Bursa Uludag University Social and Human Sciences Research and Ethics Committee dated 26.11.2021 and under the recent protocol number E-92662996-044-37698.

## Data collection instruments

The following surveys were used to collect data. The study included rating scales and a demographic information sheet.

### Social Emotional Learning Skills Scale (SELSS)

The SELSS was developed by Kabakçı and Korkut-Owen (2010). The SELSS is a 40-items and 4-point Likert-type scale ("Totally suitable for me (4)" and "Not at all suitable for me (1)"). By exploratory and confirmatory factor analyses, it was determined that the scale had four factors (problem-solving of scale skills, communication skills, self-esteem enhancing skills, and coping skills). A high score on the scale indicates high competency in social-emotional learning skills. It was found that the measurement model had very good fit indices in the validity studies. The internal consistency coefficient of the scale is .88, and the test-retest reliability coefficient is .85 for the total score. "I relax by reading a book" and "When I have a problem, I try to solve it step by step" are statements among the sample items in the scale. This study's data found the overall scale alpha coefficient as  $\alpha = .92$ .

### Youth Assets Survey (YAS)

The YAS was developed by Oman et al. (2010) to assess 17 domains of social, familial, and individual developmental assets. A 61-item Likert-type scale (Except for two subscales with 1-5 points, all scales are 1-4 including statements such as "agree", "fits me", and "always true") structure with 17 components accounting for 65% of the variance was reached in the construct validation investigation. Internal consistency coefficients ranged from .55 to .92. The language equivalency coefficient was found as .84. in the Turkish adaption study (Kabakçı, 2018). Seventeen factors with factor loadings varying from .51 to .88 and accounting for 66% of the variance emerged, yielding outcomes that were remarkably comparable to the original survey. For the subscales, the Cronbach Alpha coefficients ranged from .52 to .92, and for the overall score, it was .90. The test-retest reliability coefficient during 2 weeks was .78. "You participate in out-of-school sports teams or groups" and "Most of the adults you know are good role models for you" are sample items from the survey. The reliability coefficients for this study were found between .52-.92 for subscales and to be .92. for sum score.

### Demographic Information Form

The researcher developed a demographic information form to collect data on the demographic characteristics of the participants, such as gender, grade level, and type of school.

## Data Analysis

The SPSS 28.0 program was used for data analysis. The data were statistically analyzed using the t-test, correlation, and regression calculations. The data's normality was assessed by taking into account the skewness and kurtosis criterion (George & Mallery, 2019) in the range of +2 to -2. The pairwise relationships were examined with the Pearson correlation coefficient, and the t-test was utilized to assess differences between the groups. In order to investigate the prediction effects of developmental assets on social-emotional learning skills, multiple hierarchical regression analysis was used. The assumptions were examined before performing the regression analysis. Multivariate normality and linearity were investigated with the scatterplot matrixes. The multicollinearity between independent variables was checked with VIF values less than 10 (VIF=1.34-1.52), tolerance values greater than .10 (TV=.66-.84), and medium and low binary correlations. Non-autocorrelation in the model was also analyzed (DW=1.82). The alpha level was set at .05.

## Findings

The findings of the data analysis conducted as part of the research are presented below. Along with descriptive statistics, the relationships between variables and the results of the regression analysis were presented.

The descriptive statistics for the research variables were shown in Table 1. The kurtosis (K) and skewness (S) coefficients were shown in addition to the mean and standard deviation values. The table also shows the relationships between developmental assets and social-emotional learning skills.

**Table 1.** Descriptive statistics and correlations

		SD	S	K	r
Family communication	3.08	.60	-.64	.22	.41**
Positive Peer Role Models	3.02	.64	-.55	-.17	.27**
Educ. asp. for the Future	3.70	.45	-1.52	1.72	.19**
Gen. asp. for the Future	3.31	.41	-.26	.04	.40**
Responsible choices	3.39	.50	-.78	.17	.40**
Community Involvement	2.67	.73	-.17	-.60	.46**
Cultural respect	3.17	.62	-.84	.69	.22**
Good health practices (Exercise/Nutrition)	3.12	.73	-.76	.10	.49**
Use of Time (Group/Sports)	2.52	.82	-.06	-.85	.42**
Use of Time (Religion)	3.07	1.11	.14	-.79	.32**
Religiosity	3.60	.48	-1.38	1.82	.28**
Non-parental A. Role Models	3.32	.59	-1.03	.98	.39**
School Connectedness	3.04	.74	-0.71	.00	.45**
Relationship with Mother	4.00	.40	-1.60	1.94	.38**
Relationship with Father	3.82	.60	-1.57	1.90	.41**
General Self-Confidence	3.44	.54	-1.20	1.62	.55**
Parental Monitoring	3.67	.47	-1.59	1.90	.31**
Social-Emotional Learning	3.08	.46	-.64	.75	-

\*\*p<.01; r=Social-emotional learning skills

According to the means of developmental assets, parental relationships/monitoring and educational aspirations assets scores of youth are high, with religiosity ranking second. The assets with the lowest average were time spent participating in sports and group relationships, followed by assets related to peer and academic contexts and participation in religious activities. Out of 17 assets, the means of community involvement and using time in group/sports activities are less than 3.00.



Furthermore, the relationships between developmental assets and social-emotional learning skills were moderate, ranging from .19 (Educ. asp. for the future) to .55 (General Self-Confidence).

In the Table 2, t-test results were provided to demonstrate whether developmental assets and social-emotional learning skills differ by gender and school type. This table also includes the mean values for the gender and school-type variables.

**Table 2.** Group differences between variables

	Gender				School type			
	F	M	t	Cohen's d	MS	IHMS	t	Cohen's d
Family communication	3.06	3.09	-.64	-.05	3.10	3.03	1.25	.11
Positive peer role models	3.11	2.95	3.24**	.26	3.04	2.96	1.46	.13
Educ. asp. for the future	3.76	3.66	2.83**	.22	3.76	3.58	4.00**	.40
Gen. asp. for the future	3.33	3.30	1.05	.08	3.31	3.33	-.57	-.05
Responsible choices	3.42	3.37	1.50	.12	3.42	3.32	2.16*	.19
Community involvement	2.59	2.73	-2.48*	-.20	2.60	2.84	-4.01**	-.33
Cultural respect	3.29	3.07	4.60***	.36	3.16	3.19	-.53	-.05
Good health practices (Exercise/Nutrition)	3.02	3.19	-3.02**	-.24	3.06	3.25	-2.93**	-.26
Use of time (Group/Sports)	2.40	2.60	-3.10**	-.25	2.47	2.62	-2.02*	-.18
Use of time (Religion)	2.70	3.37	-7.95***	-.63	2.83	3.66	-.9.17**	-.80
Religiosity	3.59	3.61	-.49	-.04	3.56	3.71	-3.94**	-.31
Non-parental A. role models	3.32	3.32	-.07	-.01	3.33	3.31	.30	.03
School connectedness	3.06	3.04	.32	-.03	3.03	3.08	-.78	-.07
Relationship with mother	3.99	4.02	-1.18	-.10	3.99	4.04	-1.41	-.12
Relationship with father	3.77	3.87	-2.09*	-.17	3.81	3.86	-1.06	-.09
General self-confidence	3.42	3.45	-.72	-.06	3.42	3.49	-1.46	-.13
Parental monitoring	3.77	3.59	5.06***	.40	3.69	3.62	1.58	.14
Social-emotional learning skills	3.09	3.08	.24	.02	3.04	3.16	-3.02**	-.26

MS=Middle School; IHMS=Imam Hatip Middle School; F=Female; M=Male

\*p<.05, \*\*p<.01, \*\*\*p<.001; r=Social-emotional learning skills

Table 2 presents that females' mean scores for positive peer role models (M= 3.11), education aspiration for the future (M=3.76), cultural respect (M=3.29), and parental monitoring (M=3.77) were higher than males'. Males' community involvement (M=2.73), good health practices (M=3.19), use of time (group/sports) (M=2.60), use of time (religion) (M=3.37), and relationship with father (M=3.87) mean scores higher than females. The effect size was medium in males' use of time (religion) asset. The remaining sizes for the other assets with significant differences were small.

Middle school students had higher means of responsible choices (M=3.42) and education for the future (M=3.76) than imam hatip middle school students. The effect sizes were both small. Students attending secondary imam hatip secondary school had higher means for community involvement (M=2.84), good health practices (M=3.25), use of time (Group/Sports) (M=2.62), religiosity (M=3.71), social-emotional learning skills (M=3.16), and use of time (Religion) (M=3.66). The effect sizes were small once more, with the exception of the last one, which had a large effect.

Multiple regression analysis was used to examine the predictive power of developmental assets on social-emotional learning skills. The findings are summarized in Table 3.

**Table 3.** The variables predicting social-emotional learning skills

	<b>B</b>	<b><math>\beta</math></b>	<b>t</b>
Constant	.263		2.003*
General self confidence	.217	.261	8.086***
Community involvement	.108	.183	5.503***
Relationship with Father	.094	.126	3.926***
School Connectedness	.098	.162	5.153***
Responsible choices	.098	.113	3.444***
Use of time (religion)	.038	.098	3.197**
Good health practices (Exercise/Nutrition)	.053	.086	2.511*
Parental monitoring	.070	.074	2.446*
Family communication	.056	.073	2.203*
Use of time (sports)	.037	.070	2.115*
Adjusted R <sup>2</sup> = .54; F=70.867***			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

The results of multiple regression analysis revealed ten regression models (Table 3). It was found that 10 of the 17 assets, including general self-confidence, community involvement, relationship with father, school connectedness, responsible choices, use of time (religion), good health practices (exercise/nutrition), parental monitoring, family communication, and use of time (sports), explained 54% of the total variance related to social-emotional learning skills ( $R^2=.54$ ). The F-test for overall model significance ( $F=70.867$ ;  $p<.001$ ) indicates a good fit. General self-confidence is the most prominent predictor variable with the highest standardized regression coefficient (.26). Community involvement (.18) and school connectedness (.16) are the predictor variables with the next highest standardized regression coefficients as the next most important variables. Relationship with father (.13), responsible choices (.11), use of time-religion (.10), good health practices-exercise/nutrition (.09), parental monitoring (.07), family communication (.07), and use of time-sports (.07) were the other important variables. As the model's predictive assets score increased, so did the social-emotional learning scores. Positive peer role models, educational aspirations for the future, cultural respect, religiosity, non-parental adult role models, relationship with mother, general aspirations for the future were the seven assets that not predictive and included in the regression model.

### Discussion and Conclusion

This study looked into the relationship between developmental assets and social-emotional learning skills. It was also investigated whether these variables' scores differed by gender and school type. The roles of developmental assets to predict social-emotional learning skills were also investigated. The findings of the study are discussed in greater detail below.

First, some of the assets' means were higher in the study group. Asset scores for developmental assets, parental relationships/monitoring, and educational aspirations were high. Time spent participating in sports and group/peer relationships had the lowest average. It is known that parental supervision and enthusiasm about education are important facts in Turkish society, particularly for this age group. Participation in groups/sports with a lower average and social participation may necessitate participation outside of academic hours. High educational expectations and entrance exams at the middle and high school levels may have influenced these participation rates. Another notable finding is that, while the participants' religiosity asset scores are among the highest, their use of time/religion means are among the lowest. Perhaps, in terms of age and developmental time, the participant group's experiences with assuming religious responsibilities in the pre-adolescent period might come to mind. Studies that reach similar conclusions about the social-emotional consequences of religiosity and spending religious time (Kimter, 2011) draw attention in this context.

Moreover, a study on the factors directly related to developmental assets (Oman et al., 2017) discovered that factors such as having a single-parent family and a lower parental education level influence the number of assets. The variables in question were not included in this study, and these characteristics of participants with similar demographic backgrounds may influence the presence of prominent assets.

Furthermore, significant and positive correlations were discovered between social-emotional learning skills and 17 developmental assets. The literature is covered by studies emphasizing the positive relationship between SEL and developmental assets (Domitrovich, Syvertsen & Calin, 2017; Hoskins & Schweig, 2022; Thomas, da Cunha, Santo, 2022). Both social and emotional learning and developmental assets are thought to be necessary when reducing risk behaviors and increasing protective factors (Center for Health and Safety Culture, 2018; Oman et al., 2010). In other words, both SEL and developmental assets share the feature of being desirable to increase in young people in order to reduce risk behaviors. In this regard, the fact that social-emotional skills are linked to all asset dimensions may imply that both competency domains serve as protective factors. Additionally, both competency categories are characteristics of young people's strengths in a positive sense (Kline, 2022; Taylor et al., 2017). It is to be expected that young people with strengths in individual, family, and environmental factors will also demonstrate competence in social-emotional aspects. Aside from that, Vimont (2012) claims that the person and environmental layers have reciprocal interactions. Given that developmental assets are mostly environmental, there is a positive interaction between SEL skills (which include all individual skills) and assets.

The analysis of demographic variables revealed gender and school-type differences. Females' positive peer role models, educational aspirations, cultural respect, and parental monitoring mean scores were higher than males'. In terms of community involvement, good health practices, use of time (group/sports), use of time (religion), and relationship with father, males had higher means than females. While the girls scored higher in empathy, close friends, and family-based assets, the boys scored higher in more extroverted and social participation-based assets. In addition to recent findings similar to this difference (Bozkurt Yukcu et al., 2021; Messer et al., 2021), there are findings showing that social-emotional factors do not differ by gender (Yıldız & Kahraman, 2021). Given the findings of this study, girls may be raised in a more self-controlled, sensitive, and seeking support from parents and peers, within the context of the effect of gender perception on socialization practices (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). The fact that men are perceived to be more self-confident when socializing about out-of-home practices (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999) may be interpreted as an encouraging factor for them to acquire the relevant assets. This is also a distinctive situation in Turkish society (Bozkurt Yukcu et al., 2021), and men are given more freedom. The fact that both genders have a high level of family-related assets suggests that children learn gender-specific behaviors from their parents. Observations made during interactions with them (Messer et al., 2021) may facilitate in the acquisition of assets.

The assets scores of responsible choices and educational aspirations of middle school students were higher than those of imam hatip secondary school students. Students attending imam hatip middle school had higher means for community involvement, good health practices, use of time (Group/Sports), religiosity, social-emotional learning skills, and use of time (Religion) than middle school students. The use of time (Religion) asset by Imam Hatip middle school students had a large effect size. The findings obtained at the middle school level, which has a unique school type classification, are remarkable when compared with the findings of Aslan (2022), one of the latest studies. Accordingly, friends have a slight influence on the choice of imam hatip middle school. Parents are more influential in the school decision. It has also been revealed that parents send their children to imam hatip middle school to acquire religious competency at an early age, develop their values, and receive education in a safe environment. In addition, it was found that a significant number of students believed that academic achievement was not high in these schools. When these findings

are compared, it becomes clear that the high level of responsible choices among secondary school students can be explained by taking into account the influence of parents on school preferences. Furthermore, when parents' perspectives are taken into account, it is possible that some values and religious motivation may have an effect on getting higher scores on assets and SEL skills. Because religious beliefs are one of the individual characteristics of resilience (Masten & Coatsworth, 1998), this finding may provide insight into the group's resilience. Imam hatip secondary school students' perceptions of success are also linked to lower educational aspiration scores.

In addition, subjects such as social responsibilities and religious content, emphasized as a requirement of the curriculum given in these schools, can contribute to the high level of assets such as group/sports participation at a more social level, giving importance to health and religious participation. However, given the study's positive correlation between SEL and developmental assets, SEL skills scores may have increased through acquiring these assets.

Among the findings, the low educational hope in imam hatip secondary schools is also remarkable. In a different study (Pearson, 2022), a significant ratio of teachers thought that the education system does not effectively support educational hopes and success in students. This may suggest that the expectations of the education system and educators may affect the academic expectations of students.

As a result of the multiple regression analysis performed to examine how developmental assets influence social-emotional learning, it was found that self-confidence, community involvement, school connectedness, relationship with father, responsible choices, use of time-religion, good health practices-exercise/nutrition, parental monitoring, family communication, and use of time-sports were explanatory assets. These assets have been revealed to be important variables contributing to the regression model.

According to the findings, it can be said that responsible choices, general self-confidence, good health practices are individual level assets and correspond to problem solving, self-esteem enhancing skills, and skills to cope with stress in the SEL framework, respectively. Among them, general self-confidence was the most important predictor outcome variable for SEL. One of the individual essential skills that make up SEL skills (Korkut Owen, 2020), is self-esteem-enhancing skills. Since the common point of both competence domains is that they are protective from risky behaviors (Aspy et al., 2012; Jones-McKyer, 2005), it is significant that both self-confidence and self-esteem come to the fore in the findings.

Moreover, it was noted that the predictive variables generally consisted of family-related assets such as relations with the father, parental monitoring, and family communication. Family activities and experiences have been linked to goal setting (Bowers et al., 2011), anger expression style, and self-concept (Korkut, 2012), all of which are social-emotional skills. It has also been found that adolescents' high level of SEL skills are dependent on their perception of their parents as accepting and supportive (Bozkurt Yukcu, et al., 2021). Adolescents who perceive their families as competent consistently tend to increase protective behaviors (Davies, Crosby & Diclemente, 2009). Resilient children's families include competent, warm families and a network of relationships with grandparents and other relatives (Masten & Coatsworth, 1998). The importance of kinship in Türkiye may be related to the prominence of family factors that determine SEL, which are also seen as resilience characteristics in the findings.

Furthermore, there are developmental assets at the social level in the predictive variables. Those regarding the use of time can be said to stand out among these. It can be stated that young people's participation in group activities, sports, and religious activities contributes positively to the development of social-emotional skills. Given the structure of SEL skills, it is clear that such participation activities may necessarily require the use of fundamental skills such as communication, problem-solving, and stress management while interacting with others.

Aside from the 10 variables that predict SEL in the regression model, it is worth noting that the first three important variables belong to the levels of individual, family, and society. This result demonstrates the significance of the individual's increasingly expanding environment in the ecological dimension (Bee & Boyd, 2020) while having social-emotional learning skills. As markers of a larger ecological system, developmental assets can also exist independently beyond being protective factors (Vimont, 2012). In this respect, it has been revealed again that the developmental assets generally associated with risky behaviors are also associated with positive outcomes regarding SEL skills.

Except for the variables included in the regression model, it was observed that some assets (positive peer role models, educational aspirations for the future, cultural respect, religiosity, non-parental adult role models, relationship with mother, general aspirations for the future) were not predictive of SEL. Considered SEL skills, according to Theokas et al., (2005), not all behaviors may always match the context. It is more important than that for individuals to have a flexible behavioral repertoire to respond well to changing opportunities and challenges.

As a result, the findings indicate that micro and macro environmental factors play an important role in the development of SEL skills, which is one of the individual characteristics that has received attention in recent years. Although SEL is important at all ages, one of the research's limitations is that it only includes middle school students. Furthermore, more comprehensive studies are needed to investigate the effects of environmental developmental assets on individual SEL characteristics via other variables. Future research should look into how environmental factors effect the development of SEL skills in different age groups, using both descriptive and experimental studies.

**Ethics Committee Approval:**

The study was approved by the Bursa Uludag University Social and Human Sciences Research and Ethics Committee dated 26.11.2021 and under the recent protocol number E-92662996-044-37698.

## REFERENCES

- Alonso-Castrillo, P.P. (2021). *Risk, protective and promotive factors for socio-emotional development of children living in poverty and its influence in learning settings A systematic literature review from 2010-2021*. Unpublished master thesis, Jönköping University, School of education and communication, Jönköping, Sweden.
- Aslan, O. (2022). *Öğrencilerin imam hatip lisesini tercih etmeme sebepleri (karaman ili örneği)* [The reasons for Imam Hatip secondary school graduate students not to prefer Imam Hatip high schools (Karaman province example)], Yayınlanmamış yüksek lisans tezi, İstanbul: İstanbul Sabahattin Zaim Üniversitesi.
- Aspy, C.B., Vesely, S.K., Oman, R.F., Tolma, E., Rodine, S, Marshall, L., Fluhr, J. (2012). School-related assets and youth risk behaviors: alcohol consumption and sexual activity. *Journal of School Health*, 82, 3-10.
- Bee, H. & Boyd, D. (2020). *Çocuk gelişim psikolojisi* [The Developing Child] (Çev. Okhan Gündüz). İstanbul: Kaknüs Yayınları.
- Benson, P. L. (1997). *All kids are our kids: what communities must do to raise caring and responsible children and adolescents*, California, USA: Jossey-Bass.
- Bosworth, K. (2015). Exploring the intersection of schooling and prevention science. In K. Bosworth (Ed.), *Prevention science in school settings complex relationships and processes* (pp. 1-15). Springer.
- Bozkurt Yükçü, et al. (2021). Ön ergenlik döneminde sosyal duygusal öğrenme becerileri, akran algıları ve ebeveyn tutum algılarının incelenmesi [Investigation of Social Emotional Learning Skills, Peer Perception and Parent Attitude Perception in Preadolescence], *Sosyal Bilimler Dergisi/The Journal of Social Science*, 8(53), 431-451.
- Bowers et al. (2011). The role of ecological assets in positive and problematic developmental trajectories. *Journal of Adolescence*, 34, 1151-1165.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723-742. <https://doi.org/10.1037/0012-1649.22.6.723>
- Brush, et al. (2021). Social and emotional learning: from conceptualization to practical application in a global context (pp. 43-71). In DeJaeghere J., Murphy-Graham E. (eds.), *Life skills education for youth. young people and learning processes in school and everyday life*, 5, Cham, Switzerland: Springer.
- Catalano et al. (2004). Positive youth development in the United States: research findings on evaluations of positive youth development programs, *The Annals of the American Academy of Political and Social Science*, 591, 98-124.
- Catalano, R.F., Hawkins, J. D., Berglund L., Pollard, J.A. & Arthur, M.W. (2002). Prevention science and positive youth development: competitive or cooperative frameworks? *Journal of Adolescent Health*, (31)6 supplement, 230-239.
- Center for Health and Safety Culture. (2018). *Social and emotional development as a strategic approach to reduce risk factors and bolster protective factors associated with underage drinking*. (Research Summary). Retrieved from <https://www.ParentingMontana.org>.
- Cherry, A.L. (2000). *Research Primer For The Helping Professions: Methods, Statistics, and Writings*. Belmont, CA: Brooks/Cole
- Collaborative for Academic, Social, and Emotional Learning. (2005). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning (SEL) programs*. Erişim adresi: <https://files.eric.ed.gov/fulltext/ED505373.pdf>
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2012). *2013 CASEL guide: Effective social and emotional learning programs, preschool-elementary edition*. Chicago: CASEL.
- Davies, S.L., Crosby, R.A., Diclemante, R.J. (2009). Family influences on adolescent health. In R. J. DiClemente, et al. (Eds.), *Adolescent health: understanding and preventing risk behaviors* (pp. 391-406). John Wiley & Sons.
- Domitrovich, C.E., Syvertsen, A. K. & Calin, S. S. (2017). *Promoting social and emotional learning in the middle and high school years*. Edna Bennett Pierce Prevention Research Center, Pennsylvania State University.

- Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D. & Schellinger, K.B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1): 405–432.
- Dysona, B., Howley, D., Shenc, Y. & Baekd, S. (2021). Educators' experiences of establishing social and emotional learning pedagogies in an elementary school with at-risk students, *International Electronic Journal of Elementary Education*, 13(5), 625-638.
- Elias, M.J. et al. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- George, D. & Mallery, P. (2019). *IBM SPSS statistics 25 step by step: a simple guide and reference*, fifteenth edition, New York, NY: Routledge.
- Hammer, D., Melhuish, E. & Howard, S.J. (2018). Antecedents and consequences of social-emotional development: a longitudinal study of academic achievement, *Archives of Scientific Psychology*, 6, 105–116.
- Hoskins, J. E. S. & Schweig, J. D. (2022). SEL in context: school mobility and socialemotional learning trajectories in a low income, urban school district, *Education and Urban Society* 1–37. DOI: 10.1177/00131245221106735
- Jones, D., Crowley, D. M., & Greenberg, M.T. (2017). *Improving social emotional skills in childhood enhances long-term well-being and economic outcomes*, Edna Bennet Pierce Prevention Research Center, Pennsylvania State University.
- Jones-McKyer, E.L.L. (2005). *Relationships among developmental assets, age and smoking behaviors among youth*. Unpublished doctoral dissertation, Indiana University.
- Kabakçı, Ö.F. & Korkut-Owen, F.. (2010). A Study of Development of Social Emotional Learning Skills Scale, *Education and Science*, 35(157), 152-166.
- Kabakçı, Ö.F. (2018). *Gelişimsel kazanımlar gençlik ölçeği'nin uyarlanması (The adaptation of the youth assets survey)*. VIII. Uluslararası Eğitimde Araştırmalar Kongresi, VIII. International Congress on Research in Education (ICRE) Tam metin kitabı, 9-11 MAYIS 2018, Manisa: Manisa Celal Bayar Üniversitesi, 492-495.
- Kasikci, F. & Ozhan, M. B. (2021). Prediction of academic achievement and happiness in middle school students: the role of social-emotional learning skills. *i.e.: inquiry in education*, 13(2), Article 15, 1-22. Retrieved from: <https://digitalcommons.nl.edu/ie/vol13/iss2/15>
- Kımtır, N. (2011). Üniversiteli Gençlerde Dindarlık İle Benlik Saygısı Arasındaki İlişki Üzerine Bir Araştırma [A Research on Connections between Religiousness and Self-Esteem of University Youth], *Çankırı Karatekin Üniversitesi SBE Dergisi* 2(2), 39-60.
- Kline, M. (2022). *Okullarımızı travmaya dayanıklı kılmak için beyin değiştiren stratejiler iyi oluş hali için kalp merkezli bir hareket Brain-changing strategies to trauma-proof our schools a heart-centered movement for wiring well-being*. Ankara: Nobel yayıncılık.
- Korkut, Ş. (2012). *Lise öğrencilerinde çocukluk örselenme yaşantıları ve öfke ifade biçimleri ile benlik saygısı ve yaşam doyumu arasındaki ilişkilerin incelenmesi [Investigate the relationship between childhood traumatic experience of high school students and the anger expression styles, self-esteem, life satisfaction]*. Yayınlanmamış yüksek lisans tezi, Çukurova Üniversitesi.
- Korkut Owen, F. (2020). *Okul temelli önleyici rehberlik ve psikolojik danışma [School-based preventive guidance and counseling]*. Ankara: Anı Yayıncılık.
- Leadbeater, B.J., Kuperminc, G.P., Blatt, S.J. & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems, *Developmental Psychology* 35(5), 1268-1282.
- Lerner, R. M., & Callina, K. S. (2014). The study of character development: Towards tests of a relational developmental systems model. *Human Development*, 57, 322–346. <https://doi.org/10.1159/000368784>
- Mahoney, J.L., Durlak, J.A., Weissberg, R.P. (2018). An update on social and emotional learning outcome research. *Phi Delta Kappan*, 100, 18–23. doi: 10.1177/0031721718815668.


- Masten, A. S. & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments lessons from research on successful children, *American Psychologist*, 53(2), 205-220.
- Messer, L.C., Halladay, C., Hofert, G. and Sheppard, B.K. (2021), Youth assets and associations with adolescent risk taking. *Journal of School Health*, 91, 37-49.
- Mondi, C.F. & Reynolds, A.J. (2021). Socio-emotional learning among low-income prekindergarteners: the roles of individual factors and early intervention, *Early Education and Development*, 32(3), 360-384, DOI:10.1080/10409289.2020.1778989.
- Newman, J., & Dusenbury, L. (2015). Social and emotional learning (SEL): A framework for academic, social, and emotional success. In K. Bosworth (Ed.), *Prevention science in school settings complex relationships and processes* (pp. 287–306). Springer.
- NICE guideline (2022). *Social, emotional and mental wellbeing in primary and secondary education*
- Nucci, L. (2018). Character: A developmental system. *Child Development Perspectives*. 13(2), 73-78.
- Oman, R.F. et al. (2017). Demographic factors predict disparities in number of assets youth possess. *American Journal of Health Behavior*, 41(5):652-660. doi:10.5993/AJHB.41.5.14.
- Oman, R. F. et al. (2010). Reliability And validity of the youth asset survey: An update. *American Journal of Health Promotion*, 25(1), 13-24.
- Shek, D.T.L., Sun, R.C.F., & Merrick, J. (2012). Editorial positive youth development constructs: conceptual review and application, *The ScientificWorld Journal*, Article ID 152923, 1-3. doi:10.1100/2012/152923
- Taylor, R.D., Oberle, E., Durlak, J.A. & Weissberg, R.P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects. *Child Development*, 88(4), 1156–1171.
- Theokas, C. et.al. (2005). Conceptualizing and modeling individual and ecological asset components of thriving in early adolescence. *Journal of Early Adolescence*, 25(1), 113-143. DOI: 10.1177/0272431604272460
- Thomas, K.J., da Cunha, J. & Santo, J.B. (2022). Changes in character virtues are driven by classroom relationships: a longitudinal study of elementary school children. *School Mental Health*, 14, 266–277. <https://doi.org/10.1007/s12310-022-09511-8>
- Xu, M., MacDonnell, M., Wang, A., & Elias, M. J. (2022). Exploring social-emotional learning, school climate, and social network analysis. *Journal of Community Psychology*, 1-19. <https://doi.org/10.1002/jcop.22881>
- Vimont, M. P. (2012). Developmental systems theory and youth assets: A primer for the social work researcher and practitioner. *Child & Adolescent Social Work Journal*, 29(6), 499–514. <https://doi.org/10.1007/s10560-012-0271-3>
- Yıldız, A. & Kahraman, S. (2021). Ortaokul Öğrencilerinde Psikolojik Dayanıklılık, Sosyal Duygusal Öğrenme Becerileri ve Yaşam Doyumu Arasındaki İlişki [The Relationship between Resilience, Social Emotional Learning Skills and Life Satisfaction in Secondary School Students], *Okul Psikolojik Danışmanlığı Dergisi*, 4(2), 23-60.





# Examining The Relationship Between Teachers' Emotion Regulation Skills and Classroom Management Competencies

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 25.08.2022</p> <p>Available online: 27.12.2022</p>	<p>This study aims to reveal the relationship between teachers' emotion regulation skills and classroom management competencies. The relational survey model, one of the quantitative research approaches, was used. Three hundred forty-seven teachers, selected by convenience sampling method, working in the central districts of Isparta province in the 2021-2022 academic year, participated in the research. Data were collected online using the "Emotion Regulation Skills Assessment Scale" and the "Classroom Management Competence Scale". As a result of the research, it was determined that male teachers had a relatively similar level of skill deficiency compared to their female colleagues, and there was no significant difference. In addition, it was concluded that the variables of seniority, age, professional field and school type did not make a significant difference in teachers' emotion regulation skills and classroom management competence. The multiple linear regression analysis results showed that teachers' emotion regulation skills predicted their classroom management competencies positively and significantly.</p>
	<p>© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> Emotion regulation, emotion regulation skills, classroom management</p>

## Introduction

Schools are complex and emotional arenas constantly beset by the emotional demands of teachers,

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peers, students, administrators, and parents (Sachs & Blackmore, 1998). As a matter of fact, teachers are inevitably exposed to many sensory stimuli and experience emotions during the teaching process, which includes many components and has a complex structure. It is possible to find a significant number of studies focusing on the role of emotions in the teaching process and the personal life of teachers. Rather than examining emotions as a sub-unit of teaching in different forms, researchers working on teacher emotions have a common view that emotions have a crucial role in the teaching and learning process (Hargreaves, 1998; Nias, 1996). Emphasizing the critical role of emotions in learning and teaching, it has been stated that emotions are the heart of teaching (Hargreaves, 1998). The emotional experiences experienced in this process vary depending on the internal and external emotional stimuli that individuals are exposed to. While a noisy and disturbing classroom environment may cause the teacher to feel anger as an external stimulus, negativity experienced by the teacher in his personal life may cause him to feel anger in the classroom environment as an internal stimulus. On the contrary, it can cause a feeling of pride and happiness when students achieve a targeted learning outcome or when a student who has graduated from a teacher visits her/him. It can also be seen that emotions have a significant impact on how successful people will be in their personal and professional lives (Frenzel, Goetz, Stephens & Jacob, 2009; Mikolajczak, Tran, Brotheridge, & Gross, 2009). Therefore, in the context of education and training, all the emotional stimuli that teachers are exposed to daily and the reactions they show can be expressed as one of the factors affecting their performance in their professional lives (Hargreaves, 1998; Frenzel et al., 2009).

Although emotion regulation has been one of the focal points of studies in psychology until today, the fact that teachers and students are in emotional communication with each other in both in-school and out-of-school environments shows that emotion regulation is also in the educational field. Therefore, the emotional processes experienced have a critical effect on the education process in various aspects (Jacobs & Gross, 2014; Yaşar, 2008). Teachers attempt to have control over their emotions in order to manage classroom and discipline issues. While they are expected to have the desired level of competence in terms of field and pedagogical knowledge, the emotion regulation skills they have are mostly neglected (Yaşar, 2008). From this point of view, focusing on the emotion regulation skills of teachers in the teaching process and trying to make sense of it will make significant contributions to this field (Sutton, Mudrey Camino, & Knight, 2009). Although emotion regulation and classroom management are two different subject areas, the inclusion of emotion regulation skills in classroom management as an influential factor in achieving the goals of teaching activities will fill the conceptual gap in the field of management and discipline in educational activities and gain a different dimension, innovation and perspective (Emmer & Stough, 2008; 2001).

Although many studies are focusing on the role of emotions in the teaching process and personal life of teachers, it is stated that many dimensions of the subject need to be brought to the literature and should be examined because emotion regulation skills are a relatively new subject area in the international and national field and need to be studied. Emotion regulation skills have a dynamic structure that varies according to the demographic characteristics of individuals. For this reason, it is seen that emotion regulation skills should be examined in different contexts, and it is an essential and unexplored subject that needs to be studied in many ways in the professional life of teachers. Using analysis of variance and multiple linear regression analysis, this study aims to contribute to understanding the nature of the relationship between teachers' emotion regulation skills and classroom management skills. Therefore, this research is designed to address the following research questions:

- Do teachers' emotion regulation and classroom management skills differ according to demographic variables?
- How do teachers' emotion regulation skills affect their classroom management skills?

### **Conceptual Framework**

**Emotion Regulation.** While trying to draw a conceptual framework for emotions, Lazarus (1994, p.38) defines emotions as "psycho-physiological responses to ongoing interactions with the environment". At the same time, emotions are explained as individuals' evaluation of the events they encounter externally or internally in certain ways. As a result, they show some reaction tendencies that include experiential, behavioral, and neurobiological systems (Gross & Thompson, 2007), while they are seen as complex phenomenon that consists of many components, including biological and cognitive (Frijda, 1987).

People experience many positive or negative emotional states daily by being exposed to a stimulus that activates their emotions. Since they are a part of our daily life, avoiding them is impossible. In addition, these feelings are felt stronger under certain conditions. These intensely felt emotional states bring with them the feeling of easing the intensity of that emotion or destroying that emotion. In this case, it creates the need to manage, control, and rearrange these emotions, which are felt intensely.

"Emotion regulation refers to the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. Emotion regulatory processes may be automatic or controlled, conscious or unconscious, and may have their effects at one or more points in the emotion generative process" (Gross, 1988, p. 275).

Emotion regulation, which is responsible for monitoring, evaluating, and changing emotional reactions as an internal and external process, is also the process responsible for achieving a particular goal (Thompson, 1991; 1994). When emotions are regulated successfully, immediate reactions, which are part of the emotional process and have a negative effect on reactions, are suppressed, and emotion regulation plays a vital role in reaching the long-term goal of the person (Sutton, 2003). The goals are achieved by monitoring, evaluating, and regulating emotions, consciousness, and behaviors, and all these processes form the basis of emotion regulation. When teachers' teaching purposes are considered, it can be stated that they cover many academic and social areas and purposes, such as discipline, classroom management, and interpersonal communication. Teachers may choose to regulate their emotions, thinking that their emotions will help them achieve a specific teaching purpose. For teachers who believe that emotion regulation will help them achieve the goals they have set, emotion regulation is a sub-goal or a tool that enables them to reach a larger goal (Sutton, 2004).

**Emotion Regulation and Classroom Management.** Considering that the school and classroom environment are areas where all the stakeholders of education are active, many emotional states are encountered in the face of different events in these environments. When the literature is examined, studies examining the relationship between teachers' emotion regulation and classroom management skills are not frequently encountered. However, the studies examined showed that teachers seek ways to moderate emotion regulation to achieve an effective or ideal emotional appearance in the classroom environment (Sutton, 2004). Studies have also revealed that emotion regulation skills are essential for teachers to achieve their goals of academic expertise, social development, management, discipline, and emotional relations with students and that emotion regulation should be considered in studies to be conducted on these issues. Studies reveal that teachers prefer to use emotion regulation methods because they believe that emotion regulation methods make them feel more competent regarding classroom management, discipline, and relations with students. They have also suggested that studies and arrangements should be made in this direction since the relationship between teachers' emotions, classroom management, and teaching activities in the teacher education process is ignored (Sutton, Mudrey-Camino, & Knight, 2009).

In the field of education, studies focusing on the relationship between teachers' emotions in the educational process, classroom management, and educational activities in educational psychology are remarkably limited (Emmer & Stough, 2001). At this point, besides the few studies examining the relationship between emotion regulation and classroom management in different contexts (Gong, Chai, Duan, Zhong & Jiao, 2013), the number of studies in the context of Turkey is also very limited. In the Turkish context, it is

among the significant results that negativity experienced in terms of emotion regulation negatively affects many factors that impact the teaching process, such as motivation, effective communication, discipline, classroom management, and mental well-being in terms of teachers and students. In contrast, emotion regulation is crucial in providing discipline and classroom management (Ariğa, 2017).

## Methodology

### Research Design

The research aims to determine the relationship between teachers' emotion regulation skills and classroom management competencies. In accordance with the purpose of the study, the relational survey model will be used in the study. Relational researches are research design aimed at determining whether there is a relationship between two or many variables (Karasar, 2009).

### Sampling

The population of this research consists of teachers working in a total of 150 schools, including all primary schools, secondary schools, and high schools in the city center of Isparta, in the 2021-2022 academic year. Considering the generally accepted 95% confidence level and the 5% margin of error, the minimum sufficient sample size was calculated as 320 (Field, 2009). In this research, after listing the schools in the universe, the administrators of the selected schools were contacted. The school principals were asked to share scales online with teachers selected by convenience sampling strategy. After removing the erroneous and incomplete codes from the collected data, the remaining 347 teachers formed the research sample. Information on the demographic characteristics of the teachers participating in the study is shown in Table 1.

**Table 1.** Distribution of participants according to demographic characteristics

Variables					
Teachers' Demographic Characteristics	Gender		Female	Male	
		<i>n</i>	182	165	
		%	52.4	47.6	
	Age		21- 30	31- 40	41- 50
					51 years and older
		<i>n</i>	129	88	97
		%	37.2	25.4	28.0
	School Type		Kindergarten	Primary School	Secondary School
					High School
		<i>n</i>	19	70	174
		%	5.5	20.2	50.1
	Seniority		1-5	6- 15	16- 25
					26+
Teachers' Demographic Characteristics	Seniority	<i>n</i>	125	93	99
		%	36.0	62.8	28.5
	Professional Field		Numerical	Verbal	Applied Courses
		<i>n</i>	89	127	131
		%	25.6	36.6	37.8

### Data Collection Tools

In the research, (a) Personal Information Form was used for the demographic information of the teachers. (b) Emotion Regulation Skills Assessment Scale (Vatan & Oruçlular Kahya, 2018) in order to determine the emotion regulation skills of teachers, and (c) Classroom Management Proficiency Scale (Çetin,

2009) to determine classroom management competencies were used. The scales were sent to the participants online via Google Forms.

**Personal Information Form.** In order to collect data on the demographic information of the participants in the research, gender, type of school, branch, age, and professional seniority are included.

**Emotion Regulation Skills Scale (ERSS).** Five-point Likert Scale used in the study was developed by Berking and Znoj (2008) and adopted to Turkish by Vatan and Oruçlular Kahya (2018) to evaluate emotion regulation skills with 27 items including sub-dimensions as attention, sensations, clarity, understanding, acceptance, tolerance, confrontation, self-support, modification. In addition, the measurement tool can be evaluated on the average of the total score, including all scale items (Radkovsky, McArdle, Bockting & Berking, 2014). The scale is rated in the range of "0=Never" and "4= Almost Always". In the reliability analysis, the internal consistency coefficient was calculated as .85 for the whole scale with the sub-dimensions of attention, sensations, clarity, understanding, acceptance, tolerance, confrontation, self-support, and modification.

**Classroom Management Proficiency Scale.** The scale is a five-point Likert-type (1= Never, 5= Always) graded scale of 47 items developed by Çetin (2009). The scale consists of 5 sub-dimensions as "maintaining physical order", "instructional management", "time management", "organizing classroom relationships", and "behaviour development and regulation". The internal consistency coefficient of the scale was determined as .86.

### Data Collection and Procedure

The research data was collected online in the 2021-2022 academic year. In the data analysis process, since analyses will be carried out primarily on the total item averages, the extreme values and normality were examined over these average scores. The z-score was calculated for univariate outliers control. In the Z score, there was no value below or above the values of +3.3 and -3.3 in the total item averages of both scales. In addition, the box graph was examined in the extreme value control. In the box graph where the inter-quartile range rule multiplier was determined as 2.2, no extreme value was found. For the normality analysis of the data, first of all, skewness and kurtosis values were analyzed and examined separately at each group level. It was observed that the calculated values for each group were between  $\pm 1.5$  values (Tabachnik & Fidell, 2013), which are considered normal distributions. When it was determined that the values were suitable for analysis, a t-test for gender and one-way analysis of variance (ANOVA) for other categorical variables were performed to test whether the differences between the groups were significant or not. Bonferroni was adapted by dividing the p-value by the number of comparisons; if the significance level was less than 0.004, it was considered significant. Stepwise regression analysis that can be a useful strategy in a research scenario "where there is a large number of independent variables to include in a multiple regression analysis and the purpose may be to identify a smaller number of variables that predict the dependent variable in a unique way" (Gignac, 2019, p.c14.21), was also conducted in order to reveal which of the emotional regulation skills dimensions predicted classroom management competence. In this aspect, the purpose of choosing this method in this research is to reveal which dimensions affect classroom management in a unique way since the emotion regulation test, composed of nine dimensions, basically aims to reveal a psychological deficiency and discomfort.

The reliability of the collected data was calculated by Cronbach's Alpha internal consistency coefficient, demographic variables by percentage and frequency analysis, and emotion regulation skills and classroom management proficiency levels by descriptive statistics.

### Results

**Table 2.** Results of "t-test" showing teachers' emotion regulation skills and classroom management competencies according to gender

	Gender				<i>t</i>	<i>p</i>
	Female		Male			
	n=182		n=165			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion regulation skills						
Attention	3.84	0.71	3.97	0.63	-1.683	.093
Sensations	3.19	0.75	3.35	0.80	-1.824	.069
Clarity	3.29	0.75	3.33	0.74	-.403	.687
Understanding	3.78	0.65	3.80	0.63	-.229	.819
Acceptance	2.99	0.70	3.09	0.76	-1.282	.201
Tolerance	3.11	0.94	3.19	0.96	-.747	.456
Confrontation	3.12	0.75	3.15	0.81	-.367	.714
Self-support	3.12	0.76	3.15	0.81	-.335	.738
Modification	2.98	0.73	3.05	0.78	-.874	.383
Classroom management competencies						
Maintaining physical order	3.93	0.54	3.87	0.58	.877	.381
Instructional management	4.11	0.45	3.99	0.49	2.302	.022
Time management	4.21	0.58	4.10	0.56	1.909	.057
Organizing classroom relationships	4.05	0.39	4.02	0.42	.739	.460
Behavior development and regulation	3.97	0.46	3.96	0.46	.341	.733

Independent sample t-test was applied to compare teachers' perceptions of Emotion Regulation skills and Classroom Management competencies by gender (Table 2). Accordingly, when emotion regulation skills are examined, men have slightly higher mean scores than women in all dimensions; however, with a similar level of skill deficiency, there is no significant difference ( $p>.004$ ). When the teachers' competencies in classroom management were examined, it can be seen that even if women have higher scores than men in all dimensions, there is no statistically significant difference between men and women in terms of classroom management competencies ( $p>.004$ ).

**Table 3.** Results of the "ANOVA" test showing teachers' emotion regulation skills and classroom management competencies according to the seniority

	Seniority								<i>F</i>	<i>p</i>
	1-5		6-15		16-25		26+			
	n=125		n=93		n=99		n=30			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion regulation skills										
Attention	3.87	0.66	3.92	0.72	3.93	0.65	3.88	0.68	.172	.915
Sensations	3.15	0.78	3.33	0.75	3.31	0.79	3.39	0.75	1.501	.214
Clarity	3.18	0.77	3.42	0.74	3.35	0.74	3.37	0.65	2.049	.107
Understanding	3.75	0.63	3.85	0.71	3.79	0.59	3.73	0.63	.514	.673
Acceptance	3.01	0.75	3.10	0.73	3.02	0.74	3.11	0.58	.407	.748
Tolerance	3.06	0.89	3.16	1.00	3.24	0.98	3.12	0.90	.694	.556
Confrontation	3.03	0.81	3.19	0.81	3.14	0.73	3.40	0.69	2.011	.112
Self-support	3.03	0.81	3.19	0.79	3.13	0.75	3.39	0.68	1.993	.115
Modification	2.99	0.79	3.07	0.77	2.98	0.74	3.10	0.62	.401	.752
Classroom management competencies										
Maintaining physical order	3.89	0.57	3.82	0.55	3.96	0.54	3.98	0.54	1.289	.278
Instructional management	4.05	0.44	4.02	0.52	4.08	0.43	4.05	0.54	.302	.824
Time management	4.16	0.56	4.14	0.55	4.16	0.60	4.22	0.57	.150	.930
Organizing classroom relationships	4.08	0.41	3.99	0.41	4.05	0.36	3.95	0.49	1.540	.204

Behavior development and regulation	3.91	0.48	3.96	0.46	4.02	0.40	4.04	0.52	1.511	.212
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Table 3 presents descriptive statistics of ANOVA results by seniority related to teachers' emotion regulation skills and classroom management competencies. Accordingly, no statistically significant difference was found in emotion regulation skills dimensions based on seniority ( $p>.004$ ). Similarly, no statistically significant difference was observed when classroom management competencies based on seniority were examined ( $p>.004$ ).

**Table 4.** Results of the "ANOVA" test showing teachers' emotion regulation skills and classroom management competencies according to the age

	Age Group								<i>F</i>	<i>p</i>
	21-30		31-40		41-50		51+			
	<i>n</i> =129		<i>n</i> =88		<i>n</i> =97		<i>n</i> =33			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion regulation skills										
Attention	3.89	0.64	3.92	0.74	3.90	0.65	3.90	0.69	.056	.983
Sensations	3.16	0.77	3.30	0.80	3.36	0.76	3.34	0.71	1.527	.207
Clarity	3.18	0.77	3.42	0.78	3.36	0.68	3.36	0.71	2.174	.091
Understanding	3.75	0.62	3.84	0.73	3.82	0.58	3.69	0.64	.712	.545
Acceptance	2.97	0.75	3.11	0.75	3.07	0.72	3.05	0.57	.710	.547
Tolerance	3.05	0.85	3.18	1.05	3.27	0.98	3.06	0.89	1.121	.340
Confrontation	3.02	0.81	3.16	0.81	3.21	0.72	3.31	0.73	1.770	.153
Self-support	3.02	0.81	3.16	0.81	3.20	0.73	3.30	0.72	1.775	.152
Modification	2.97	0.80	3.06	0.79	3.03	0.71	3.03	0.62	.239	.869
Classroom management competencies										
Maintaining physical order	3.90	0.56	3.81	0.58	3.96	0.54	3.99	0.54	1.481	.219
Instructional management	4.05	0.46	4.04	0.49	4.07	0.45	4.04	0.52	.070	.976
Time management	4.18	0.55	4.17	0.55	4.10	0.61	4.22	0.56	.505	.679
Organizing classroom relationships	4.07	0.42	4.02	0.40	4.04	0.35	3.96	0.49	.698	.554
Behavior development and regulation	3.91	0.49	3.97	0.44	4.02	0.42	4.01	0.51	1.022	.383

In Table 4, descriptive statistics of teachers' emotion regulation skills and classroom management competencies according to age variable and ANOVA results related to age variable are presented. Accordingly, depending on the age variable, no statistically significant difference was found in emotion regulation skills ( $p>.004$ ). Similarly, when age-related findings on classroom management competencies were examined, no statistically significant difference was found ( $p>.004$ ).

**Table 5.** Results of the "ANOVA" test showing teachers' emotion regulation skills and classroom management competencies according to the school type

	School Type								<i>F</i>	<i>p</i>
	Kindergarten		Primary		Secondary		High school			
	n=19		School		School		n=84			
			n=70		n=174					
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion regulation skills										
Attention	3.98	0.45	3.83	0.75	3.96	0.66	3.82	0.68	1.236	.297
Sensations	3.30	0.80	3.25	0.84	3.22	0.74	3.37	0.78	.720	.541
Clarity	3.44	0.71	3.15	0.77	3.33	0.77	3.37	0.67	1.471	.222

Understanding	3.61	0.66	3.85	0.60	3.79	0.63	3.77	0.68	.718	.542
Acceptance	3.00	0.75	3.00	0.71	3.03	0.76	3.10	0.67	.300	.826
Tolerance	2.84	1.01	3.10	0.87	3.16	0.90	3.23	1.07	.921	.431
Confrontation	3.18	0.81	3.11	0.78	3.03	0.77	3.37	0.75	3.668	.013
Self-support	3.18	0.81	3.07	0.81	3.03	0.77	3.37	0.75	3.832	.010
Modification	2.98	0.90	3.02	0.74	3.00	0.78	3.07	0.68	.181	.909
Classroom management competencies										
Maintaining physical order	4.06	0.52	3.93	0.57	3.87	0.54	3.91	0.58	.787	.502
Instructional management	4.23	0.51	4.01	0.43	4.07	0.49	4.01	0.45	1.462	.225
Time management	4.28	0.61	4.15	0.57	4.11	0.57	4.23	0.55	1.186	.315
Organizing classroom relationships	4.29	0.33	3.96	0.41	4.05	0.40	4.03	0.41	3.453	.017
Behavior development and regulation	4.20	0.47	3.93	0.48	3.96	0.44	3.96	0.47	1.797	.147

The ANOVA test results, which show the variation of teachers' emotion regulation skills and classroom management competencies depending on the school type variable, are presented in Table 5. Accordingly, no significant difference was found in teachers' emotion regulation skills depending on the school type variable ( $p>.004$ ). There was no significant difference in teachers' classroom management competencies depending on the school type variable ( $p>.004$ ).

**Table 6.** Results of the "ANOVA" test showing teachers' emotion regulation skills and classroom management competencies according to the professional field

	Professional Field						<i>F</i>	<i>p</i>
	Numerical n=89		Verbal n=127		Applied Courses n=131			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion regulation skills								
Attention	3.94	0.63	3.99	0.65	3.79	0.71	2.878	.058
Sensations	3.26	0.78	3.26	0.79	3.28	0.76	.033	.967
Clarity	3.26	0.72	3.44	0.75	3.22	0.75	3.204	.042
Understanding	3.85	0.62	3.74	0.63	3.79	0.66	.870	.420
Acceptance	3.09	0.66	2.93	0.75	3.11	0.75	2.224	.110
Tolerance	3.25	1.06	3.06	0.90	3.16	0.90	1.009	.366
Confrontation	3.17	0.77	3.14	0.79	3.12	0.78	.115	.892
Self-support	3.19	0.76	3.11	0.80	3.11	0.79	.314	.731
Modification	3.05	0.74	2.93	0.76	3.08	0.76	1.313	.270
Classroom management competencies								
Maintaining physical order	3.76	0.65	3.94	0.51	3.96	0.52	3.795	.023
Instructional management	4.08	0.44	4.08	0.49	4.01	0.48	.832	.436
Time management	4.16	0.56	4.16	0.57	4.15	0.57	.023	.978
Organizing classroom relationships	4.01	0.45	4.05	0.37	4.04	0.40	.311	.733
Behavior development and regulation	4.03	0.41	3.94	0.46	3.94	0.49	1.362	.257

The ANOVA test results, which show the variation of teachers' emotion regulation skills and classroom management competencies depending on the professional field variable, are presented in Table 6. Accordingly, no significant difference was found in the emotion regulation skills of teachers depending on the



professional field variable ( $p>.004$ ). No significant difference was found in teachers' classroom management competencies depending on the professional field variable ( $p>.004$ ).

**Table 7.** Descriptive statistics and correlation matrix for study variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Attention	3.90	0.67	1									
2. Sensations	3.27	0.77	-.07	1								
3. Clarity	3.31	0.75	.03	.44**	1							
4. Understanding	3.79	0.64	.64**	-.02	-.18	1						
5. Acceptance	3.04	0.73	-.10	.38**	.36**	-.02	1					
6. Tolerance	3.15	0.95	.45**	.09	-.09	.55**	.07	1				
7. Confrontation	3.14	0.78	-.17**	.51**	.42**	-.14**	.35**	.00	1			
8. Self-support	3.13	0.78	-.19**	.54**	.43**	-.15**	.38**	.00	.87**	1		
9. Modification	3.02	0.76	-.09	.37**	.37**	-.04	.86**	.08	.33**	.35**	1	
10. Classroom management competencies	4.02	0.33	-.12*	.18**	.30**	-.22**	.30**	-.17**	.20**	.20**	.30**	1

\* $p<.05$ . \*\* $p<.01$ .

When Table 7 is examined, it is seen that there is a moderately significant relationship between the sub-dimensions of teachers' emotion regulation skills and classroom management competencies in the results of the Pearson product-moment correlation analysis, which was conducted to determine the relationship between emotion regulation skills and classroom management competencies. While attention, understanding, and tolerance, being among the sub-dimensions of emotion regulation, have a negative relationship with classroom management competencies, it is seen that classroom management competencies have a positive relationship with other sub-dimensions.

**Table 8.** Multiple linear regression analysis of emotion regulation skills to determine predictors of classroom management competencies of teachers

Predictor Variables	Classroom Management Competencies				
	<i>B</i>	<i>SE<sub>B</sub></i>	$\beta$	<i>t</i>	<i>p</i>
Step 1					
Constant	3.627	.069		52.612	.000
Modification	.130	.022	.301	5.861	.000*
Step 2					
Constant	4.045	.120		33.718	.000
Modification	.127	.022	.293	5.848	.000*
Understanding	-.108	.026	-.211	-4.210	.000*
Step 3					
Constant	3.809	.137		27.760	.000
Modification	.098	.023	.227	4.283	.000*
Understanding	-.092	.026	-.181	-3.609	.000*
Clarity	.080	.024	.183	3.389	.001*

Note:  $R=.301$ ,  $R^2=.091$ ,  $F_{(1,345)}=34.355$ ,  $p=.000$ , \* $p<.05$  for step 1;  $R=.368$ ,  $R^2=.135$ ,  $F_{(2,344)}=26.870$ ,  $p=.000$ , \* $p<.05$  for step 2;  $R=.404$ ,  $R^2=.163$ ,  $F_{(3,343)}=22.288$ ,  $p=.000$ , \* $p<.05$  for step 3.

In Table 8, the results of multiple linear regression analysis performed to determine the level of prediction of classroom management competencies by emotion regulation skills are presented. Accordingly,

the independent variables representing the modification, understanding, and clarity sub-dimensions of emotion regulation skills together significantly predicted classroom management competencies. These independent variables could explain 16% of the change in classroom management skills [ $R=.404$ ,  $R^2=.163$ ,  $F_{(3,343)}=22.288$ ,  $p=.000$ ]. It is seen that the rest of the classroom management skills can be explained by other variables. According to the standardized regression coefficients of the predictor variables, the order of importance on the dependent variable is modification, clarity, and understanding. However, understanding, one of the sub-dimensions of emotion regulation skills, has a negative effect on its own, while the other two dimensions in the model have a positive effect on their own.

### **Discussion and Conclusion**

Teachers' emotional states and ability to regulate their emotions are seen as important variables in classrooms where human relations and communication are intense. These skills have the potential to affect teachers' classroom management competencies as well. In this context, this study aims to reveal whether teachers' emotion regulation skills and classroom management competencies differ according to demographic variables such as age, seniority, school type, and professional field and the role of emotion regulation skills on classroom management competencies.

As a result of the research, when teachers' perceptions of emotion regulation skills and classroom management competencies were evaluated according to gender, it was seen that male teachers needed relatively more emotion regulation skills than women, and it was determined that there was no significant difference between the female and male teachers. Although there are studies in the literature supporting this finding of the study (Alnabhan, 2008; Brackett, Palomera, Mojsa-Kaja & Salovey, 2010; Llego, 2017; Shen & Zhang, 2012; Sutton, 2004), it is possible to see studies revealing that gender causes a differentiation in emotion regulation skills (Chang, 2013; Goroshit & Hen, 2016; Lee, Schutz, Taxer, Pekrun, Meier, & Xie, 2014; Lee, Pekrun, Taxer, Schutz, Vogl & Xie, 2016). At this point, although this study does not support the findings that gender is a determining variable in emotion regulation skills, the literature states that female teachers differ in their emotional regulation skills due to their relatively higher level of work sensitivity and emotional labour level of females compared to their male counterparts (Altınkurt and Ekinci, 2016). As for classroom management competency, while there are studies that corroborate with the conclusion that gender does not make a significant difference in classroom management skills (Burç, 2006; Çubukçu & Girmen, 2008; Korkut, 2009; Ocakcı & Samancı, 2019), there are studies supporting the idea that gender causes difference on classroom management skills (Aküzüm & Özdemir Gültekin, 2017; Tunca, 2010; Yüksel, 2013).

We also found that seniority did not have a significant effect on teachers' emotion regulation skills. The view that emotion regulation skills can be developed with emotion management skills and strategies rather than professional seniority supports this finding (Akbari, Samar, Kiany & Tahernia, 2017; Bahia, Freire, Amaral & Teresa Estrela, 2013; Gong, Chai, Duan, Zhong & Jiao, 2013). The awareness that can be created about the practical contribution of emotion regulation skills in the working environment, especially in pre-vocational and in-service training, gives clues that these skills can be gained not by progress in terms of years in the profession but by studies aimed at developing these skills. Also, according to the results of the current study, seniority did not have a significant effect on teachers' classroom management skills. The fact that the faculties of education have a professional vocational mission in general and that teachers are given pre-professional skills and competencies, such as planning instruction through indoctrination, may have caused seniority to be meaningless in the profession (Koni & Krull, 2018). In this respect, it can explain the fact that seniority is not a determining variable because the new teacher and the more senior teacher are equipped with similar skills. Instead of just based on seniority, how much teachers develop themselves in the profession is another perspective for classroom management skills. This claim matches with TALIS results. According to

TALIS results, the professional development of teachers is closely related to numerous aspects of classroom management skills and mastery of various teaching methods in the classroom (OECD, 2019).

Another finding that needs to be interpreted is age. In the context of our study, the age variable did not make a significant difference in teachers' emotion regulation skills. Emotion regulation skills in terms of age variable are generally specific to students, children, and adolescents in the literature. Even if our study gives no evidence about meaningful variance difference by age on the emotion regulation skills of teachers, some of the studies conducted with the different sample groups concluded that the age variable had an effect on emotion regulation skills and strategies and more planned problem-solving skills were applied as the age progressed. As for classroom management skills of teachers, it is among the findings that the age variable is not a determining variable (Aküzüm & Özdemir Gültekin, 2017). Based on the findings obtained, it can be concluded that since the teaching profession is a professional process, classroom management skills are acquired before the profession, and this gain does not decrease or increase by differentiating according to age.

Another result of the research is related to whether teachers' emotion regulation skills and classroom management competencies differ depending on the school type variable. Although the type of school assigned varies, it can be stated that emotion regulation skills are necessary for both the learner and the teacher (LaBillois & Lagacé-Séguin, 2009; Şahin Ası, Ocak Karabay & Güzeldere Aydın, 2018; Trigwell, 2012). Although the in-class situations faced by teachers differ according to school types by levels, it can be stated that teachers should apply similar approaches to emotion regulation skills in these situations. The situation in emotion regulation skills is also valid in classroom management. In the context of classroom management skills, it is seen that the type of school does not cause differentiation. The fact that teachers need classroom management skills for all levels, even if they work in different types of schools, supports the finding of this current study. However, the result of this study does not match with the one with Galluzo and Minix's (1992; cited in Yaşar, 2008), which revealed that elementary teachers were far less worried about the attitudes and behaviors of their students than their secondary counterparts.

Similarly, it has been found that teachers' professional fields do not significantly differentiate teachers' emotion regulation skills. Regardless of the type of professional field, emotion regulation skills, emotion management, and strategies have been the subject of research within various types of professional fields (Uzuntiryaki-Kondakci, Kirbulut, Sarici, and Oktay, 2020). The same result was also reached in classroom management skills. In this study, it was determined that the field variable was not a determining variable in classroom management skills. However, this result does not accord with an earlier study (Yaşar, 2008), which showed that class teachers have higher classroom management skills than branch teachers. Even if there is inadequate information, this result may be explained by the assumption that since the type of subject may have an impact on the classroom management strategy teachers employ, so there may be fundamental differences between teachers from different branches.

The results of the research also provided evidence that emotion regulation skills had a significant effect on teachers' classroom management competency. This effect indicated that teachers can improve their classroom management competencies by naming feelings about the emotions they experience in the classroom, providing clarity on which emotions to experience at which moments, and by making a change in their feelings by consciously revealing positive feelings, influencing negative feelings. Thus, it can be argued that emotion regulation skills make teachers more proficient in classroom management and communication with students (Sutton, Mudrey-Camino, & Knight, 2009). The belief that teachers' ability to regulate emotions makes them more competent in the classroom, which is expressed among the study findings and a limited number of research, shows the importance of the subject in various contexts (Sutton & Knight, 2006). Therefore, this situation necessitates a re-evaluation of classroom management and discipline issues (Lee et al., 2014; Sutton & Wheatley, 2003).

In the context of education, emotion and emotion regulation are important phenomena for both students and teachers because they are parts of the learning process of the students, and they are phenomena that teachers always experience in the teaching process. In this respect, emotion regulation is crucial for effective classroom management because a teacher who can manage his/her feelings and create a more effective and friendlier environment with fewer distractions have a higher level of authority in the classroom (Jennings & Greenberg, 2009). These findings coincide with many study findings in the classroom management literature (Coban & Atasoy, 2019; Emmer, 1994; Poulou, 2017).

The findings of our study encourage researchers to pay more attention to the effects of emotion regulation skills. Identifying the positive predictive role of emotion regulation skills on teachers' classroom management competency, in line with previous studies in the literature (Sutton, Mudrey-Camino, & Knight, 2009; Sutton & Knight, 2006), our study suggests that teachers' ability to control and regulate emotional mood in their classroom is an important variable in managing the classroom. These results also provide important evidence for researchers by drawing attention to an issue that is not generally addressed in the psychological dimension of the teacher training process in Turkey.

### **Ethics Committee Approval**

The study was approved by the Süleyman Demirel University Social and Human Sciences Ethics Committee on 02.02.2021 with the decision number of 102/14.

## REFERENCES

- Akbari, R., Samar, R.G., Kiany, G.R., & Tahernia, M. (2017). A qualitative study of efl teachers' emotion regulation behavior in the classroom. *Theory and Practice in Language Studies*, 7, 311-321.
- Aküzüm, C. & Özdemir Gültekin, S. (2017). Sınıf öğretmenlerinin iletişim becerileri ile sınıf yönetimi becerileri arasındaki ilişkinin incelenmesi. *Elektronik Eğitim Bilimleri Dergisi*, 6 (12), 88-107.
- Alnabhan, M. (2008). Assessing the high school teachers' emotional intelligence in Karak district of Jordan. *Gifted & Talented International*, 23(1), 81-86.
- Altinkurt, Y., & Ekinci, C. E. (2016). Examining the relationships between occupational professionalism and organizational cynicism of teachers. *Educational Process: International Journal*, 5(3), 236-253.
- Bahia, S., Freire, I., Amaral, A., & Teresa Estrela, M. (2013). The emotional dimension of teaching in a group of Portuguese teachers. *Teachers and Teaching*, 19(3), 275-292.
- Benson, L., English, T., Conroy, D. E., Pincus, A. L., Gerstorf, D., & Ram, N. (2019). Age differences in emotion regulation strategy use, variability, and flexibility: An experience sampling approach. *Developmental psychology*, 55(9), 1951-1964.
- Berking, M. & Znoj, H. (2008). Entwicklung und Validierung eines Fragebogens zur standardisierten Selbsteinschätzung emotionaler Kompetenzen (SEK-27). *Zeitschrift für Psychiatrie, Psychologie und Psychotherapie*, 56(2), 141-153.
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-schoolteachers. *Psychology in the Schools*, 47(4), 406-417.
- Burç, E., D. (2006). *İlköğretim okulu öğretmenlerinin sınıf yönetimi yeterlikleri (Hatay dili örneği)*. (Yayınlanmamış Yüksek Lisans Tezi). Abant İzzet Baysal Üniversitesi, Bolu.
- Coban, O., & Atasoy, R. (2019). An Examination of Relationship between Teachers' Self-Efficacy Perception on ICT and Their Attitude towards ICT Usage in the Classroom. *Cypriot Journal of Educational Sciences*, 14(1), 136-145.
- Çetin, F. (2009). *Eğitim fakültelerinde görev yapan öğretim elemanlarının sınıf yönetimi ile ilgili davranışlarının incelenmesi*, (Yayınlanmamış Doktora Tezi). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Chang, M. L. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehavior: Appraisal, regulation and coping. *Motivation and Emotion*, 37(4), 799-817.
- Çubukçu, Z. ve Girmen, P. (2008). Öğretmenlerin sınıf yönetimi becerilerine ilişkin görüşleri. *Bilgi/Türk Dünyası Sosyal Bilimler Dergisi*, 44, 123-142.
- Emmer, E. T. (1994). Towards an understanding of the primacy of classroom management and discipline. *Teaching Education*, 6(1), 65-69.
- Emmer, E. T., & Stough, L. M. (2001). Classroom management: a critical part of educational psychology, with implications for teacher education. *Educational Psychologist*, 36(2), 103-112.
- Emmer, E. T., & Stough, L. M. (2008). Responsive classroom management. In T. L. Good (Ed.), *21st century education: A reference handbook*. London, UK: Sage Publications.
- Ersan, C. (2020) Physical aggression, relational aggression and anger in preschool children: The mediating role of emotion regulation, *The Journal of General Psychology*, 147(1), 18-42.
- Field, A. (2009). *Discovering statistics using SPSS* (Third Ed.). London: Sage Publication.
- Frenzel, A. C., Goetz, T., Stephens, E. J., & Jacob, B. (2009). Antecedents and effects of teachers' emotional experiences: An integrated perspective and empirical test. In P. A. Schutz & M. Zembylas (Eds.), *Advances in teacher emotion research* (pp. 129-151). Springer.
- Frijda, N. H. (1987). Emotion, cognitive structure, and action tendency. *Cognition & Emotion*, 1(2), 115-143.
- Gignac, G. E. (2019). *How2statsbook* (Online Edition 1). Perth, Australia: Author.


- Gong, S., Chai, X., Duan, T., Zhong, L., & Jiao, Y. (2013). Chinese teachers' emotion regulation goals and strategies. *Psychology*, 4, 870–877.
- Goroshit, M., & Hen, M. (2016). Teachers' empathy: can it be predicted by self-efficacy? *Teachers and Teaching*, 22(7), 805–818.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271–299.
- Gross, J.J., & Thompson, R.A. (2007). Emotion regulation: Conceptual foundations. In J.J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3-24). New York: Guilford Press.
- Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education*, 14(8), 835–854.
- Jacobs, S. E., & Gross, J. J. (2014). Emotion Regulation in Education. *International Handbook of Emotions in Education*.
- Jennings, P. A., & Greenberg, M. T. (2009). The pro-social classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491-525.
- Karasar, N. (2009). *Bilimsel araştırma yöntemi*, Ankara: Nobel Yayın Dağıtım.
- Koni, I., & Krull, E. (2018). Differences in novice and experienced teachers' perceptions of planning activities in terms of primary instructional tasks. *Teacher Development*, 1–17. doi:10.1080/13664530.2018.1442876
- Korkut, K. (2009). *Sınıf öğretmenlerinin öz-yeterlik inançları ile sınıf yönetimi beceri algıları arasındaki ilişki*. (Yayımlanmamış yüksek lisans tezi). Mehmet Akif Ersoy Üniversitesi, Burdur.
- LaBillois, J. M., & Lagacé-Séguin, D. G. (2009). Does a good fit matter? Exploring teaching styles, emotion regulation, and child anxiety in the classroom. *Early Child Development and Care*, 179(3), 303-315.
- Lazarus, R.S. (1994). *Emotion and adaptation*. Oxford, UK: Oxford University Press.
- Lee, M., Schutz, P. A., Taxer, J., Pekrun, R., Meier, E., & Xie, X. (2014, April). *Teachers' emotions, emotion regulation, and classroom management efficacy*. Paper presented at the Annual Meeting of the American Educational Research Association, Philadelphia, USA
- Lee, M., Pekrun, R., Taxer, J. L., Schutz, P. A., Vogl, E., & Xie, X. (2016). Teachers' emotions and emotion management: Integrating emotion regulation theory with emotional labor research. *Social Psychology of Education*, 19(4), 843-863.
- Llego, J. H. (2017). Demographic influence on emotional intelligence of science technology and engineering teachers in region Philippines. *Imperial Journal of Interdisciplinary Research*, 3(3), 1075-1083.
- Martin, N., Yin, Z., & Mayall, H. (2006, February). *Classroom management training, teaching experience and gender: Do these variables impact teachers' attitudes and beliefs toward classroom management style?* Paper presented at the annual conference of the Southwest Educational Research Association. Austin, TX.
- Mikolajczak, M., Tran, V., Brotheridge, C. M., & Gross, J. J. (2009). Using an emotion regulation framework to predict the outcomes of emotional labor. *Research on Emotion in Organizations*, 5, 245–273.
- Nias, J. (1996). Thinking about Feeling: the emotions in teaching. *Cambridge Journal of Education*, 26(3), 293–306.
- Ocakçı, E. & Samancı, O. (2019). Birleştirilmiş sınıf öğretmenlerinin sınıf yönetimi yeterlilikleri ve sınıf yönetimi ile ilgili görüşlerinin incelenmesi. *Bolu Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 19 (2), 604-620.
- OECD (2019), TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners, TALIS, OECD Publishing, Paris, <https://doi.org/10.1787/1d0bc92a-en>.
- Poulou, M. S. (2017). An examination of the relationship among teachers' perceptions of social-emotional learning, teaching efficacy, teacher-student interactions, and students' behavioral difficulties. *International Journal of School & Educational Psychology*, 5(2), 126-136.
- Radkovsky, A., McArdle, J. J., Bockting, C. L., & Berking, M. (2014). Successful emotion regulation skills application predicts subsequent reduction of symptom severity during treatment of major depressive disorder. *Journal of Consulting and Clinical Psychology*, 82(2), 248.

- Sachs, J., & Blackmore, J. (1998). You never show you can't cope: Women in school leadership roles managing their emotions. *Gender and Education*, 10, 265- 279.
- Sanchis-Sanchis, A., Grau, M. D., Moliner, A.-R., & Morales-Murillo, C. P. (2020). Effects of Age and Gender in Emotion Regulation of Children and Adolescents. *Frontiers in Psychology*, 11 (946).
- Shen, X., & Zhang, W. (2012). The effect of temperament on emotion regulation among Chinese adolescents: The role of teacher emotional empathy. *International Education Studies*, 5(3), 113-125.
- Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education*, 7(4), 379-398.
- Sutton, R. E., & Knight, C. C. (2006). Teachers' emotion regulation. In A. V. Mitel (Ed.), *Trends in Educational Psychology* (pp. 107-136). Hauppauge, NY: Nova Publishers.
- Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' Emotion Regulation and Classroom Management. *Theory Into Practice*, 48(2), 130-137.
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review*, 15(4), 327-358.
- Şahin Asi, D., Güzeldere Aydın, D., & Ocak Karabay, S. (2018). How preschool teachers handle problem situations: Discussing some indicators of emotional issues. *Journal of the European Teacher Education Network*, 13, 126-135.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.), Boston: Allyn and Bacon.
- Thompson, R. A. (1991). Emotional regulation and emotional development. *Educational Psychology Review*, 3(4), 269-307.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*, 59 (2-3), 25-52.
- Trigwell, K. (2012). Relations between teachers' emotions in teaching and their approaches to teaching in higher education. *Instructional Science*, 40(3), 607-621.
- Tunca, Ö. (2010). *Duygusal zeka düzeylerinin sınıf yönetimi becerilerine etkisi ve bir araştırma*. (Yayımlanmamış Yüksek Lisans Tezi), İstanbul Üniversitesi, İstanbul.
- Uzuntiryaki-Kondakci, E., Kirbulut, Z. D., Sarici, E., & Oktay, O. (2020). Emotion regulation as a mediator of the influence of science teacher emotions on teacher efficacy beliefs. *Educational Studies*, 1-19.
- Vatan, S. & Oruçlular Kahya, Y. (2018). Duygu düzenleme becerileri ölçeğinin türkçeye uyarlanması: Geçerlilik ve güvenilirlik çalışması. *Anatolian Journal of Psychiatry*, 19 (2), 192-201.
- Vatan, S. (2020). Duygu düzenleme eğitiminin duygu düzenleme becerileri üzerindeki etkisinin incelenmesi. *Anadolu Psikiyatri Dergisi*, 21(4), 396-402.
- Yaşar, S. (2008). *Classroom management approaches of primary school teachers* (Unpublished master's thesis). Middle East Technical University.
- Yüksel, A. (2013). *Sınıf öğretmenlerinin sınıf yönetimi becerilerinin değerlendirilmesi* (Afyonkarahisar ili örneği). (Yayımlanmamış Yüksek Lisans Tezi), Gazi Üniversitesi, Ankara.
- Zimmer-Gembeck, M. J., & Skinner, E. A. (2011). Review: The development of coping across childhood and adolescence: An integrative review and critique of research. *International Journal of Behavioral Development*, 35(1), 1-17.

# Views of Lecturers Working at Vocational School on Distance Education Applications during the Covid-19 Pandemic\*

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 10.09.2022</p> <p>Available online: 13.12.2022</p>	<p>In this study, it was aimed to determine the views of the lecturers working at vocational schools on distance education applications during the COVID-19 pandemic. The research was prepared with the qualitative research method. The study group of the research, in which the phenomenology design was used, was determined according to the maximum variation sampling. Accordingly, 23 lecturers working at Bingöl University Vocational School of Technical Sciences were included in the study group in the 2021-2022 academic year. An interview form consisting of open-ended questions developed by the researchers was used as a data collection tool in the research. The data collected from the lecturers were analyzed according to the descriptive analysis method. As a result of the research, the views of the instructors about the positive and negative situations they experienced regarding distance education practices during the pandemic process were revealed.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b></p> <p>Distance education, vocational school, covid-19</p>

## Introduction

Distance education refers to implementation of learning and teaching activities by learners and instructors in separate locations using some mass media (Oral & Yazar, 2017). Access to information has become easier and costs have reduced. Therefore, the learning-based e-learning systems have substituted traditional education (Firat, Atila, Tanyeri & Varol, 2013). Distance education practices have gained importance due to reasons such as providing a certain level of education service to individuals who cannot benefit from formal education opportunities, and making education a lifelong process on the other hand.

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Distance education focuses on increasing the quality of education, disseminating it to large masses and giving education a life-long qualification (Oral, 2010).

In order to ensure the effective use of information technologies in today's education system, it has become necessary to use educational technologies that effectively design learning environments, solve problems, and enhance the quality of learning products. This condition has indicated that schools that failed to make use of educational technology would have a difficult time keeping up with the rapidly developing society that heavily relies on technology (İşman, 2002). This requires the teachers to have the skills necessary for the 21st century, to be innovate, follow recent developments, and regularly refresh themselves with these developments (Yenice & Tunç, 2019). Technological developments make it necessary for the individual to constantly renew himself and to use the knowledge and skills that arise due to new developments in his daily life. There is a constant increase in knowledge due to rapid scientific developments. It is often difficult or even impossible for the individual to return to educational institutions in the traditional sense and try to acquire these new knowledge and skills. Limiting education to a certain time frame and physical space may also hinder individual and institutional development (Oral, 2010).

While planning for distance education, the most suitable source and strategy should be selected, the most accurate way of communication should be identified, and the most effective learning methods should be established while transferring knowledge to the student (Serçemeli & Kurnaz, 2020). In traditional learning, the lecturer should stop being the source of information and instead undertake computer and internet-supported teaching that delivers continuous, interactive, independent, and individual teaching (Özlü, 2011).

With the Covid 19 pandemic, face-to-face education was stopped in the Turkey and distance education was implemented. This emergency transition has led to many positive and negative situations. The rapid transition of the education system from face-to-face to distance education during the pandemic has demonstrated the necessity of some abilities in lecturers. Lecturers were affected by the distance education applications, all of which suddenly became important with the COVID-19 pandemic period, and lecturers tried to keep up with this transition (Kurnaz, Kaynar, Barışık & Doğrukök, 2020). In this direction, it was aimed to reveal the positive and negative situations experienced by the lecturers during the pandemic distance education process.

## Method

This section contains information about the research model, sample group, data collection tools and data analysis practices.

### Research Model

Qualitative research method and phenomenology design were used in the study. Qualitative studies examine the experiences of people and the meanings attributed to those experiences (Merriam, 2015). The phenomenological design is a qualitative research design that offers an appropriate basis for studies that intend to investigate the phenomenon that we may experience in many ways in our everyday lives, which are not far away from us and whose meaning we cannot completely comprehend (Yıldırım & Şimşek, 2016).

### Sample Group

In this study, a study group was formed with maximum variation sampling. This sampling is used to reveal how the personal characteristics of individuals affect the circumstance and how it varies from individual to individual throughout the process (Ersoy, 2016). In the research, this sampling was used because the opinions of the lecturers who teach in different departments of the vocational school were wanted to be taken. The study group of the research consisted of 23 lecturers working at Bingöl University Vocational School of Technical Sciences in the 2021-2022 academic year. One of the lecturers who participated in the study

was working in the Alternative Energy Resources and Technology programme, two in the Computer Programming programme, four in the Electrical programme, one in the Electronic Communication Technology programme, one in the Graphic Design programme, two in the Mapping and Cadastral Survey programme, and in the Carpet Weaving and Rugmaking programme, two in the Interior Design programme, two in the Construction Technology programme, two in the Machinery programme, one in the Mechatronics programme, and one in the Automotive Technology programme, one in the Landscape and Ornamental Horticulture programme, and two in the Textile Technology programme.

### **Data Collection Tools**

A semi-structured interview form prepared by the researchers was used as a data collection tool in the study. In the process of preparing the interview form, first of all, a list of questions was prepared and presented to the expert opinion. An interview form consisting of open-ended questions was prepared by making necessary adjustments in line with expert opinions. Through this form, interviews were conducted with 23 lecturers working in different departments on a voluntary basis and data were collected.

### **Data Analysis**

Descriptive analysis method was used in the analysis of the data obtained from the interviews with the lecturers. In the descriptive analysis method, the researcher places the collected data into comprehensive categories in line with the purpose of the study (Merriam, 2015). The data obtained from the lecturers were divided into main themes in parallel with the questions in line with the descriptive analysis. The main themes also consist of sub-themes and coding.

Reliability and validity are very important in qualitative research applications. For trustworthiness, it is essential for the researcher to provide comprehensive information about the process, to make extensive explanations on subjective circumstances, and to include particular citations taken from the interviews (Kıncal, 2013). Internal validity in qualitative studies can be achieved by ensuring that the categories and interpretations determined by the researchers overlap with the actual truths and reflect the truths. It is important for the researcher to maintain impartiality and eliminate any biases during the process of both data collection and interpretation. Additionally, the data may be analyzed and compared by two separate persons in order to enhance the internal validity. In this context, it is important for an external auditor to examine the process and the data obtained as a result of the study and to evaluate their accuracy. External validity depends on the well definition of data, categories, and analysis stages, as well as the generalizability of the findings (Büyüköztürk et al., 2012; Creswell, 2015).

In order to ensure reliability and validity in the research, the recorded data were analyzed by the researchers at different times and main and subcategories were determined. In addition, the opinions of the lecturers are given in quotation marks and with abbreviations such as L-1, L-2...L-23.

### **Findings and Interpretation**

As a result of the analysis of the data obtained from the lecturers' views, 8 main themes appeared. These main themes were divided into sub-themes and coding.

#### **1. The Theme of First views for Distance Education Decision**

This major theme was divided into two sub-themes: emotions and thoughts. Table 1 shows the coding and loading numbers for this main theme.

**Table 1.** Sub-themes and loading numbers of the lecturers' first views on the distance education decision during the COVID-19 pandemic

SUB-THEMES	f
<b>EMOTIONS</b>	<b>22</b>
<b>Positive emotions</b>	2
• curiosity	1
• joy	1
<b>Negative emotions</b>	20
• worry/anxiety	7
• nervousness	6
• <i>application for the first time</i>	2
• <i>with regard to the narrative method</i>	1
• <i>with regard to connection</i>	1
• <i>lack of laboratory</i>	1
• <i>applicability of the system</i>	1
• astonishment	3
• suspicion/doubt	2
• fear	1
• sadness	1
<b>THOUGHTS</b>	<b>21</b>
<b>Positive thoughts</b>	4
• maintaining continuity of the education	2
• staying safe (health)	2
<b>Negative thoughts</b>	17
• adaptation problem	3
• problems related to material	3
• <i>preparation of material</i>	1
• <i>supply of material</i>	1
• <i>delivery of material to the student</i>	1
• technical deficiencies	3
• lack of experience	2
• inefficiency	2
• difficulty	2
• lack of knowledge	1
• communication problem	1
<b>Total</b>	<b>43</b>

When Table 1 was examined, it was found that the lecturers expressed their first views on the distance education decision as both thoughts and emotions in both positive and negative contexts. The following are the views on the resulting coding:

**L-22.** "... It's nice that it's more technologically advanced. This makes me to believe that the education has been updated."

**L-15.** "I was worried due to the nature of my department when I first heard about it." I was worried about how effective numerical courses might be with online education."

**L-6.** "...I considered what we could do about how we could deliver educational materials to our students and how we might address them."

**L-4.** “We had no knowledge since the COVID-19 pandemic began unexpectedly. We had no idea what to do. We had no idea how to manage the courses since we had no idea how to teach or manage the process.”

## 2.The Theme of Views on the Effect of Distance Education Applications on the Courses

It was observed that “theoretical courses” and “applied courses” appeared as sub-themes of this main theme. Table 2 shows the coding and loading numbers for the sub-themes.

**Table 2.** Sub-themes and loading numbers of lecturers’ views on the effect of distance education applications on the courses during the COVID-19 pandemic

SUB-THEMES	f
<b>APPLIED (LABORATORY) COURSES</b>	<b>64</b>
Positive views	2
• advantageous	1
• efficient	1
Negative views	62
• inefficient	20
• inability to benefit from laboratory facilities	14
• unsuitable for content	12
• professional	4
• <i>negative effects on business life</i>	2
• <i>failure to do internships at workplaces</i>	1
• <i>reduced professional awareness</i>	1
• decreasing success	3
• costly	2
• student’s lack of materials	2
• difficult	2
• unable to benefit from the lecturer	1
• unhealthy	1
• failure to understand the applications exactly	1
<b>THEORETICAL COURSES</b>	<b>40</b>
Positive views	25
• efficient	16
• <i>for verbal courses</i>	5
• <i>for conscious/concerned students</i>	4
• <i>for the lecturers</i>	2
• <i>when the system is used properly</i>	2
• <i>when the materials suitable for the system are used</i>	2
• <i>when there are no technical problems</i>	1
• suitable for content	7
• ensuring active participation	1
• advantageous	1
Negative views	15
• inefficient	11
• <i>other factors</i>	7
• <i>for unconscious/unconcerned students</i>	2
• <i>for unmotivated students</i>	1
• <i>for numerical courses</i>	1
• disadvantageous	1
• decrease in interest in the course	1

• unsuitable for content	1
• overcoming by languor	1
<b>Total</b>	<b>104</b>

When Table 2 was examined, it was observed that both sub-themes were divided into two categories as “positive views” and “negative views”. The following are the sub-themes of this main theme, as well as the sentences that may refer to these sub-themes:

**L-14.** “We had a lot of problems with the applied courses. Since these courses are mostly those in which the students are active, I don’t believe they were very efficient because the students couldn’t take and examine the piece individually, regardless of how much we described it and supported it with videos.”

**L-1.** “I don’t think it’s very efficient. We were unable to enable the students do an internship, particularly during internship education. We couldn’t place them in an internship in the business or in the public... This was also unfavourable.”

**L-13.** “Obviously, I think it would be highly beneficial to teach online at a law school. Or in other fields of social science. However, in our field, we were confronted with a typically unproductive circumstance.”

**L-17.** “Of course, depending on the structure and content of the course, we have seen that some courses can actually be taught more readily and fluently via distance education.”

### 3. The Theme of Views on the Assessment/Evaluation Applications in Distance Education

It was observed that “beneficial aspects” and “problems faced” appeared as sub-themes of this main theme. Table 3 shows the coding and loading numbers for sub-themes.

**Table 3.** Sub-themes and loading numbers of lecturers’ views on the assessment/evaluation applications in distance education during the COVID-19 pandemic

SUB-THEMES	f
<b>PROBLEMS FACED</b>	<b>79</b>
<b>Other Problems</b>	37
• failure to reflect the success	19
• inefficient	10
• unfair	3
• failure of the process	3
• nonobjective	1
• increasing workload	1
<b>Student-Based Problems</b>	30
• studying collaboratively	10
• suspicious cheating activities	9
• accessing answers from different sources	8
• lack of exam awareness	2
• overcoming by languor	1
<b>Technical/System-Based Problems</b>	12
• supervision/control difficulty	7
• incapacity to intervene in students	1
• failure to ensure exam security	1
• problem with uploading exam papers to the system	1
• problematic system	1
• ineligible system for assessment/evaluation	1
<b>BENEFICIAL ASPECTS</b>	<b>14</b>
• being applicable	4
• reflecting the success	2

• efficient	2
• increasing success	1
• converting difficulties into an opportunity	1
• being comfortable	1
• diversity of exams	1
• diversity of questions	1
• diversity of time	1
<b>Total</b>	<b>93</b>

When Table 3 was analysed, both positive and negative coding appeared on the assessment/evaluation applications made through distance education. The following are the reference views for these codings:

**L-4.** *“At some universities, there were cameras or a specific control system. But, since we lack a specific control system, I don’t believe it accurately reflects as we don’t know what the student is doing on the other side.”*

**L-23.** *“I don’t believe it’s a very fair exam system since we don’t know the circumstances under which students answer the questions.”*

**L-12.** *“If the lecturer develops the system for a full evaluation, picks the questions accordingly, and executes it, I certainly believe it reflects success.”*

**L-14.** *“It was convenient to have questions uploaded to the system and for students to respond to those questions within a particular time frame.”*

#### **4. The Theme of Views on the Effect of Distance Education Applications on the Interpersonal Communication**

It was observed that “positive effects” and “problems faced” were sub-themes of this main theme. Table 4 shows information about this theme.

**Table 4.** Sub-themes and loading numbers of lecturers’ views on the effect of distance education applications on interpersonal communication during the COVID-19 pandemic

<b>SUB-THEMES</b>	<b>f</b>
<b>PROBLEMS FACED</b>	<b>66</b>
<b>Student-Based Problems</b>	<b>46</b>
• failure to communicate	13
• failure to actively participate	7
• failure to get feedback	7
• failure to listen to the course by turning on the system	7
• lack of experience	6
• unfamiliar with the lecturer/university	2
• failure to adapt	1
• failure to watch asynchronous classes	1
• indifference among students	1
• failure to express oneself	1
<b>Lecturer-Based Problems</b>	<b>10</b>
• failure to establish an eye contact with students	4
• sense of self-lecturing	3
• failure to ensure participation of students	2
• unfamiliar with the student	1
<b>Technical/System-Based Problems</b>	<b>10</b>
• access/connection problem	3
• hesitant students to speak as the conversations are being recorded	2

• late submission of feedback/correction	1
• failure to communicate	1
• technological impossibilities	1
• unfamiliar with how to use the system	1
• the capability of the system to demote students	1
<b>POSITIVE EFFECTS</b>	<b>10</b>
• problem-free completion of the process	8
• communication diversity	2
• <i>question-answer</i>	1
• <i>WhatsApp groups</i>	1
<b>Total</b>	<b>76</b>

When Table 4 was examined, it was determined that the lecturers expressed their views on the problems they faced and the positive experiences they had in the context of communication in distance education applications. The following are the reference views for the coding:

**L-20.** *"I experienced communication problems with students while having problems with the system."*

**L-21.** *"...we had no idea who the first-year students were. We didn't know what their names were. It did not materialize when you simply spoke with them through speech when you didn't establish eye contact. There was no communication."*

**L-6.** *"At first, we had problems with how our students would use the system, from which link they would connect to, and how they would use the teams."*

**L-17.** *"...However, as the process progressed, both the students and us became accustomed to the system and were able to develop a more interactive course process."*

## 5. The Theme of Views on the Problems Faced During Distance Education Applications

Loading was made to two sub-themes under this main theme: "associated with live classes" and "associated with the application system". Table 5 shows the sub-themes and loading numbers for this theme.

**Table 5.** Sub-themes and loading numbers of lecturers' views on the problems faced in distance education applications during the COVID-19 pandemic

<b>SUB-THEMES</b>	<b>f</b>
<b>Associated with Live Classes</b>	<b>78</b>
• lack of technological opportunities	23
• <i>internet cut out</i>	7
• <i>internet connection problem</i>	5
• <i>access problem</i>	4
• <i>power cut</i>	3
• <i>lack of technical infrastructure</i>	2
• <i>internet quota problem</i>	1
• <i>PC/Tablet Issue</i>	1
• lack of technological skills	13
• <i>students forgetting to turn their microphones on</i>	4
• <i>failure to upload lecture notes to the system</i>	2
• <i>failure to record the course</i>	3
• <i>failure to download the course records</i>	1
• <i>lecturers forgetting to turn their microphones off</i>	1
• <i>overlapping voices</i>	1

• sound and microphone problem	1
• lack of active participation	11
• failure to receive feedback	5
• students being interested in other things after logging in the class	5
• inability to control students	5
• lack of communication and interaction	4
• students logging in the class from different environments	4
• absenteeism problem	3
• the inability of students to adapt to classes	1
• the inability of students to understand classes	1
• students' disinterest in classes	1
• the boredom of students when the class time is prolonged	1
• inability to present materials suitable for the classes	1
<b>Associated with the Application System</b>	<b>26</b>
• unfamiliar with the system	7
• connection problem	5
• system login and logout problems	5
• system intervention by students	3
• being logged out of the class by the system	2
• difficult system	2
• freezing system	1
• instalment problem of system into a PC/tablet	1
<b>Total</b>	<b>104</b>

When Table 5 was examined, it was determined that the lecturers expressed the problems they faced during the process with different coding. The following are the phrases that served as the source for these coding:

**L-6.** *"Sometimes our students had problems with accessing the internet. Because sometimes our students came back to us. For example, one of our students had to climb a hill above the village in order to access the internet. This kind of internet-based, that is, the student had problems with the access point."*

**L-9.** *"My students always had their phones or computers turned on and were always interested in different things."*

**L-13.** *"...there were problems with question-answer and student participation in order to have a deeper understanding of the topic." We couldn't achieve that."*

**L-23.** *"Since the students might tamper with the system, they could turn off our microphone, cease recording the class, or log out us of the system. I've had these kinds of problems."*

## 6. The Theme of Recommendations for Distance Education Applications

Two sub-themes appeared under this main theme: "for reducing problems", and "for increasing efficiency". Table 5 shows the sub-themes and loading numbers for this theme.

**Table 6.** Sub-themes and loading numbers of lecturers' views on the recommendations for distance education applications during the COVID-19 pandemic

SUB-THEMES	f
<b>FOR REDUCING PROBLEMS</b>	<b>43</b>
<b>With regard to Teaching Lessons</b>	21
• there should be a restriction for absenteeism	5



• students must have their webcams turned on	5
• education should be hybrid	4
• students should be made aware	3
• courses should be kept short	2
• appropriate teaching method should be selected	2
<b>With regard to the Used System</b>	<b>11</b>
• participants should be trained	6
• it should be for applied courses	2
• students should be prevented from tampering with the system	1
• the system should be improved	1
• the system should be visualized	1
<b>With regard to Technical Support</b>	<b>6</b>
• technological infrastructure should be established	4
• internet support should be given	1
• support for technical devices should be given	1
<b>With regard to Exams</b>	<b>5</b>
• security measures should be taken	3
• a question pool should be employed	1
• applied exams should be held face to face	1
<b>FOR INCREASING EFFICIENCY</b>	<b>32</b>
<b>With regard to Teaching Courses</b>	<b>18</b>
• education should be hybrid	5
• documents/videos should be uploaded to the system before the class	2
• students should be assigned homework/responsibilities	2
• students should turn on their webcam	2
• applications should be made in front of the webcam	2
• attendance must be mandatory	1
• documents should be developed	1
• lecturers should turn on their webcam	1
• theoretical courses should be taught asynchronously, whereas applied courses should be taught synchronously	1
• flipped learning should be employed	1
<b>With regard to Exams</b>	<b>8</b>
• exams should be held at the online exam centre	3
• exams should be held at desired times	1
• webcams should be turned on during exams	1
• exams should take less time	1
• exams should be held face to face	1
• open-ended questions should be asked	1
<b>With regard to the Used System</b>	<b>5</b>
• system should be improved	3
• orientation training should be done	1
• lecturer should be able to customize the system	1
<b>With regard to Technical Support</b>	<b>1</b>
• support for technical devices should be made available	1
<b>Total</b>	<b>75</b>

When Table 6 was examined, the lecturers made some suggestions in accordance with the problems they faced in order to reduce these problems and increase efficiency and enhance quality. The following are the lecturers' views that served as the reference for these recommendations:

**L-14.** *“Both the student and the lecturer should turn on their webcam so, I know that the student is in front of me and I can interact with the student while I am speaking. I think the student can also answer me in this manner. I suppose it might have gone like this.”*

**L-15.** *“I believe that the programme to be utilized in distance education should first be well described to and understood by both participants and lecturers.”*

**L-14.** *“It would also be more beneficial to have an additional mechanism to monitor the student for the exams.”*

**L-5.** *“An obligation to attend might be imposed. The system may automatically record it.”*

## 7. The Theme of Views on the Comparison of Face-to-face Education Applications and Distance Education Applications

Two sub-themes as “face-to-face education”, and “distance education” appeared under this theme. Table 7 shows the sub-themes and upload numbers for this theme.

**Table 7.** Sub-themes and loading numbers of the lecturer views for the comparison of face-to-face education applications and distance education applications during the COVID-19 pandemic.

SUB-THEMES	f
<b>DISTANCE EDUCATION</b>	<b>64</b>
<b>Its effect on the course</b>	32
• the capability to play back course recordings	10
• document sharing	5
• easy teaching of courses	4
• the capability of students to better focus on the courses	4
• comfortable preparation and use of course materials	3
• no interruption in education	2
• easy access to resources	1
• timely completion of curriculum	1
• the capability to have a joint class for different departments	1
• the capability of lecturers to realize their inadequacies	1
<b>Providing flexibility</b>	25
• independence from space	9
• independence from time	6
• saving time	6
• quick access	1
• reduced length of the course	1
• disburdening lecturers	1
• the ability of students to both work and attend courses	1
<b>Its effect on communication</b>	3
• ability to make announcements, hold meetings, and disseminate information	2
• ability of students to reach the lecturer instantly	1
<b>Energy saving for the lecturer</b>	2
<b>Economic for students</b>	2
<b>FACE-TO-FACE EDUCATION</b>	<b>23</b>
<b>Its effect on the course</b>	16
• efficient	3
• active participation	2
• getting feedback from the student	2
• maintaining students' attention in the class	2
• having a better command of the course by the lecturer	2

• ability to correct feedback instantly	1
• obligation to attend the class	1
• interaction among students	1
• improved comprehension of the course by students	1
• the ability of students to use the course materials effectively	1
<b>Its effect on communication</b>	<b>7</b>
• active interaction	4
• face-to-face communication	2
• efficient use of gestures and facial expressions	1
<b>Total</b>	<b>87</b>

When Table 7 was examined, some lecturers stated that they preferred face-to-face education while some others preferred distance education due to its positive effects on the course and communication. The following are the views on the resulting coding:

**L-15.** *“Courses taught for students were recorded and students who were unable to attend class might listen to the class again.”*

**L-8.** *“We realized that we also had shortcomings for ourselves.”*

**L-16.** *“First and foremost, if we look at the positive aspects of distance education for students: They may attend the classes wherever they are without leaving their current location, without having to travel, and without incurring any expenses.”*

**L-14.** *“...interacting with students grows deeper in face-to-face education, you can explain yourself better, and you can gather feedback from the student.”*

## 8. The Theme of Views on the Continuity of Distance Education Applications

Loading was made to three sub-themes under this main theme: “should partially continue” “should never continue”, and “should fully continue”. Table 8 shows information about this theme.

**Table 8.** Sub-themes and loading numbers of the lecturers’ views on the continuity of distance education applications after the COVID-19 pandemic

SUB-THEMES	f
<b>Should partially continue</b>	<b>13</b>
• verbal courses	5
• some courses	3
• theoretical courses	2
• counselling courses	1
• visual courses	1
• should be hybrid	1
<b>Should never continue</b>	<b>10</b>
<b>Should fully continue</b>	<b>2</b>
<b>Total</b>	<b>25</b>

When Table 8 was examined, it was observed that the lecturers had different views. The following information is provided on these views:

**L-17.** *“I believe that some courses will be simpler, more practical, and more beneficial for students with distance education, albeit not all courses, depending on the topic, structure, content, and curriculum of the course. I’d want to continue some classes.”*

**L-2.** *"For example, I think that this allows the students, for whom I am serving as an advisor, not to need to come to me when they had any problems or to seek counsel or ask anything. "*

**L-5.** *"I do not want certainly. Because this is not only a place for teaching but also a place for education."*

### **Conclusion and Discussion**

Furthermore, when both students and lecturers initially learned about the distance education decision, they felt common emotions including positive emotions such as curiosity and joy, as well as negative emotions such as nervousness, sadness, anxiety, doubt, unhappiness, and astonishment. One further conclusion that can be drawn from the findings of the research is that the lecturers felt frightened. With regard to applied courses, the lecturers mentioned that the laboratory facilities could not be utilized. The lecturers claimed that the students could not benefit from the lecturer in the applied courses. With regard to the negative effects of distance education on theoretical courses, the lecturers stated that it was inefficient. Likewise, the lecturers mentioned that students' interest in the course decreased as a result of distance education, which also made them more likely to become sluggish. The lecturers claimed that it was suitable for the content and advantageous about the positive effects of distance education on theoretical courses. The lecturers mentioned that students' interest in the course decreased as a result of distance education, which also made them more likely to become sluggish. In their related study, Kunaviktikul et al. (2022) stated similar views on the psychological negative effects of the pandemic on participants such as stress, loss of motivation and concentration, fear and anxiety.

Another result reached as a result of the research is related to the positive and negative aspects of measurement and evaluation practices. Lecturers stated that distance measurement-evaluation practices are efficient. When the lecturers stated to having some problems caused by the students while measuring and assessing. Another finding revealed that there was a common opinion that exams are inefficient and unfair. The lecturers mentioned that the exams did not reflect success. In the study on distance education, Duman (2020) mentioned about individual homework planning and insufficient feedback for assessment, while Özdoğan & Berkant (2020) also noted similar problems by discussing exam control difficulties and assessment-evaluation problems. The study by Hietanen & Svedholm-Hakkinen (2022) that reported similar findings to those obtained from this main theme, reported that there were difficulties in preparing the anti-cheating questions, adapting the exams to online exams was difficult, and there was a lack of supervision.

The fourth theme that emerged is the effect of distance education on interpersonal influence. In this theme, the lecturers mentioned about the problems they faced and the positive effects of distance education applications. The lecturers claimed that they had communication problems mostly due to the students. In the study by Alper (2020), it was observed that communication with students did not resemble face-to-face education, students could not provide any feedback, and students were inactive against reactions. Similarly, Keleş et al., (2020) discussed low motivation resulting from inadequacies in parent communication. Based on the findings of the study of Hietanen & Svedholm-Hakkinen (2022), it was noticed that the negative view about the lack of contact with students in distance education applications was similar to the lecturers' inability to establish eye contact with the students in this main theme.

The fifth result that emerged is the problems faced by the lecturers regarding both live lessons and application software in distance education applications. The lecturers especially had problems with the live classes. The results of the study by Pal et al., (2021) revealed that they faced various problems in online education due to the lack of sufficient and sustainable infrastructure. The lack of internet access in rural regions has made academic activities difficult to carry out. The study by Al-Smadi et al., (2022) mentioned that classroom size caused problems in e-learning, and problems with communication and class attendance appeared. The recommendations for distance education applications were one of the outcomes of the

interviews. The lecturers made recommendations on the subjects included in two sub-themes, namely to reduce the problems and increase efficiency. The lecturers offered webcams be turned about the teaching of courses in the sub-theme of reducing problems and teaching of courses in the sub-theme of increasing efficiency and exams. In addition, lecturers made suggestions for course durations, technological devices and internet support. Alper (2020) mentioned that by introducing various methods into the courses, lecturers' active participation would be assured, and the classes would be more productive by providing extensive course materials. Al-Smadi et al., (2022) recommended that higher education institutions should revise and upgrade their infrastructure, internet access, and network connection for online applications in order to enhance learning quality and eliminate gaps in learning outcomes achieved. The study also indicated that there was a need for training in this field so that new students can effectively utilize e-learning applications. In their study, Meirovitze et al., (2022) mentioned about the need for lecturer education programs to raise the lecturers' awareness of new pedagogical-technological learning methods.

One of the outcomes of the interviews consisted of the views on comparing face-to-face education applications with distance education applications during the COVID-19 pandemic. In this main theme, under which face-to-face education and distance education applications during the COVID-19 pandemic period were compared the lecturers mentioned about the effect of distance education on the course and its ability to provide flexibility. The lecturers also highlighted the effects of distance education on communication and that it was energy savings for lecturers and economic for students. Views on the positive aspects of distance education mentioned in this theme and similar views in other studies include independence from time and space, ability to play back lecture recordings, saving time, quick access, and the ability of lecturers to realize their inadequacies. In their study, Bakioğlu & Çevik (2020) concluded that when using the distance education system, numerous modifications were made to the teaching methods and course materials that were previously employed in face-to-face education and these modifications contributed professionally to the lecturers. The last result reached in the research was related to the continuity of the distance education practices of the lecturers. Most of the instructors stated that if we want the distance education applications to continue partially, some of them stated that they do not want to continue at all. According to Gören et al. (2020), the stakeholders shared their views on the continuance of face-to-face education in the form of providing support for distance education in the views on of the future of distance education.

## REFERENCES


- Alper, A. (2020). Pandemi sürecinde K-12 düzeyinde uzaktan eğitim: Durum çalışması. *Milli Eğitim Dergisi*, 49(1), 45-67. <https://doi.org/10.37669/milliegitim.787735>
- Al-Smadi, A. M., Abugabah, A., & Al Smadi, A. (2022). Evaluation of e-learning experience in the light of the covid-19 in higher education. *Procedia Computer Science*, 201, 383-389. <https://doi.org/10.1016/j.procs.2022.03.051>
- Bakioğlu, B. & Çevik, M. (2020). COVID-19 Pandemisi sürecinde fen bilimleri öğretmenlerinin uzaktan eğitime ilişkin görüşleri. *Turkish Studies*, 15(4), 109- 129. <https://dx.doi.org/10.7827/TurkishStudies.43502>
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. A., Karadeniz, Ş. & Demirel, F. (2012). *Bilimsel araştırma yöntemleri* (12. Baskı). Ankara: Pegem Akademi.
- Creswell, J. W., (2016). *Nitel araştırma yöntemleri: Beş yaklaşıma göre nitel araştırma yöntemleri* (M. Bütün, & S. Beşir, Çev.). Siyasal Kitabevi
- Duman, S. N. (2020). Salgın döneminde gerçekleştirilen uzaktan eğitim sürecinin değerlendirilmesi. *Milli Eğitim Dergisi*, 49(1), 95-112. <https://doi.org/10.37669/milliegitim.768887>
- Ersoy, A. F. (2016). *Fenomenoloji*. A Saban ve Ali Ersoy (Eds.), Eğitimde nitel araştırma desenleri içinde (s. 51-105). Anı Yayıncılık
- Fırat, M., Atıla, O., Tanyeri, B. & Varol, Y., (2014). Mühendislik eğitiminde uzaktan eğitimin kullanılması. *Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 17 (1), 73-76. <https://dergipark.org.tr/en/download/article-file/193886>
- Gören, S., Gök, F., Yalçın, M., Göregen, F., & Çalışkan, M. (2020) Küresel salgın sürecinde uzaktan eğitimin değerlendirilmesi: Ankara örneği. *Milli Eğitim Dergisi*, 49(1), 69-94. <https://doi.org/10.37669/milliegitim.787145>
- Hietanen, M., & Svedholm-Häkkinen, A. M. (2022). Transition to distance education in 2020—challenges among university faculty in Sweden. *Scandinavian Journal of Educational Research*, 1-14. <https://doi.org/10.1080/00313831.2021.2021444>
- İşman, A. (2002). Sakarya ili öğretmenlerinin eğitim teknolojileri yönündeki yeterlilikleri. *The Turkish Online Journal of Educational Technology*, 71-91. <http://www.tojet.net/articles/v1i1/1110.pdf>
- Keleş, H., Atay, D., & Karanfil, F. (2020). Covid- 19 pandemi sürecinde okul müdürlerinin öğretim liderliği davranışları. *Milli Eğitim Dergisi*, 49(1), 155-174. <https://dergipark.org.tr/tr/download/article-file/1262463>
- Kıncal, R. Y. (Ed.). (2013). *Bilimsel araştırma yöntemleri* (2. Baskı). Nobel Yayıncılık
- Kunaviktikul, W., Ang, E., Baridwan, N. S., Bernal, A. B., Dones, L. B. P., Flores, J. L., ... & Shorey, S. (2022). Nursing students' and faculty members' experiences of online education during covid-19 across southeast Asia: a photovoice study. *Nurse Education Today*, 111, 105307. <https://doi.org/10.1016/j.nedt.2022.105307>
- Kurnaz, A., Kaynar, H., Şentürk Barışık, C., & Doğrukök, B. (2020). Öğretmenlerin uzaktan eğitime ilişkin görüşleri. *Milli Eğitim Dergisi*, 49(1), 293-322. <https://dergipark.org.tr/tr/download/article-file/1264622>
- Meirovitz, T., Russak, S., & Zur, A. (2022). English as a foreign language teachers' perceptions regarding their pedagogical-technological knowledge and its implementation in distance learning during covid-19. *Heliyon*, 8(4), e09175. <https://doi.org/10.1016/j.heliyon.2022.e09175>
- Merriam, S.B. (2015). *Nitel araştırma: desen ve uygulama için bir rehber* (Selahattin Turan, Çev.). Nobel Yayıncılık
- Oral, B. (2010). *Uzaktan eğitim*. Ö Demirel ve E Altun (Eds.), Öğretim teknolojileri ve materyal tasarımı içinde (s. 172-201). Ankara: Pegem Akademi.
- Oral, B., & Yazar, T. (Ed.).(2017). *Eğitimde program geliştirme ve değerlendirme*. Ankara: Pegem Akademi.


- Özdoğan, A., & Berkant, H. (2020). Covid-19 pandemi dönemindeki uzaktan eğitime ilişkin paydaş görüşlerinin incelenmesi. *Milli Eğitim Dergisi*, 49(1). 13-43. <https://doi.org/10.37669/milliegitim.788118>
- Özlü, Ö. (2011). *Uzaktan Eğitim Metoduyla Sürdürülebilirlik Eğitimi Uygulamaları Üzerine Bir Araştırma*. (Yayımlanmamış Yüksek Lisans Tezi, Maltepe Üniversitesi, Sosyal Bilimleri Enstitüsü). Retrieved from <https://openaccess.maltepe.edu.tr/xmlui/handle/20.500.12415/2698>
- Pal, K. B., Basnet, B. B., Pant, R. R., Bishwakarma, K., Kafle, K., Dhami, N., ... & Bhatta, Y. R. (2021). Education system of Nepal: Impacts and future perspectives of covid-19 pandemic. *Heliyon*, 7(9), e08014. <https://doi.org/10.1016/j.heliyon.2021.e08014>
- Serçemeli, M., & Kurnaz, E . (2020). Covid-19 pandemi döneminde öğrencilerin uzaktan eğitim ve uzaktan muhasebe eğitimine yönelik bakış açıları üzerine bir araştırma. *Uluslararası Sosyal Bilimler Akademik Araştırmalar Dergisi*, 4 (1), 40-53. <https://dergipark.org.tr/en/download/article-file/1164104>
- Yenice, N., & Alpak Tunç, G. (2019). Öğretmen adaylarının yaşam boyu öğrenme eğilimleri ile bireysel yenilikçilik düzeylerinin incelenmesi. *Kastamonu Eğitim Dergisi*, 27 (2), 753-765. DOI: 10.24106/kefdergi.2716
- Yıldırım, A., & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri* (10. Baskı). Seçkin Yayıncılık

# Exploring the Curriculum Literacy Level of English Language Teachers

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 20.09.2022</p> <p>Available online: 09.12.2022</p>	<p>In this study, it is aimed to examine the curriculum literacy of English teachers in terms of various variables and to determine their views on curriculum literacy. To this end, a mixed research method was used by making use of both quantitative and qualitative research methods. The study group of the quantitative dimension of the research consists of 179 English teachers. For the qualitative dimension, 65 teachers were selected from the study group based on the maximum diversity sampling. Within the scope of the research, the Curriculum Literacy Inventory for Language Teachers was applied to the teachers for the quantitative dimension. For the qualitative dimension, an interview form was consisting of 5 questions prepared and applied, aiming to get the opinions of the teachers about the literacy levels of the curriculum. According to the results obtained from the analysis of the quantitative data analysis, the curriculum literacy of the majority of the teachers is at "moderate" and "high" levels. Since the literacy level of the teachers in the curriculum did not differ significantly according to the variables of gender and the school type, differed significantly according to age and seniority variables. According to the results obtained from the analysis of the qualitative data, it was determined that the teachers did not fully understand the definition of the curriculum concept; it has been understood that teachers think that curriculum literacy contributes positively to the implementation of curriculum and classroom management.</p>
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	<p><b>Keywords:</b> curriculum, literacy, English language teacher</p>

## Introduction

Education is an ongoing acculturation process that is implemented within the framework of a specific plan and program to create permanent changes in the behavior of the individual. Until today, many limited or comprehensive definitions of education have been made. While Merriam-Webster (2021) defined education as "the knowledge, skills, and understanding you acquire by attending a school, college or university", it

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emphasized the formal part of education. According to NCERT (2014), education is nothing but a deliberately planned purposeful activity for the optimum development of an individual's potential. In the most general sense, education, which is defined as "the process of creating the desired change in an individual's behavior through his/her own life and intentionally" (Ertürk, 1982, p. 12), is about transferring the filtered values, moral standards, knowledge, and skills of the society to new generations. In this sense, education is "the process of acculturation of the individual with the desired quality". The most important actor in this acculturation process is the teachers. According to Erden (2011, p. 23), the teacher is the person who creates desired behavior change in students by organizing teaching activities in accordance with the curriculum. The teacher plans all educational activities not only in the classroom but also outside the classroom. In this respect, it would be more appropriate to use the concept of curriculum to express the planning process of all educational activities.

There are many definitions made of the curriculum in the literature. Looking at its etymological origin, the word "curriculum" derives from the Latin verb "currere" and means to run. Again, the noun form of the word in Latin means both a "lesson" and a "tool" (Akkaş Baysal & Ocak, 2020). The concept of the curriculum was first used by Franklin Bobbit who stated that "targets are the goals of growth. The student's activities and experiences are the steps that make up his journey towards these goals. Activities and experiences are the curricula" (Bobbitt, 1924, p.44). When the current and general definition of the curriculum is considered, the curriculum covers "all the activities that an educational institution provides for children, youth and adults, towards the realization of the objectives of the National Education and the institution" (Varış, 1994; cited in Demirel, 2020, p. 3). Saylor, Alexander & Lewis (1981) defined the concept of curriculum as a plan to provide learning experiences for individuals who will be trained. Doll (1996; cited in Imonikebe, 2013) stated that the curriculum of a school is the formal and informal content and the process by which students gain knowledge and understanding, develop skills, and change attitudes, appreciation, and values, under the auspices of that school.

The quality of future generations depends on the quality of the teachers who train them (Özer & Alkan, 2017). Even though a qualified teacher has a lot of features, it is expected that teachers have pedagogical content knowledge (Çetinkaya & Tabak, 2019). The concept of pedagogical content knowledge, introduced by Shulman (1986; cited in Van Driel, Verloop, & De Vos, 1998) in an article in which he argues that research on teaching and teacher education unfairly ignores research questions about the content of taught courses, refers to teachers' interpretations and transformations of subject knowledge in the context of facilitating students' learning. There are four dimensions on the basis of pedagogical content knowledge. These dimensions can be expressed as "Subject content knowledge", "Student understanding knowledge", "Instructional strategies knowledge" and "Curriculum knowledge" (Grossman, 1990; Shulman, 1987; cited in Çetinkaya & Tabak, 2019). While the subject area expresses the knowledge that the teacher has about his/her branch; understanding students and knowledge of teaching strategies refers to professional knowledge. Curriculum knowledge refers to the correct perception and application of the curriculum by the teacher or pre-service teacher who is the implementer of the curriculum. For this reason, a teacher or teacher candidate should have good curriculum literacy skills (Bolat, 2017).

### **Theoretical Framework**

The tendency to use the term literacy, which simply means the ability to read and write, as a synonym for proficiency or ability (Goodfellow, 2011) becomes widespread and new meanings are added over time. Wray (2001) defined literacy as writing in accordance with the purpose, by understanding and applying what one reads, and emphasized that it should be integrated with speaking, listening, and critical thinking. The curriculum literacy concept, on the other hand, consists of a combination of curriculum and literacy concepts and expresses a competence area related to the understanding of all work and actions in the processes of understanding, implementing, and evaluating an education or training program (Akyıldız, 2020). He also

stated that it includes information on the recognition and use of language in accordance with different situations. According to Steiner (2018), curriculum literacy is the ability of teachers to identify and correct deficiencies in the materials they are told to teach. For curriculum literacy skills, it is necessary to have the ability to understand and apply the curriculum. Curriculum literacy can be expressed as a basic instructional competence that is the combination of two theoretical and practical skills (Erdamar & Akpınar, 2021).

In the literature, many studies have been conducted to determine the curriculum literacy levels of teachers or teacher candidates. In Carless' (1998) study, one of these studies, it was seen that teachers' academic and vocational education, English language proficiency, positive attitudes towards teaching and innovation, desire for more self-development, and professional development affect program literacy positively. In Shawer's (2010) study, teachers were handled in three dimensions as developing, making, and transferring the curriculum. In the study conducted by Saral (2019), it was seen that English teachers were moderately literate in the curriculum. In addition, it has been observed that the curriculum literacy levels of female teachers are higher than male teachers, the teachers who graduated from the English language teaching program are higher than the teachers who graduated from different departments, and the teachers with less experience have higher curriculum literacy levels than the teachers with many years of teaching experience. In the study conducted by Demir & Toraman (2021), it was seen that teachers found their own curriculum literacy level to be high and sufficient, teachers' gender, seniority and the level they were assigned to were not determining variables of curriculum literacy, and there was a significant difference in favor of classroom teachers when viewed according to the branch variable. Contrary to the study of Demir & Toraman (2021), in the study of Aslan & Gürlen (2019), there was no significant difference between the branches, seniority of teachers, and the literacy levels of the curriculum. Taylor (2013; cited in Gülpek, 2020, p.60) stated that curriculum literacy develops as teachers implement the curriculum, think about it and make different adaptations. In the study of Ustabulut (2021), it was observed that there is a significant relationship between the gender, age, and education level of the instructors and their views on curriculum literacy; male trainers found themselves more competent in the quantification component of the curriculum than female trainers. In the study of Karagülle, Varki, and Hekimoğlu (2019), curriculum literacy, the applicability, and functionality of the curriculum were considered as a whole, and it was seen that those with high curriculum literacy increased the applicability and functionality of the curriculum.

Similar to these studies, there are many other studies on teachers' curriculum literacy in the literature (Bromley, Oakley, & Vidovich, 2019; Güneş Şinego & Çakmak, 2021; Innes, 2022; Sarıca, 2021; Kasapoğlu, 2020; Akyıldız, 2020; Nsibandé and Modiba, 2012; Ollila and Macy, 2019; Esen Aygün, 2019; Oliver, 2010). However, when the international and national literature on the curriculum literacy of English teachers is scanned, it is seen that the studies are insufficient. In this study, which was carried out to fill the gap in the literature regarding the curriculum literacy levels of foreign language teachers, it was aimed to examine the curriculum literacy of English teachers. In line with this main purpose, answers to the following questions were sought in the quantitative and qualitative aspects of the research:

For the quantitative dimension;

- What is the curriculum literacy level of English teachers?
- Do teachers' curriculum literacy levels differ significantly in terms of some variables (gender, age, the year of teaching experience, the programs of graduation, the level they were assigned)?

For the qualitative dimension;

- What is the knowledge level of teachers about the curriculum?
- What are the teachers' views on the contribution of curriculum literacy to them?

- What are the views of teachers on the contribution of curriculum literacy to the implementation of the curriculum?
- What are the views of teachers on the effect of curriculum literacy on classroom management?
- What are the views of teachers on the impact of curriculum literacy on students' academic development?

## Method

### Research Design

In this research, which is a screening model, a mixed design, in which both quantitative and qualitative research methods are used together, was adopted. It is essential to use qualitative and quantitative methods together in a mixed-pattern research design. The basic philosophy of mixed research is the knowledge (theory and practice) approach, which is based on pragmatism and tries to take these researches into account from multiple, qualitative and quantitative perspectives (Johnson et al., 2007; cited in Akarçay Ulutaş and Ustabaşı Gündüz, 2018).

### Participants

The population of the research consists of English teachers working in the central district of a city in the Central Anatolian Region. The scale, which was decided to be used for the quantitative dimension of the research, was applied to 190 English teachers determined by cluster sampling method. However, 11 forms that were found to be incomplete and filled randomly were removed and analyzes were made on 179 forms. The unit chosen while creating the sample from the research universe is called the sampling unit. The sampling unit may consist of a single universe unit or clusters with more than one universe unit" (Büyüköztürk et al, 2016, Erkuş, 2017; cited in Altındış & Ergin, 2018). If the sample selection from the universe is based on the element, this process is element sampling; if it is taken from more than one universe unit and made on a group basis, it is expressed as cluster sampling. While deciding whether the sample unit should be an element or a cluster, the researcher can be facilitated during the research by considering the constraints such as cost and time (Büyüköztürk et al., 2013). Among the teachers who filled out the scales in the quantitative dimension of the study, 65 English teachers were selected for the qualitative dimension, using the maximum diversity method, and interviews were conducted.

### Instruments

An instrument was applied to teachers in the quantitative dimension. The instrument consists of two parts. In the first part, it has some demographic questions (gender, age, the year of teaching experience, the programs of graduation, and the year of experience) and in the second part, the "Curriculum Literacy Inventory for Language Teachers" prepared by Saral (2019). In the qualitative dimension; the "Teacher Interview Form" prepared by the researchers was applied.

**Curriculum Literacy Inventory for Language Teachers:** The Curriculum Literacy Inventory for Language Teachers (CLILT), which includes multiple-choice questions, was developed by Saral (2019). The scale consists of questions consisting of 24 items written as a four-choice multiple-choice test item related to language program literacy.

First of all, to measure language curriculum literacy, by meeting with the subject matter experts, a first trial form with 51 items was created on theoretical knowledge by researchers to interpret language skills, functions and learning results, activities, evaluation, and curriculum. The CLILT type was designated as a criterion-referenced test to group teachers into low, intermediate, and high curriculum literacy. After the pilot

application of the trial form was made, factor analysis was done with the data obtained, item analysis was calculated and it was decided to have 25 items on the scale.

Then, since CLILT was designed as a criterion-referenced test for the study, cut-off scores and standards were defined according to the item analysis results and the judgments of the subject experts and contributed to the content validity of the inventory. Accordingly, each question in CLILT was calculated as 4 points, and the scores obtained from the scale were calculated by multiplying the correct answers of the teachers by 4. English teachers whose total scores are between 0 and 59 are classified as low-level curriculum literate, 60 to 79 intermediate curriculum literate, and 80 to 100 high-level curriculum literate teachers. As a result of factor analysis, the eigenvalues of the five factors in CLILT were found to be 9.393, 1.846, 1.301, 1.153, and 1.090, respectively. Also, the five components of CLILT explain a total of 59.14 percent of the variance, which is quite satisfactory for the social sciences. In addition, factor loadings of 25 items in CLILT were found to be at an acceptable level and there were no cross-loaded factor loads. That is, the construct validity of CLILT is maximized. In addition, item analysis was performed to determine the difficulty and distinctiveness values of CLILT. The mean item difficulty value (0.64) and the mean item discrimination value (0.51) reveal that CLILT contains items that contribute to reliability with satisfactory values. In addition to item analysis, the KR20 formula was run to ensure reliability as internal consistency. The KR20 value was found to be 0.84, which is good enough for internal consistency.

The KR-20 reliability coefficient of the scale calculated for this study is .78. This value shows that the internal consistency coefficient of the scale is high.

**Teacher Interview Form:** In the qualitative dimension; the "Teacher Interview Form" prepared by the researchers was applied to 65 English teachers selected by the maximum diversity method among the teachers who applied the "Curriculum Literacy Inventory for Language Teachers", which constitutes the study group of the research. This form has been prepared to examine the curriculum literacy of English teachers. To ensure the content validity of the semi-structured interview form, it was presented to the opinions of the subject matter experts. In line with the opinions and suggestions from the subject matter experts, the interview form was given its final form. The interview form consists of 5 questions in total.

### **Data Collection and Analysis**

First of all, ethics committee approval for the research was obtained from Sivas Cumhuriyet University Scientific Research and Publication Ethics Social and Human Sciences Committee. The forms prepared for both quantitative and qualitative data were applied to the teachers by going to the schools one by one by the researchers. It was stated that the identity information of the teachers participating in the research would be kept confidential and that the information provided would be used only for scientific purposes, and they were given the opportunity to answer the questions completely, sincerely and accurately.

The data obtained from the "Curriculum Literacy Inventory for Language Teachers" applied to teachers in the quantitative dimension of the research were analyzed with the SPSS 23 program, which is a quantitative data evaluation program. For quantitative data analysis, first of all, whether the data obtained from the scale exhibit normal distribution or not was examined with the Kolmogorov-Smirnov test. The p values obtained with the Kolmogorov-Smirnov test calculated for the analysis to be made for each variable were significant ( $p < .05$ ). "Since Kolmogorov-Smirnov test is affected by sample size and small differences between measured values in large samples can be significant, this method should be used together with graphical or descriptive methods" (Çokluk et al., 2010; Sprent & Smeeton, 2007). For this reason, the normality of the distribution was checked with histograms and Q-Q plot graphs, and no extreme points were seen in these graphs. In addition, the skewness and kurtosis coefficients of the scores obtained from the scale for each variable were checked and it was seen that the skewness and kurtosis values were within the range of  $\pm 1$ . Tabachnick and Fidell

(2013) stated that  $\pm 2$  range can be accepted as a criterion for skewness and kurtosis coefficients. Therefore, the distribution of the data obtained from the scale was accepted as normal. In addition, outlier analysis was performed and the data were converted into z-scores and examined in terms of being in the range of  $\pm 3$ . In the normal distribution, 99% of the data is within  $\pm 3$  standard deviations from the mean. Therefore, subjects with a z-value greater than +3 or less than -3 are considered as extreme values (Çokluk, Şekercioğlu, & Büyüköztürk, 2010). When the z-scores were examined, it was understood that they were in the range of  $\pm 3$  and there was no z-score to be considered as an extreme score. Therefore, it was decided to use parametric tests in the analyses. To determine whether the literacy levels of the teachers participating in the study differ significantly according to their genders, the independent-samples t-test was calculated. In addition, the Anova test (analysis of variance) was calculated to determine whether the English language literacy levels of the teachers differ significantly according to the variables of age, the year of teaching experience, the programs of graduation, and the level they were assigned. Tukey test was used to determine between which groups the significant differences in the analysis of variance were.

In the analysis of the data obtained in the qualitative dimension of the research, descriptive analysis, one of the qualitative data analysis techniques, was used. The answers given by the teachers were recorded in writing by the researcher. To increase the validity and reliability of the research, the data were analyzed by two different researchers and then reanalyzed. In order to ensure validity, attention was paid to transferability, and a detailed description method was used for this. Detailed description is the transfer of raw data without adding interpretation and by sticking to the nature of the data. For this purpose, direct quotations are frequently used (Yıldırım & Şimşek, 2013). In this research, the data were presented as they were without adding any comments, and the direct quotations that were the source of the formation of the themes were given in italics without any changes on the text and in quotation marks. Explanatory coding as **T1** (Teacher 1) has been added to the end of the direct quotations, taking into account the confidentiality of identity. In order to ensure reliability, the concepts of consistency and confirmability were taken into consideration. For this purpose, the data obtained from the interviews were first transferred to the computer and the data were analyzed individually by each researcher, then the researchers came together and the analyzes were compared and the themes were formed by providing consensus at the end. Thus, “researchers had the opportunity to think over and over the data, and deeper and stronger ideas emerged” (Creswell, 2017, p. 202).

## Findings

In this section, the quantitative and qualitative findings related to the literacy of the teachers participating in the research are given.

### Findings Regarding the Quantitative Dimension of the Research

The data on the literacy levels of teachers in the curriculum and the examination of these literacy levels in terms of various variables are presented below.

#### Findings on Teachers' Curriculum Literacy Levels

The data on the scores of the English teachers participating in the study in the CLILT are given in Table1.

**Table 1.** Data on curriculum literacy scores of English teachers

	N	Min	Max	$\bar{X}$	Sd
<b>Curriculum Literacy Scores</b>	179	44.00	100.00	73.18	12.96

As it can be seen in Table 1, the lowest score that English teachers got from CLILT was 44, and the highest score was 100. The average of score that the teachers got on the overall scale was 73.18 out of 100. This shows that the majority of teachers answered 17 of 25 questions correctly. The literacy levels obtained from

the answers given by the teachers to the scale were grouped as low, moderate, and high, and the data regarding the groups are given in Table 2.

**Table 2.** Distribution of English teachers in curriculum literacy levels

Score Range	Level	N	%
0-59	Low	33	18.4
60-79	Moderate	72	40.2
80-100	High	74	41.3
<b>Total</b>		<b>179</b>	<b>100</b>

According to Table 2, 33 (18.4%) teachers scored between 0-59 points on the scale and their curriculum literacy levels were "low". The number of items that these teachers answered correctly on the scale was 14 or less. From this, it can be said that approximately one-fifth of the teachers have a low level of literacy in the curriculum so the teachers in this group cannot make sense of the English curriculum sufficiently. According to Saral (2019), these teachers can; according to the CLILT standards, describe language forms and functions, repeat learning outcomes easily, know simple assessment tools, know limited lesson activities, lesson planning steps, and foreign language teaching approaches, and can perform a few activities related to students' language skills.

The curriculum literacy of 72 of the teachers were at the "moderate" level. The number of items answered correctly by these teachers was between 15-19. Almost half of the teachers (40.2%) answered most of the questions in the Curriculum Literacy Scale correctly. According to Saral (2019), the teachers in this group can reasonably determine the relationship between language forms and functions; interpret learning outcomes appropriately, simply notice the differences between language forms, functions, and learning outcomes, and use adequate types of assessment tools concerning their purpose. In addition, they can describe a sufficient number of lesson activities, lesson planning steps, and foreign language teaching approaches and the relationship between them and identify a sufficient number of activities for students' language skills and goals.

Finally, 74 of the teachers had a "high" level of literacy in the curriculum. These teachers answered almost all of the items on the scale correctly. Almost half of the teachers (41.3%) who participated in the research were in this group. According to Saral (2019), the teachers in this group can analyze the relationship between language forms and functions in an advance way, interpret learning outcomes effectively, evaluate the differences between language forms, functions, and learning outcomes in detail, identify learning outcomes by precisely relating language use and functions in language, foreign language teaching approaches, and methodologies, they can fully integrate them into complex curriculum activities and lesson planning steps. They can also identify a wide range of activities for students' language skills regarding their aims and apprehend numerous types of assessment and assessment tools regarding their aims to appropriately assess students' progress in language learning.

### Examining Teachers' Curriculum Literacy Levels in Terms of Various Variables

Table 3 shows the results of the t-test for independent groups, which were conducted to determine whether the literacy levels of the teachers participating in the study differed significantly according to their genders.

**Table 3.** t-test results of teachers' curriculum literacy level by gender variable

Gender	n	$\bar{x}$	sd	t	df	p
Female	114	73,544	12,245	,491	175	,625
Male	63	72,508	14,068			

According to Table 3, teachers' English curriculum literacy levels did not show a significant difference according to the gender variable ( $p>.05$ ). When the literacy averages of the teachers in the English curriculum were examined, it was seen that the average of female and male teachers was close to each other.

The results of the Anova test, which was conducted to determine whether the literacy levels of the teachers participating in the study differ significantly according to the age variable, are given in Table 4.

**Table 4.** ANOVA results regarding the curriculum literacy levels by age variable

Variable	Descriptive Statistics			ANOVA Results					
Age	n	$\bar{x}$	sd		Sum of Squares	df	Mean Square	F	p
21-30	63	75,746	13,591	Between groups	1134,210	2	567,105	3,469	,033
31-40	74	73,351	12,069	Within groups	28774,706	176	163,493		
41 and above	42	69,047	12,773	Total	29908,916	178			
Total	179	73,184	12,963						

As a result of the Anova, it was understood that the literacy levels of the teachers differed significantly according to their ages ( $p<.05$ ). As a result of the Tukey test conducted to determine the source of this difference, it is seen that the curriculum literacy levels of teachers aged 21-30 and teachers aged 41 and over differ, and this difference is in favor of teachers aged 21-30.

The results of the Anova test, which was conducted to determine whether the literacy levels of the teachers participating in the study differed significantly according to the year of teaching experience, are given in Table 5.

**Table 5.** ANOVA results regarding the curriculum literacy levels by the teachers' year of teaching experience

Variable	Descriptive Statistics			ANOVA Results					
Year of Teaching Experience	n	$\bar{x}$	sd		Sum of Squares	df	Mean Square	F	p
1-5 years	64	76,125	13,371	Between groups	2115,054	4	528,763	3,310	,012
6-10 years	44	75,272	12,299	Within groups	27793,863	174	159,735		
11-15 years	29	71,448	11,599	Total	29908,916	178			
16-20 years	27	68,296	12,199						
Over 20 years	15	66,667	13,063						
Total	179	73,1844	12,963						

According to the results of the Anova in Table 5, it was understood that the literacy levels of the teachers in the English curriculum differed significantly according to the year of teaching experience variable, ( $p<.05$ ). As a result of the Tukey test, a significant difference was found between teachers with 1-5 years of service and those with 16-20 years and more than 20 years, and between teachers with 6-10 years of service and teachers with 16-20 years and more than 20 years of service. When the literacy averages of the teachers were examined according to their year of teaching experience, it was seen that the literacy averages of those whose year of teaching experience was between 1-5 years and 6-10 years were higher than those whose year of teaching experience was 16-20 years and above 20 years. In other words, it was understood that the curriculum literacy levels of teachers who were new to the profession were higher.

The results of the Anova test, which was conducted to determine whether the literacy levels of the teachers in the English curriculum differ significantly according to the program they graduated from, are given in Table 6.

**Table 6.** The results of ANOVA regarding the curriculum literacy levels by the programs from which the teachers graduated

Variable	Descriptive Statistics			ANOVA Results					
The prog. of grad.	n	$\bar{x}$	sd		Sum of Squares	df	Mean Square	F	p
English Lan. Teaching	111	76,180	12,688	Between groups	2624,067	2	1312,033	8,463	,000
English Lan. and Literature	53	68,377	12,310	Within groups	27284,849	176	155,028		
Other	15	68,000	11,006	Total	29908,916	178			
Total	179	73,184	12,963						

As a result of the Anova test on whether the English curriculum literacy levels of the teachers differ significantly according to the programs of graduation, it was found that the teachers' curriculum literacy levels differed significantly according to the programs of graduation. As a result of the Tukey test, it was seen that this difference was between English Language Teaching, English Language and Literature, and other faculty graduates. When the literacy averages of the teachers were examined, it was seen that the average of the teachers who graduated from English Language Teaching was higher than all other teachers. This shows that English teachers who graduated from the Faculty of Education had more knowledge about curriculum literacy than other teachers.

The results of the Anova test, which was conducted to determine whether the literacy levels of the teachers in the English language curriculum differ significantly according to the levels they were assigned are given in Table 7.

**Table 7.** ANOVA results of teachers' curriculum literacy level by the level they were assigned variable

Variable	Descriptive Statistics			ANOVA Results					
The Level	n	$\bar{x}$	sd		Sum of Squares	df	Mean Square	F	p
Primary school	28	69,857	12,291	Between groups	603,088	2	301,544	1,811	,167
Middle School	47	75,659	12,889	Within groups	29305,828	176	166.510		
High school	104	72,961	13,065	Total	29908,916	178			
Total	179	73,184	12,962						

Finally, when the English curriculum literacy levels of the teachers were examined according to the level they were assigned variable, no significant difference was found between the curriculum literacy levels of the teachers ( $p > .05$ ).

### Findings Regarding the Qualitative Dimension of the Research

In this section, the data obtained in the qualitative dimension of the research are presented.



## Views of the Teachers on the Concept of Curriculum

The opinions of the teachers participating in the research about what the curriculum is are given in Table 8.

**Table 8.** Views of teachers on the concept of curriculum

Theme	Sub Theme	f
<b>Plan</b>	Lesson plan	8
	Annual plan	3
	Unit plan	1
<b>Tool</b>	Tool to achieve the goal	6
	Information transfer tool	4
	Tool to organize the learning-teaching process	3
<b>The Function of the Curriculum</b>	Guide	6
	Planned teaching	2
	Helper for teacher	1
<b>Definitions Regarding the Components of the Curriculum</b>	Learning-teaching process (Method-technique-strategy)	13
	Goals	10
	Content	9
	Goals and content	4
	The curriculum consists of goals, content, learning process, and assessment and evaluation dimensions	5
	Content and method	4
	Goals and learning-teaching process	2
	Goals and measurement-evaluation	1
<b>Total</b>		<b>82</b>

According to Table 8, the opinions of the teachers on the definition of the curriculum were divided into four categories as “Plan”, “Tool”, “The Function of the Curriculum” and “Definitions of Regarding the Components of the Curriculum”. In the plan category, teachers defined the curriculum as “lesson plan” (f: 8), “annual plan” (f: 3), and “unit plan” (f: 1); in the tool category, defined as “tool to achieve the goal” (f: 6), “information transfer tool” (f: 4) and “tool to organize the learning-teaching process” (f: 3). In the category of the function of the curriculum, as “guide” (f: 6), “planned teaching” (f: 2), and “helper for the teacher” (f: 1); in the category of definitions regarding the components of the curriculum, it was defined mostly as “learning-teaching process” (f: 13), “goals” (f: 10) and “content” (f: 9). According to Table 8, when teachers talk about the curriculum, they think mostly of the learning-teaching process and the strategies, methods, and techniques they use in this process. After that, the most frequently mentioned expressions regarding the definition of the curriculum were the goals, content, and lesson plan. In addition to these, it is seen that the number of teachers (f: 5) who emphasize all four components of the curriculum is very low. These results indicate that most teachers could not fully grasp the curriculum; they only associate it with a single item such as the teaching process, the goal, or the content.

Some sample expressions from the teachers answers are given below:

*“It is a plan that provides the acquisition of compulsory and preferable information for both professional life and daily life.” (T13)*

*“The curriculum is a tool based on scientific data that ensures that the affective, cognitive and psychomotor changes expected from the students are transferred to the students on a regular basis.” (T36)*

*“It is a guide that shows the teacher what and how to teach.” (T8)*

*"These are the programs that are determined as a framework and that show the achievements, techniques/methods specific to the level and branch, the subjects and the tools and equipment that should be used, and are customized and implemented."* (T61)

### Views of the Teachers on the Contribution of Curriculum Literacy to Them

The views of the teachers participating in the research on the contribution of curriculum literacy to them are given in Table 9.

**Table 9.** Views of teachers on the contribution of curriculum literacy to them

<i>Theme</i>	<i>f</i>
Effective teaching	25
Planned teaching	19
Implementing the curriculum correctly	16
Professional development	7
Ensuring a variety of methods and techniques	5
Saving on time	3
Gaining assessment skills	2
Increasing teacher's self-confidence	2
Increasing creativity	1
<b>Total</b>	<b>80</b>

According to Table 9, the answers given to the question of the contribution of curriculum literacy to teachers were divided into 9 themes: "Effective teaching" (f: 25), "Planned teaching" (f: 19), "Implementing the curriculum correctly" (f: 16), "Professional development" (f: 7), "Ensuring a variety of methods and techniques" (f: 5) and "Saving on time" (f: 3), "Gaining assessment skills" (f: 2), "Increasing teacher's self-confidence" (f: 2), "Increasing creativity" (f: 1). Under this heading, teachers believe that the literacy of the curriculum contributes to them the most in terms of practical and planned teaching and applying the curriculum correctly.

Some sample expressions from the teachers answers are given below:

*"It helps me set realistic goals and create a learning environment suitable for the process."* (T4)

*"It allows the teacher to proceed in a planned manner."* (T27)

*"It enables me to determine the aims better and to apply appropriate methods and techniques."* (T43)

*"It allows me to constantly question and renew myself. It requires following the ever-evolving science and technology, educational publications, and gives us ideas for new educational methods and techniques."* (T9)

### Views of the Teachers on the Contribution of Curriculum Literacy to the Implementation Process of Curriculum

Teachers' views on the contribution of curriculum literacy to the implementation process of the curriculum are given in Table 10.

**Table 10.** Views of teachers on the contribution of curriculum literacy to the implementation process of curriculum

<b>Theme</b>	<b>f</b>
Ensuring effective teaching	25
Ensuring the correct implementation of the curriculum	12
Providing planned instruction	12
Facilitating the handling of topics	8
Saving time	7
Ensuring a variety of methods and techniques	2

Providing flexibility in implementing plans	1
<b>Total</b>	<b>67</b>

According to Table 10, the answers given to the question of the contribution of curriculum literacy to the implementation of the curriculum were divided into 7 themes: "Ensuring effective teaching" (f:25), "Ensuring the correct implementation of the curriculum" (f:12), "Providing planned instruction" (f:12), "Facilitating the handling of topics" (f:8), "Saving time" (f: 7), "Ensuring a variety of methods and techniques" (f:2), "Providing flexibility in implementing plans" (f: 1). Under this heading, teachers thought that curriculum literacy contributed to the implementation process of the curriculum in terms of providing effective and planned teaching and ensuring the correct implementation of the curriculum.

Some sample expressions from the teachers answers are given below:

*"The contribution of program literacy is important in order to achieve an effective education and training."* (T2)

*"Before applying the curriculum, it is necessary to have curriculum literacy. Being able to follow the activities specified in the curriculum, what should be followed on which week and day, and the developments in the curriculum, of course, facilitates the implementation of the curriculum."* (T48)

*"Ensures that the lesson is planned."* (T52)

*"It facilitates the regular teaching of the subjects and the ease of making connections when moving from one subject to another."* (T16)

### Views of the Teachers on the Effect of Curriculum Literacy on Classroom Management

Teachers' views on the effect of curriculum literacy on classroom management are given in Table 11.

**Table 11.** Teachers' views on the effect of curriculum literacy on classroom management

Theme	f
Facilitating classroom management	33
Reducing undesired behaviors	11
Effective communication	8
No effect	7
Ensuring active participation	3
Ensuring time management	3
Positive classroom atmosphere	3
Flexible classroom organization	2
Ensuring empathy	1
<b>Total</b>	<b>71</b>

According to Table 11, the answers given to the question of the effect of curriculum literacy on classroom management were divided into 9 themes: "facilitating classroom management" (f:33), "reducing undesired behaviors" (f:11), "effective communication" (f:8), "no effect" (f:7), "ensuring active participation" (f: 3), "ensuring time management" (f:3), "positive classroom atmosphere" (f:3), "flexible classroom organization" (f:2), "ensuring empathy" (f:1). Under this heading, teachers thought that curriculum literacy has effects on classroom management, facilitating classroom control, reducing undesired behaviors, and effective communication. A few of the teachers who participated in the research thought that curriculum literacy did not affect classroom management.

Some sample expressions from the teachers answers are given below:

*"It catalyzes classroom management on the part of teachers' control over in a mutual way."* (T11)

*"In classrooms where the lessons are planned in accordance with the curriculum, there will be less in-class chaos and undesirable behavior. Because I think that classroom management is easier for a teacher in classrooms where it is clear what to do every week and sometimes different activities are done in the extra time that is left if necessary."* (T29)

*"As the literacy of the curriculum will ensure that appropriate activities and necessary materials are planned in advance, it increases student engagement and prepares a fruitful ground for student interaction."* (T58)

### **Views of the Teachers on the Effects of Curriculum Literacy on Students' Academic Development**

The teachers' views on the effects of the teacher's curriculum literacy on the academic development of the students are given in Table 12.

**Table 12.** Views of teachers on the effects of curriculum literacy on students' academic development

<b>Theme</b>	<b>f</b>
Increasing academic success	36
Ensuring permanent learning	14
Increasing knowledge	10
Gaining language skills	10
Increasing motivation	6
Enabling development	2
Gaining different perspectives	2
Enabling systematic learning	2
Increasing self-confidence	1
No effect	1
<b>Total</b>	<b>84</b>

According to Table 12, the answers given to the question of the effects of the teacher's curriculum literacy on the academic development of the students were divided into 10 themes; "increasing academic success" (f:36), "ensuring permanent learning" (f:14), "increasing knowledge" (f:10), "gaining language skills" (f:10), "increasing motivation" (f: 6), "Enabling development" (f:2), "gaining different perspectives" (f:2), "enabling systematic learning" (f:2), "increasing self-confidence" (f:1), and "no effect "(f:1). Under this heading, teachers thought that they have effects on increasing academic success, ensuring permanent learning, and increasing knowledge. Only one teacher believed that the teacher's curriculum literacy did not affect the academic development of the students.

Some sample expressions from the teachers answers are given below:

*"It is beneficial for the academic development of the student that the gains are brought to the student in an appropriate and timely manner."* (T24)

*"A teacher who has the ability to actually implement the curriculum can provide more permanent learning for her students."* (T10)

*"Since the teacher with high curriculum literacy will teach the lessons more effectively, the students in that class will learn better than the others."* (T25)

*"Using the right method and techniques that lead to the right aims facilitates teaching and learning and increases the student's chance of using the language for certain purposes, and the student will be more willing to use this language by realizing that language is not just a lesson, but a living phenomenon in life and as long as it is used."* (T45)

## Conclusion and Discussion

The quantitative and qualitative results obtained in this study, which was conducted to examine the curriculum literacy of English teachers in terms of various variables, are presented in this section. The following results were obtained in the quantitative dimension of the research:

The lowest score that the English teachers participating in the study got from the CLILT was 44, and the highest score was 100. The average of score that the teachers got on the overall scale was 73.18 out of 100. In other words, most of the teachers answered 17 of 25 questions correctly. In addition, the curriculum literacy of most of the teachers was found to be "moderate" and "high". According to the findings obtained in the study of Aslan & Gürlen (2019), it was seen that the literacy levels of the participant teachers were at a high level. Similar results were obtained in many studies in the literature (Erdem & Eğımir, 2018; Çetinkaya & Tabak, 2019; Gömleksiz & Erdem, 2018; Sarıca, 2021; Sural & Dedebali, 2018).

As a result of the research, the English curriculum literacy levels of the teachers did not differ significantly according to their genders. This result indicates that the gender variable is not determinant in teachers' perceptions of curriculum literacy. This finding is in parallel with the results of some studies in the literature (Aslan & Gürlen, 2019; Demir & Toraman, 2021; Sarıca, 2021). In addition, according to the findings obtained in the research conducted by Kahramanoğlu (2019), since the curriculum literacy levels of female teachers and teacher candidates are higher than that of male teachers and teacher candidates, teachers' curriculum literacy levels differ significantly according to the gender variable.

The English curriculum literacy levels of the teachers differed significantly according to the age variable. It is seen that the curriculum literacy levels of teachers aged 21-30 and teachers aged 41 and over differ, and this difference is in favor of teachers aged 21-30. In Aslan's (2018) study, while all teachers have similar problems with the curriculum, teachers under the age of 24 have fewer problems. According to these results, the literacy levels of the teachers between the ages of 21-30 are higher. Different from these studies, according to the findings obtained by Sarıca (2021); it is stated that the teachers aged 51 and over age group have the highest average scores on the curriculum literacy scale.

The literacy levels of the teachers in the English curriculum differed significantly according to the year of teaching experience variable, and this difference was between 1-5 years and 16-20 years and 21-25 years of service; teachers with 6-10 years of service and teachers with 16-20 years and 21-25 years of service. Curriculum literacy averages of those whose year of teaching experience was between 1-5 years and 6-10 years were higher than the others. This shows that teachers who are new to the profession have higher curriculum literacy levels. Contrary to the results obtained, in similar studies in the literature (Demir & Toraman, 2021; Aslan & Gürlen, 2019), when teachers were examined according to the year of teaching experience variable, no statistical significance was found between the teachers' years of teaching experience, and their perceptions of curriculum literacy in sub-dimensions and overall average. This result indicates that the year of teaching experience variable is not a determining factor in teachers' perceptions of curriculum literacy. The difference between studies may be since foreign language teachers teach a living language. Applications and information in foreign languages are constantly updated more frequently than in other branches. The fact that the curriculum literacy levels of newly graduated and newly recruited teachers may be higher since their information is up to date. Another reason may be that teachers with many years of teaching experience are inadequate in applying the current curriculum and following the curriculum from textbooks and guidebooks (TED, 2009; cited in Demir & Toraman, 2021).

According to the variable of the program from which the teachers graduated, there was a significant difference in the literacy levels of the English curriculum, and this difference emerged between the teachers who graduated from English Language Teaching and English Language and Literature. The average of the

teachers who graduated in English Language Teaching was higher than the teachers who graduated in English Language and Literature. Although the curriculum literacy levels of teachers who graduated in English Language Teaching did not differ significantly from those who graduated from other faculties, these teachers had the highest average. This shows that English teachers who graduated from the Faculty of Education have more knowledge about curriculum literacy than other teachers. Similar findings were also obtained in some studies in the literature. In Gülpek's (2020) study, teachers who graduated from the Department of Physical Education and Sports Teaching were graduated from Physical Education and Sports School, Sports Sciences, Recreation, and Classroom Teaching at a statistical level according to the programs of graduation variable in both curriculum literacy and physical education teaching proficiency levels. It can be seen that they get higher scores than teachers. In the study conducted by Gömleksiz & Erdem (2018), it can be said that the level of reading the curriculum in the curriculum literacy of the teacher candidates in the Faculty of Education is higher than that of the teacher candidates enrolled in the Pedagogical Formation Education. These results show that teachers who graduated from the Faculty of Education have more knowledge about curriculum literacy.

Finally, teachers' English curriculum literacy levels did not differ significantly according to the level they were assigned variable. According to this result, it can be stated that the level they were assigned variable is not determinant in teachers' perceptions of curriculum literacy.

In the qualitative dimension of the research, the following results were obtained: When the teachers participating in the research were asked about the definition of the curriculum, the teachers mostly thought of the learning-teaching process and the strategies, methods, and techniques they used in this process. After that, the most frequently mentioned expressions regarding the definition of the curriculum were the goal, content, and lesson plan. In addition to these, the number of teachers emphasizing all four elements of the curriculum was very few. These results indicate that most teachers could not fully grasp the curriculum; they only associate it with a single item such as the teaching process, the goal, or the content. According to Posner (1995; cited in Keskin, 2020), the curriculum is meaningless until it is applied correctly by the teachers. Factors such as physical, cultural, temporal, economic, organizational, political, and personal evaluations of the teacher can bring the curriculum to life as well as prevent the curriculum from coming to life, and these factors draw the framework of the curriculum. In this context, it can be explained that teachers' inability to fully grasp the concept of the curriculum has negative effects on curriculum literacy.

Regarding the contribution of curriculum literacy to teachers, teachers stated the contributions such as effective teaching, planned teaching, implementing the curriculum correctly, professional development, ensuring a variety of methods and techniques, and saving time. Çetinkaya & Tabak (2019) stated in their study that the ability of pre-service teachers to understand and interpret the curriculum correctly, to apply the curriculum correctly, and to adapt it according to the conditions are important factors that will lead them to become successful teachers in the future. According to the data obtained by Yıldırım (2019) in the development of a curriculum literacy scale, it is seen that a teacher's being curriculum literate in his field will undoubtedly contribute greatly to the quality of teaching and student success.

The teachers listed the contributions of curriculum literacy to the implementation process of the curriculum as ensuring effective teaching, ensuring the correct implementation of the curriculum, providing planned instruction, facilitating the handling of topics, saving time, ensuring a variety of methods and techniques, and providing flexibility in implementing the plans. Teachers thought that curriculum literacy mostly contributes to the implementation of the curriculum in terms of providing effective and planned teaching and ensuring the correct implementation of the curriculum. Carl (2005) states that it is not correct for teachers to be accepted as the "recipients" of the curricula developed by experts and that each teacher should take part in program development studies to achieve success in practice. According to the results of the

teachers' opinions, it is thought that the high literacy of the teachers during the implementation of the curriculum will affect this process positively. As stated in the McKinsey Report (McKinsey & Company, 2007; cited in Call, 2018), the quality of an education system cannot exceed the quality of its teachers. High-quality teaching can be achieved with teachers with curriculum literacy skills.

Regarding the effect of curriculum literacy on classroom management, teachers emphasized the dimensions of facilitating classroom management, reducing undesired behaviors, effective communication, ensuring active participation, ensuring time management, positive classroom atmosphere, flexible classroom organization, and ensuring empathy. Under this heading, teachers thought that curriculum literacy has effects on classroom management in facilitating classroom dominance, reducing undesirable behaviors, and effective communication. A few teachers thought that curriculum literacy does not affect classroom management. According to the results of teachers' views, it can be seen that curriculum literacy has positive effects on classroom management. According to Charles (1996; cited in Ada, 2000), curricula should be given through learning that is beneficial in students' lives and through activities that attract students' attention, actively involve students in the lesson, provide entertainment, and lead to meaningful success. This can be achieved by the high literacy levels of the teachers who are the implementers of the program.

When the views of teachers on the effects of having curriculum literacy on the academic development of students are examined, the effects of teachers such as increasing academic success, ensuring permanent learning, increasing knowledge, gaining language skills, increasing motivation, enabling development, gaining different perspectives, enabling systematic learning, increasing self-confidence were listed. In this regard, teachers thought that curriculum literacy had effects on increasing academic success, providing permanent learning, and increasing knowledge. Only one teacher thought that having curriculum literacy does not affect the academic development of students. According to these results, it can be seen that the teacher's curriculum literacy has positive effects on the academic development of the students. In the study of Yalçın Tılfaroğlu & Öztürk (2007) on the problems encountered in English teaching program applications; it is concluded that English teachers are not satisfied with teaching English to 4th and 5th-grade primary school students and that approximately 23% of teachers do not consider themselves sufficient. According to these results, it can be deduced that the low literacy of the teachers in the curriculum negatively affects the academic achievement of the students.

When the quantitative and qualitative findings of the study are compared, it is seen that the teachers mostly answered the quantitative questions correctly and their curriculum literacy is moderate and high. Still, the curriculum literacy of the teachers in the qualitative findings is low. The reason for this difference may be because it is easier for teachers to find the correct answer to multiple-choice questions and the difficulty they have in answering open-ended questions using their expressions. According to the result obtained here, it can be deduced that the curriculum literacy levels of the teachers are not high.

### **Recommendations**

As a result of the research, the following suggestions were made:

More detailed academic studies can be conducted to examine the professional development needs, practices, and problems of English teachers in their professional development.

It may be beneficial to update teacher training models in accordance with the Turkish education system by examining the programs and practices followed in the process of training teachers in countries that are successful in the field of education.

Various in-service training can be organized to increase the literacy of the teachers aged 31 and over.

More detailed training can be given to teacher candidates by emphasizing the importance of curriculum literacy in formation education applied to become a teacher in other faculties.

It can be seen that curriculum literacy contributes positively to teachers in the implementation of curriculum and classroom management. Teacher candidates and teachers need to support themselves with various training to keep their knowledge of curriculum literacy up-to-date both during their education at university and after graduation.

In the research, it can be seen that the teacher's curriculum literacy has positive effects on the academic development of the students. When the literature is examined, it is seen that there are deficiencies in the literature in studies examining the relationship between teachers' program literacy skills and students' academic achievement. More detailed studies can be conducted to examine this relationship.

Since this study was conducted in a province in the Central Anatolia Region of Turkey, the results cannot be generalized to Turkey. At this point, it would be beneficial to conduct similar studies with a larger sample that better represents the Turkish population.

This study is limited to English teachers. By carrying out similar studies in other branches, the literature on program literacy can be enriched.

A more detailed study can be done to investigate the difference between the quantitative and qualitative data of this study.

#### **Ethics Committee Approval:**

Committee Name = Sivas Cumhuriyet Üniversitesi Bilimsel Araştırma ve Yayın Etiği Sosyal ve Beşeri Bilimler Kurulu

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## REFERENCES

- Ada, S. (2000). Sınıf yönetimini etkileyen faktörler. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 12(12), 1-8.
- Akarçay Ulutaş, D., & Ustabaşı Gündüz, D. (2018). Karma Araştırma Tasarımı. Ş. Aslan (Ed.), *Sosyal Bilimlerde Araştırma Yöntemleri* içinde (s. 439-453). Ankara: Eğitim Yayınevi.
- Akkaş Baysal, E., & Ocak, G. (2020). Yabancı dil öğrenme stratejileri öğretim programı bir ihtiyaç mı? *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi*, 10(1), 306-325.
- Akyıldız, S. (2020). Öğretim programı okuryazarlığı kavramının kavramsal yönden analizi: bir ölçek geliştirme çalışması. *Elektronik Sosyal Bilimler Dergisi*, 19(73), 315-332.
- Altındış, S., & Ergin, A. (2018). Araştırma Evreni ve Örneklem. Ş. Aslan (Ed.), *Sosyal Bilimlerde Araştırma Yöntemleri* içinde (s. 81-102). Ankara: Eğitim Yayınevi.
- Aslan, S. (2018). *Ortaokul Öğretmenlerinin Program Okuryazarlık Düzeyleri* (Yayımlanmamış doktora tezi). Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Aslan, S., & Gürlen, E. (2019). Ortaokul öğretmenlerinin program okuryazarlık düzeyleri. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 20(1), 171-186.
- Bobbitt, F. (1924). *How to Make a Curriculum*. Boston: Houghton Mifflin Company.
- Bolat, Y. (2017). Eğitim programı okuryazarlığı kavramı ve eğitim programı okuryazarlığı ölçeği. *Turkish Studies*, 12(18), 121-138.
- Bromley, T., Oakley, G., & Vidovich, L. (2019). The enactment of literacy curriculum policy by early childhood teachers in two Australian schools. *Literacy*, 53(3), 160-169.
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2013). *Bilimsel Araştırma Yöntemleri*. Ankara: Pegem Akademi.
- Call, K. (2018). Professional teaching standards: a comparative analysis of their history, implementation and efficacy. *Australian Journal of Teacher Education*, 43(3), 93-108.
- Carl, A. (2005). The “voice of the teacher” in curriculum development: a voice crying in the wilderness? *South African Journal of Education*, 25(4), 223-228.
- Carless, D. R. (1998). A case study of curriculum implementation in Hong Kong. *System*, 26(3), 353-368.
- Creswell, J. W. (2017). Nitel Araştırmacılar İçin 30 Temel Beceri. (H. Özcan, Çev.). Ankara: Anı Yayıncılık.
- Çetinkaya, S., & Tabak, S. (2019). Öğretmen adaylarının eğitim programı okuryazarlık yeterlilikleri. *OMÜ Eğitim Fakültesi Dergisi*, 38(1), 296-309.

- Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2010). *Sosyal Bilimler için Çok Değişkenli İstatistik SPSS ve LISREL Uygulamaları*. Ankara: Pegem Akademi.
- Demir, E., & Toraman, Ç. (2021). Öğretmenlerin eğitim programı okuryazarlık düzeyleri. *Trakya Eğitim Dergisi*, 11(3), 1516-1528.
- Demirel, Ö. (2020). *Eğitimde Program Geliştirme Kuramdan Uygulamaya*. Ankara: Pegem Akademi.
- Erdamar, F. S. (2020). Sınıf Öğretmenlerinin Program Okuryazarlık Algıları ve İlkokul Yöneticilerinin Öğretmenlerin Program Okuryazarlık Becerisine Yönelik Algılarının İlerlemeci Felsefe Bağlamında Analizi (Yayımlanmamış doktora tezi). Fırat Üniversitesi Eğitim Bilimleri Enstitüsü, Elâzığ.
- Erdamar, F.S., & Akpınar, B. (2021). Yönetici perspektifinden sınıf öğretmenlerinin program okuryazarlık becerilerinin analizi. *Tarih Okulu Dergisi*, 14(52), 1861-1884.
- Erdem, C., & Eğinir, E. (2018). Öğretmen adaylarının eğitim programı okuryazarlığı düzeyleri. *Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi*, 20(2), 123-138.
- Erden, M. (2011). *Eğitim Bilimine Giriş*. Ankara: Arkadaş Yayıncılık.
- Ertürk, S. (1982). *Eğitimde Program Geliştirme*. Ankara: Yelken Tepe Yayınları.
- Esen Aygün, H. (2019). The prediction of the teaching readiness level of pre-service teachers in terms of curriculum literacy. *Uluslararası Eğitim Programları ve Öğretim Çalışmaları Dergisi*, 9(2), 203-220.
- Gömlüksiz, M. N., & Erdem, Ş. (2018). Eğitim fakültesi ve pfe programına kayıtlı öğretmen adaylarının eğitim programı okuryazarlığına ilişkin görüşleri. *The Journal of Academic Social Science Studies*, 73, 507-529.
- Gülpek, U. (2020). Beden Eğitimi ve Spor Öğretmenlerinin ve Öğretmen Adaylarının Program Okuryazarlık ve Beden Eğitimi Öğretim Yeterliliği Düzeylerinin İncelenmesi (Yayımlanmamış yüksek lisans tezi). Bursa Uludağ Üniversitesi Eğitim Bilimleri Enstitüsü, Bursa.
- Güneş Şinego, S., & Çakmak, M. (2021). Öğretmenlerin eğitim programı okuryazarlık düzeylerinin incelenmesi. *Kesit Akademi Dergisi*, 7(27), 223-256.
- İmonikebe, M. A. (2013). Overview of the visual arts curriculum, and its relationship with evaluation and instruction. *Mevlâna International Journal of Education*, 3(1), 143-151.
- Innes, M. (2022). The micro-politics of the enactment of a school literacy policy, *Oxford Review of Education*, 48(1), 63-77, <https://doi.org/10.1080/03054985.2021.1912721>
- Kahramanoğlu, R. (2019). Öğretmenlerin öğretim programı okuryazarlığına yönelik yeterlik düzeyleri üzerine bir inceleme. *Uluslararası Sosyal Araştırmalar Dergisi*, 12(65), 827- 840.
- Karaduman, B. & Uçar, S. (2020). Öğretmen adaylarının eğitim felsefeleri ve program yönelimleri. *Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi*, 14(2), 1343-1380.


- Karagülle, S., Varkı, E., & Hekimoğlu, E. (2019). Program okuryazarlığı kavramının eğitim programının uygulanabilirliği ve işlevselliği bağlamında incelenmesi. *Journal of Educational Reflections*, 3(2), 85-97.
- Kasapoğlu, K. (2020). Öğretmenlere yönelik algılanan eğitim programı okuryazarlığı ölçeği: bir ölçek geliştirme ve geçerleme çalışması. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 21(2), 963-977.
- Keskin, A. (2020). Öğretmenlerin Öğretim Programı Okuryazarlık Düzeylerine Yönelik Algılarının Belirlenmesi (Yayımlanmamış doktora tezi). Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Merriam-Webster (2021). Dictionary by Merriam-Webster, <https://www.merriam-webster.com/dictionary/education> 26.12.2021
- NCERT (National Council of Educational Research and Training) (2014). Basics in Education, e Publication Division by the Secretary, NCERT, Sri Aurobindo Marg, New Delhi.
- Nsibande, R. N., & Modiba, M. M. (2011). 'I just do as expected'. Teachers' implementation of continuous assessment and challenges to curriculum literacy. *Research Papers in Education*, 27(5), 629-645.
- Oliver, K. M. (2010). Evaluating teacher readiness for the implementation of one-to-one computing based on national educational technology standards. *Journal of Literacy and Technology*, 11(3), 40-76.
- Ollila, J., & Macy, M. (2018). Social studies curriculum integration in elementary classrooms: a case study on a Pennsylvania rural school. *The Journal of Social Studies Research*, 43, 33-45. <https://doi.org/10.1016/j.jssr.2018.02.001>
- Özer, B., & Alkan, S. (2017). AB ve Türkiye öğretmen yetiştirme programlarının karşılaştırılması ve Türkiye için bir model önerisi. *Disiplinlerarası Eğitim Araştırmaları Dergisi*, 1(1), 62-95.
- Saral, N. Ç. (2019). Exploring Curriculum Literacy Level of English Language Teachers in Turkey (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi Eğitim Enstitüsü, Ankara.
- Sarıca, R. (2021). Öğretmenlerin eğitim programı okuryazarlıkları üzerine bir çalışma. *Kırşehir Eğitim Fakültesi Dergisi*, 22(1), 132-170.
- Senemoğlu, N. (2005). *Gelişim Öğrenme ve Öğretim Kuramdan Uygulamaya*. Ankara: Gazi Kitabevi.
- Shawer, S. F. (2010). Classroom-level curriculum development: EFL teachers as curriculum-developers, curriculum-makers and curriculum-transmitters, *Teaching and Teacher Education*, 26(2), 173-184.
- Sprent, P., & Smeeton, N. C. (2007). *Applied Nonparametric Statistical Methods* (Fourth edition). Boca Raton: Chapman & Hall/CRC Press.
- Sural, S., & Dedebali, N. C. (2018). A study of curriculum literacy and information literacy levels of teacher candidates in department of social sciences education. *European Journal of Educational Research*, 7(2), 303-317.
- Tabachnick B., & Fidell, L. (2013). *Using Multivariate Statistics* (6th ed.). Boston, MA: Pearson.


- Ustabulut, M. Y. (2021). Yabancı dil olarak Türkçe öğreten eğitimcilerin eğitim programı okuryazarlık düzeyleri. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 31(3), 1235-1243.
- Van Driel, J. H., Verloop, N., & De Vos, W. (1998). Developing science teachers' pedagogical content knowledge. *Journal of Research in Science Teaching*, 35(6), 673-695.
- Wray, D. (2001). Literacy in the secondary curriculum. *Literacy (Formerly Reading)*, 35(1), 12-17.
- Yalçın Tılfaroğlu, F., & Öztürk, A. R. (2007). An analysis of elt teachers' perceptions of some problems concerning the implementation of English language teaching curricula in elementary schools. *Journal of Language and Linguistic Studies*, 3(1), 202-217.
- Yıldırım, A. ve Şimşek, H. (2013). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık.

# The Effect of Psychoeducation Programs on Test Anxiety of Secondary Education Students in the Distance Education Process

## Research Article

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i></p> <p>Received: 24.01.2022</p> <p>Available online: 27.12.2022</p>	<p>The aim of this study was to investigate whether or not psychoeducation programs are effective on preventing and coping with possible negative situations, to be caused by anxiety status experienced by individuals in the test preparation process and developing life skills or not. In the study applying the experimental method, there were experimental and control groups with pretest-posttest data. The sample of the study comprised a total of 20 female secondary education students, (10 in the experimental group and 10 in the control group), who had a high level of test anxiety. The study was conducted on the distance education platform. The data collection tool of this study was the Test Anxiety Inventory which was developed by Spielberger, Gorsuch and Lushene (1980) and adapted into Turkish by Öner and Albayrak-Kaymak (1990). The Test Anxiety Inventory has two subscales as "Worry" and "Emotionality Anxiety". The Test Anxiety Inventory was applied to the individuals and the raw scores obtained as a result of the inventory were converted into standard total scores (Standard T-scores) according to the gender status in the "Test Anxiety Inventory". At the beginning of the application, the Test Anxiety Inventory was applied to both groups. Following this step, a psychoeducation program aimed at preventing test anxiety was applied to the experimental group for eight weeks. As a result of the program, the posttest was applied to the experimental and control groups. The pretest-posttest measurements were entered in the SPSS program (the Statistical Package for Social Sciences) and analyzed. Accordingly, it was concluded that psychoeducation programs were effective on preventing test anxiety in the distance education process.</p> <p style="text-align: right;">© 2022 IOJES. All rights reserved</p> <p><b>Keywords:</b> anxiety, test anxiety, distance education, psychoeducation program, secondary education</p>

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## **Introduction**

Anxiety is not only a normal emotion that can be experienced under pressure, but also a condition arising from life. For individuals, test is a stressful and uncomfortable experience. Every individual experiences and feels the effects of anxiety in different ways according to the test. Indeed, some anxieties may have a positive effect on the best performance. The amount of adrenalin released during anxiety plays a key role in stimulation and concentration. However, strong adrenalin released during excessive anxiety may prevent the information transfer and lead to some physical symptoms and panic (Baldık, 2004). Mild and moderate anxiety may increase learning and performance. For example, little anxiety about performance in the next test or a tennis match may actually enable to succeed. On the other hand, mild and moderate anxiety is valuable for adaptation; whereas, chronic or intense anxiety may cause adaptation problems (Butcher et al., 2013).

It has been determined that anxiety level of people preparing for university entrance exams is much higher than patients with internal diseases (Baltaş, 1999). In this sense, test anxiety is a serious phenomenon that students need to control and cope with. Student general anxiety may be exacerbated by the rapid spread of the coronavirus pandemic and the emergence of online distance learning rather than face-to-face classes at school (Lowe, 2021). Distance learning requires strong motivation and a high level of focus to complete the courses. In addition, in distance education, students feel alone in virtual classrooms. This may be due to the lack of physical interaction between students and teachers (Rehab, 2021). In a study measuring the uncertainty and distance education status and state trait anxiety of students who had to take distance education during the pandemic process, it was determined that the students' state and trait anxiety levels increased during this period (Öz Ceviz et al., 2020). This virus, which has caused many restrictions in Turkey, has caused especially the young generation to be negatively affected (Zengin & Şengel, 2020). The field of education was also affected by the restrictions, causing the implementation of the distance education model instead of face-to-face education. This process, which continued for a long time, led to fears and concerns in the field of education (Kafes et al., 2022). Psychological training groups are usually used for controlling anxiety and adding life skills to people. They aim to remove the causes of some problems that may cause troubles in life for members and add necessary knowledge and life skills in order to raise their awareness. Individuals who are able to usually manage their life well are able to cope with their problems better (Corey-Corey, 2013). Main purpose of these groups is to eliminate deficiencies in knowledge and skills, develop abilities of life adjustment and prevent psychological problems. This method usually adopts the cognitive behavioral skills teaching method based on the psychological training for coping skills of clients (Çakır, 2011).

The cognitive behavioral method is accepted as a method based on the effect of thinking styles on behavior. According to these methods, personal interpretations of incidents will lead to specific emotional reactions in individuals experiencing this situation (Beck, 2008). The cognitive behavioral method is a theory which is usually developed by combining and integrating basic principles of the cognitive method with the behavioral method (Piştöf & Şanlı, 2013). The cognitive behavioral therapy, based on the cognitive type of mood disorders, aims to determine how people evaluate the cases and phenomenon they experience and suggests that the behaviors and emotions of these people are associated with their past experiences under the guidance of consultants (Beck & Emery, 2011).

The cognitive behavioral therapy (CBT) has become one of the main methods in the consultancy practice in the 21<sup>st</sup> century. The cognitive behavioral therapy is a general definition including a sort of consultancy based on homogeneous essential conceptions. Two models which are usually preferred in these models are rational emotional behavioral therapy and cognitive therapy. In recent years these methods have been commonly used not only in the psychology counseling and guidance area, but also in children, adolescents, and adults with no mental disorder (Karakaya & Öztö, 2013; Bozanoğlu, 2005). Neuderth et al., (2009) stress

that the cognitive behavioral therapy can be more effective on decreasing test anxiety than other intervention types. Also in a study conducted by Züleyman (1979) the cognitive therapy, cognitive behavioral therapy and systematic desensitization methods were compared and it was found that the cognitive behavioral therapy was a more effective treatment. Most studies have demonstrated that the cognitive behavioral therapy is accepted to be the most effective way of decreasing test anxiety and it can treat anxiety and anxiety disorders efficiently (Cuijpers et al., 2016). Others believe that the use of the cognitive behavioral therapy and skill-oriented methods to control test anxiety may increase the efficiency of the intervention (Ergene, 2003; Von Der Embse et al., 2013). In Turkey, students are faced with exams during the transition period to many educational institutions and levels. A natural outcome of the exam process is life-like emotions such as excitement, haste, curiosity, and anxiety. Although the severity and dimensions of these feelings and emotions vary from individual to individual, they can cause high anxiety states. Preventing and coping with anxiety is of great importance in terms of real performance. There are many studies that do not draw attention to the importance of coping with anxiety on the road to success and that anxiety is studied (Genç & Kutlu, 2018; Demirci & Erden, 2016; Kaya, 2015; Seçer, 2013; Bozanoğlu, 2005). It is thought that the studies will contribute to the literature in this field due to the limited number of experimental studies, the absence of only studies with female students who feel test anxiety more, the fact that the effects of educational programs can be observed better with experimental studies, cause and effect relationships can be established and they are repeatable. In addition to all these, the fact that test anxiety is a subject of guidance services is thought to support the activities applicable in secondary education institutions within the scope of preventive guidance in the psychoeducation program prepared. In this study the question “to what extent the psychoeducation experience affects test anxiety of the group preparing with cognitive behavioral methods” would be answered. For that purpose, the correlation between psychological training programs and test anxiety was discussed.

### **Purpose of the Study**

The aim of this study was to investigate whether or not psychoeducation programs are effective on preventing and coping with possible negative situations, to be caused by anxiety status experienced by individuals in the test preparation process and developing life skills or not.

### **Hypotheses of the Research**

The hypotheses of the research are:

1. There is no significant difference between the pretest test anxiety score average and the posttest test anxiety score average of the experimental group individuals who participated in the psychoeducation program applications.
2. There is no significant difference between the pretest mean scores and the posttest mean scores of the control group individuals who did not participate in the psychoeducational programs.
3. There is no significant difference between the pretest delusional subscale mean scores and the posttest delusional subscale mean scores of the experimental group individuals participating in the psychoeducation program.
4. There is no significant difference between the pretest affective sub-dimension average scores and the posttest affective sub-dimension mean scores of the experimental group individuals who participated in the psychoeducation program applications.
5. There is no significant difference between the posttest mean scores of the experimental group individuals participating in the psychoeducation program and the posttest mean scores of the control group individuals.

6. There is no significant difference between the posttest delusional mean scores of the experimental group individuals participating in the psychoeducation program applications and the posttest delusional mean scores of the control group individuals.

7. There is no significant difference between the posttest affective mean scores of the experimental group individuals participating in the psychoeducation program applications and the posttest affective mean scores of the control group individuals.

8. There is a significant difference between the posttest total scores and the monitoring total scores of the experimental group individuals who participated in the psychoeducation program applications.

## **Method**

### **Design of the Study**

The study was conducted using the experimental design with pretest-posttest control group which is among quantitative research methods. Experimental design is a research design used for deciding on whether an independent variable has an effect on a dependent variable or not (Gliner et al., 2015). In the study the final year secondary education students preparing for university exams comprised the experimental and control groups. A psychoeducation program prepared for preventing and controlling test anxiety was applied to the experimental group. In the study, the independent variable (experimental procedure) was an eight-session psychoeducation program application which was studied in the experimental group. The dependent variable was the test anxiety level of the students.

In the study, the paired quasi-experimental model with pretest-posttest control group which is among experimental models was used. In the study, two measurements (pretest-posttest) were applied to students in the experimental and control groups. This approach in the study facilitated comparing the experimental and control groups prior to the experimental procedure with the help of a pretest and similarity of the pretests of the groups enabled the posttests, performed after the application, to yield healthier and more reliable results.

### **Sample**

The working group of the study was obtained using the descriptive statistics results of the Test Anxiety Inventory which was applied to 108 twelfth-graders studying in the 2020-2021 academic year in Elazığ province. Considering that the Higher Education Institution test might increase test anxiety in final year students further, the twelfth-graders which were the closest group to taking the test were chosen and the study was limited to this grade. The ninth, tenth and eleventh-graders (intermediate classes) from secondary education were excluded from the study. In addition, the related students were assigned to groups by considering high test anxiety score and voluntariness during sample selection. While selecting the research sample, criterion sampling method was used. The reason for choosing this sampling method is that it will work with students with high test anxiety. Among the students who were applied test anxiety scale, students whose anxiety scores were high and who volunteered to participate in the research were included in the psychoeducation program or were included in the control group.

While determining the sample, the Test Anxiety Inventory was primarily applied to the female final year secondary education students and the raw scores obtained as a result of this application were converted into standard total scores (Standard T-scores) according to the gender status in the "Test Anxiety Inventory". Then, 20 students were chosen from this group via the criterion sampling method and an experimental group of 10 students and a control group of another 10 students were formed. Considering that groups are to have 10 to 18 members and due to the distance education platform and pandemic conditions, the number of group members was limited to 10 (Güçray et al., 2009). The students were included in the experimental and control groups via the criterion sampling method considering high test anxiety score and voluntariness.



## Study Process

The researcher performed an eight-session psychoeducation application for preventing test anxiety on the experimental group. However, no procedure was performed on the control group. The experimental and control group students continued their distance education and maintained their university exam preparation process during the application. At the end of this psychoeducation application performed on the experimental group, the Test Anxiety Inventory was applied to both the experimental and control groups and the posttest data were acquired.

In a study conducted it was found that the female students had a higher anxiety level than the male students since female students had lower opportunity to go to school compared to male students (Baltaş, 1999). Also in their meta-analysis study, Van Daele et al., (2012) stressed that gender of participants was very important for effectiveness of psychoeducation applied. In a study conducted by Cülen (1993), test anxiety of students was examined in terms of some psychosocial factors and it was found that their anxiety level was affected by certain social factors. Due to the specified reasons, a personal information form was applied to all individuals to take part in the study and such information was used only in the group formation stage for the purpose of creating equal groups. When obtaining the sample, attention was paid to choosing those who were equal or close in terms of the information in the form.

The survey study was conducted in the second term of the 2019-2020 academic year and lasted for two weeks. The interview hour was determined within the scope of the distance education program according to availability of the students. In order to determine the sample the Test Anxiety Inventory was used. The students were told that they gathered for a study and an inventory was to be applied in this direction on voluntary basis. They were informed that the purpose of the study was to examine the test anxiety level of twelfth-graders and the inventory answers were not to be shared with anyone and they were asked to give sincere answers in order to obtain proper results from the study. Then, the voluntary students were informed about how to complete the inventories and the inventories were sent with student information forms.

The inventories and student information forms were completed within a distance education course hour (30 minutes) and submitted to the researcher. After completing the survey studies, the experimental and control groups were specified and the students in the experimental group were informed about the group and process via individual Zoom sessions. The groups were created based on psychoeducation group rules.

## Data collection tools

### Test Anxiety Scale

The "Test Anxiety Scale" developed by Spielberger et al. (1980) was used by Öner & Albayrak-Kaymak (1990) and was translated into Turkish and adapted to Turkish culture. The "Exam Anxiety Scale" consists of two subtests, "worry anxiety" and "emotionality anxiety", consisting of a total of 20 items. Öner and Albayrak-Kaymak (1990) conducted a study on the validity and reliability of the Turkish version of the Test Anxiety Scale. The Cronbach Alpha value of the test was 0.87, the intellectual subtest was 0.74, and the emotion subtest was 0.79. Within the scope of this study, the Cronbach Alpha value was calculated as 0.83 as a result of measurement. While evaluating the answers given by secondary education branches to the items in the Test Anxiety Scale, the score weight of each option is determined according to the number of options. The weight of the answers to these options is between 1-4 points. Except for the 1st item, which was in the opposite direction in the test, all other questions were scored according to the weights above. For the 1st question, it was scored 4 points for "Almost never", 3 points for "Sometimes", 2 points for "Often" and 1 point for "Almost always". "Total exam anxiety scores" were obtained by adding the numerical equivalents of the answers given by the students to 20 questions. The scores obtained were converted into the T-score, which is called the "Exam Anxiety Inventory" scores, the standard score. The standard T scores obtained for each student are the scores

that determine the students' general exam anxiety levels. According to the test anxiety inventory manual, pre-service teachers with a standard score of 60 and above are considered to have "High Test Anxiety". This total score obtained only gives general information about the anxiety level of the students. However, since the "Exam Anxiety Inventory" consists of two subtests, namely, Delusional Anxiety and Affective Anxiety, the scores of these subtests should also be evaluated and interpreted separately.

### **Worry subtest**

The delusion subtest is related to the intellectual aspect of test anxiety. It creates the negative thoughts, failures, inadequacies of the individual about himself, in short, the internal communications of the individual himself. Eight of the 20 items (2, 3, 4, 5, 8, 12, 17 and 20) in the inventory were developed to measure the delusional anxiety dimension of students. The sum of the scores obtained from these items constitutes the student's delusion subtest raw score. Just like the total score, the raw scores of 12th Grade students on Delusional Anxiety were converted into the standard score type, the T-score. While making comments, it was thought that students with standard scores of 60 and above had a high level of cognitive test anxiety.

### **Emotional anxiety subtest**

The affective subtest is related to the affective and emotional sub-dimension of test anxiety. The 12 items in the inventory (1, 6, 7, 9, 10, 11, 13, 14, 15, 16, 18 and 19) include the Affective Subtest. The sum of the scores obtained from these items constitutes the student's affective subtest total score. As in the total score and the Delusion dimension score, the affective anxiety subtest raw scores were converted to the standard score type, the T-score. It has been concluded that the affective, that is, the emotional sub-direction of the test anxiety of the students whose standard score is 60 and above, is high.

### **Data Analysis**

The data were collected in the computer environment in line with goals. The data were analyzed using the SPSS 22 package program. In order to decide on the statistical analysis method related to the hypotheses of the study, descriptive data analysis was performed in the scale applied and all of its subscales. Descriptive data analysis is accepted to be an important guide in parametric or non-parametric test choice in hypothesis tests (Büyüköztürk et al., 2011). Normal distribution of data is the most important presupposition for parametric tests. Therefore, it is primarily required to determine whether the data are normally distributed or not. Although there are different methods for doing so, the most commonly accepted method is the examination of kurtosis-skewness coefficients and normality tests. When a data set is normally distributed, the kurtosis-skewness coefficients vary between  $\pm 1$ . While examining kurtosis-skewness coefficients of the numerical data for each group, the test and subscale, in the table, it was observed that some data met this condition, while some did not. However, in order to use parametric tests in the hypothesis test, all subgroups of the data set are to be normally distributed. The normality tests were used for clarifying the situation. Büyüköztürk et al., (2011) suggests that there are two normality tests as Kolmogorov-Smirnov and Shapiro-Wilk and sample size is used to decide which one should be used. Büyüköztürk et al., (2011) states that if the sample number is below 30, the Shapiro-Wilk test is to be used. Therefore, the relevant test was used and the results were given in Table 2. This test analyzes whether the data in the sample is significantly different from normal distribution or not. According to the findings acquired from the table, all data was not significantly different from normal distribution, except for the kurtosis value of the control group for emotionality subscale ( $p > .05$ ). Due to these reasons, it was possible to use parametric statistical analysis methods when analyzing the hypotheses of the study and non-parametric tests were preferred because the sample represented a very small population and the results were not generalizable.

### Findings and Interpretation

The content of this section consists of the findings obtained from the analysis of the data collected in the research. The order of reporting the findings was made according to the order of the research experiments. Due to these reasons, it was possible to use parametric statistical analysis methods when analyzing the hypotheses of the study and non-parametric tests were preferred because the sample represented a very small population and the results were not generalizable.

**Table 1.** The Shapiro-Wilk Test results concerning the distribution of the data

Groups	Dependent Variable	f	X	Sd	Skewness	Kurtosis	Shapiro-Wilk	p
Experimental	Worry Subscale-Pretest	10	3.41	.195	.247	.764	.945	.609
	Worry Subscale-Posttest	10	1.21	.015	.280	-.066	.929	.436
	Emotionality Subscale-Pretest	10	3.50	.136	-.574	-.288	.935	.494
	Emotionality Subscale-Posttest	10	1.30	.080	-.813	-.022	.801	.015
	Pretest Total	10	3.45	.106	.335	-.913	.952	.692
	Posttest Total	10	1.25	.076	.736	.844	.889	.167
Control	Worry Subscale-Pretest	10	3.47	.299	-.677	-.608	.895	.193
	Worry Subscale-Posttest	10	3.72	.164	.088	-.751	.942	.575
	Emotionality Subscale-Pretest	10	3.41	.068	.000	-1.393*	.832	.035
	Emotionality Subscale-Posttest	10	3.67	.126	-.678	.625	.929	.441
	Pretest Total	10	3.44	.179	-.621	-.714	.887	.156
	Posttest Total	10	3.70	.075	.840	.503	.946	.625

There was no significant difference between the pretest test anxiety total mean score and the posttest test anxiety total mean scores of the experimental group who took part in the psychoeducation program. Table 2 shows the analysis results.

**Table 2.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Pretest-Posttest Test Anxiety Mean Scores of the Experimental Group or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum_{sira}$	z	p
Pretest Posttest	Decreasing	10	5.50	55.00	-2.812	.005
	Increasing					
	Equal					
	Total					

As it is understood from the table, the Non-parametric Wilcoxon Signed Rank Test which was applied to test whether there was a significant difference between the pretest and posttest Test Anxiety Inventory scores of the experimental group or not revealed that there was a statistically significant difference between the mean ranks at the level of  $p < .001$ . The difference was observed on behalf of the pretest. In other words, the test anxiety of the experimental group significantly decreased at the end of the group applications.

There was no significant difference between the pretest test anxiety total mean scores and the posttest test anxiety total mean scores of the control group who did not take part in the psychoeducation program. Table 3 shows the analysis results.

**Table 3.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Pretest-Posttest Test Anxiety Total Scores of the Control Group or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum sira$	z	p
Pretest Posttest	Decreasing	0	,00	,00	-2,810	,005
	Increasing	10	5,50	55,00		
	Equal	0				
	Total	10				

As it is understood from the table, the Non-parametric Wilcoxon Signed Rank Test which was conducted to test whether there was a significant difference between the pretest and posttest Test Anxiety Inventory scores of the control group or not, revealed that there was a statistically significant difference between the mean ranks at the level of  $p < .005$ . The difference was observed on behalf of the posttest. In other words, the test anxiety scores of the control group significantly increased at the end of the study.

There was no significant difference between the pretest test anxiety worry subscale mean scores and the posttest test anxiety worry subscale mean scores of the experimental group who took part in the psychoeducation program. Table 4 shows the analysis results.

**Table 4.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Pretest-Posttest Test Anxiety Worry Subscale Mean Scores of the Experimental Group or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum sira$	z	p
Pretest Posttest	Decreasing	10	5,50	55,00	-2,812	,005
	Increasing	0	,00	,00		
	Equal	0				
	Total	10				

As a result of the Non-parametric Wilcoxon Signed Rank Test which was conducted to test whether or not there was a significant difference between the pretest and posttest Test Anxiety Inventory worry subscale scores of the experimental group, it was found that there was a statistically significant difference between the mean ranks at the level of  $p < .01$ . The difference was observed on behalf of the pretest. In other words the test anxiety worry subscale scores of the experimental group significantly decreased at the end of the group applications.

There was no significant difference between the pretest and posttest test anxiety emotionality subscale mean scores of the experimental group individuals who took part in the psychoeducation program. Table 5 shows the analysis results.

**Table 5.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Pretest-Posttest Test Anxiety Emotionality Subscale Mean Scores of the Experimental Group or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum sira$	z	p
Pretest Posttest	Decreasing	10	5,50	55,00	-2,814	,01
	Increasing					
	Equal					
	Total					

Based on the table, the Non-parametric Wilcoxon Signed Rank Test which was conducted to test whether there was a significant difference between the pretest and posttest Test Anxiety Inventory emotionality subscale scores of the experimental group or not indicated that there was a statistically significant difference between the mean ranks at the level of  $p < .01$ . The difference occurred on behalf of the pretest. In other words the test anxiety emotionality subscale scores of the experimental group significantly decreased at the end of the group applications.

There was no significant difference between the posttest test anxiety mean scores of the experimental group individuals who took part in the psychoeducation program and the posttest test anxiety mean scores of the control group. Table 6 shows the analysis results.

**Table 6.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Posttest Test Anxiety Mean Scores of the Experimental and Control Groups or Not

Score	Groups	<i>N</i>	$\bar{x}_{sira}$	$\sum sira$	<i>z</i>	<i>p</i>
Pretest	Decreasing	0	,00	,00	-2,810	,01
	Increasing	10	5,50	55,00		
Posttest	Equal	0				
	Total	10				

As a result of the Non-parametric Wilcoxon Signed Rank Test which was conducted to determine whether there was a significant difference between the posttest Test Anxiety Inventory scores obtained by the experimental and control groups or not, it was found that there was a statistically significant difference between the mean ranks at the level of  $p < .01$ . The difference was observed on behalf of the experimental group posttest. In other words, the test anxiety of the experimental group significantly decreased at the end of the group applications, while the anxiety of the control group students did not significantly decrease compared to the experimental group.

There was no significant difference between the posttest test anxiety worry subscale mean scores of the experimental and control groups. Table 7 shows the analysis results.

**Table 7.** Results of the Wilcoxon Analysis Performed to Test Whether There was a Significant Difference between the Posttest Test Anxiety Worry Subscale Mean Scores of the Experimental and Control Groups or Not

Score	Groups	<i>N</i>	$\bar{x}_{sira}$	$\sum sira$	<i>z</i>	<i>p</i>
Pretest	Decreasing	0	,00	,00	-2,823	,01
	Increasing	10	5,50	55,00		
Posttest	Equal	0				
	Total	10				

Accordingly, the Non-parametric Wilcoxon Signed Rank Test which was conducted to determine whether there was a significant difference between the posttest Test Anxiety Inventory worry subscale scores of the experimental and control groups or not indicated that there was a statistically significant difference between the mean ranks at the level of  $p < .01$ . The difference took part on behalf of the experimental group posttest. In other words, the test anxiety worry subscale scores of the experimental group significantly decreased at the end of the group applications, while the worry scores of the control group students did not significantly decrease compared to the experimental group.

There was no significant difference between the posttest test anxiety emotionality subscale mean scores of the experimental and control groups. Table 8 shows the analysis results.

**Table 8.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Posttest Test Anxiety Emotionality Subscale Mean Scores of the Experimental and Control Groups or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum_{sira}$	z	p
Pretest Posttest	Decreasing	0	,00	,00	-2,842	,01
	Increasing	10	5,50	55,00		
	Equal	0				
	Total	10				

As it is understood from the table, the Non-parametric Wilcoxon Signed Rank Test which was conducted to test whether there was a significant difference between the posttest Test Anxiety Inventory emotionality subscale scores of the experimental and control groups or not revealed that there was a statistically significant difference between the mean ranks at the level of  $p < .01$ . The difference was observed on behalf of the experimental group posttest. That is to say, the test anxiety emotionality subscale scores of the experimental group significantly decreased at the end of the group applications, while the emotionality scores of the control group did not significantly decrease compared to the experimental group.

There was a significant difference between the posttest test anxiety total mean scores of the experimental group individuals who took part in the psychoeducation program and their total follow-up session test anxiety mean scores. Table 9 shows the analysis results.

**Table 9.** Results of the Wilcoxon Analysis Performed to Determine Whether There was a Significant Difference between the Mean Total Posttest Test Anxiety Scores of the Experimental Group and their Follow-up Session Test Anxiety Total Scores or Not

Score	Groups	N	$\bar{x}_{sira}$	$\sum_{sira}$	z	p
Pretest Posttest	Decreasing	2	2,75	5,50	-2,018	,044
	Increasing	7	5,64	39,50		
	Equal	1				
	Total	10				

Based on the table, the Non-parametric Wilcoxon Signed Rank Test which was conducted to determine whether there was a significant difference between the posttest Test Anxiety Inventory scores of the experimental group students and their follow-up session posttest scores or not revealed that there was a statistically significant difference between the mean ranks at the level of  $p < .05$ . The difference was determined on behalf of the experimental group posttest. In other words the test anxiety scores of the experimental group significantly decreased, while the test anxiety scores of the follow-up session did not significantly decrease compared to the experimental group at the end of the group applications.

### Discussion, Conclusion, and Recommendation

As a result of the findings acquired in this section, the results of the study were examined within the framework of the hypotheses of the study and the hypotheses were evaluated based on the ranking in the findings.

In line with the purpose of the study, the effect of psychoeducation programs on test anxiety of twelfth-graders receiving secondary education was examined. Of 20 students who were determined homogeneously and were demographically similar, 10 were included in the experimental group and 10 were included in the control group and a training of two months (8 sessions) was provided. An eight-session training program aimed at preventing test anxiety was applied to the experimental group, whereas no intervention was applied to the control group. The students in both groups continued to receive training aimed at preparing for the test

at the beginning and at the end of the process. When the psychoeducation was completed, the changes in the anxiety level of both groups were examined and discussed in line with the hypotheses.

When examining the findings and the table concerning Hypothesis 1 ‘There is no significant difference between the pretest and posttest test anxiety mean scores of the experimental group individuals who participated in the psychoeducation program’, Hypothesis 3 ‘There is no significant difference between the pretest and posttest worry subscale mean scores of the experimental group individuals who participated in the psychoeducation program’ and Hypothesis 4 ‘There is no significant difference between the pretest and posttest emotionality subscale mean scores of the experimental group individuals who participated in the psychoeducation program’, it was observed that there was a significant difference between the pretest and posttest test anxiety scores of the experimental group individuals and the posttest anxiety scores were significantly lower than the pretest anxiety scores. According to the results, it can be asserted that the anxiety score change is supported by past studies on the usability of psychoeducation programs in the test anxiety area. It is observed that psychoeducation programs aimed at decreasing test anxiety have obtained similar results and support the present study (Alver et al., 2013; Seer, 2013; Kaya, 2015; Tařpınar & Bařgöl, 2017; Karabur & Tun, 2017; Gen & Kutlu, 2018; Doęan, 2019; Kral, 2019, Yapan, 2021). As a result of a study conducted by Karabur & Tun (2017) on test anxiety, it was observed that the posttest emotionality and worry subscale data of the experimental group individuals were lower than the pretest data. In a study conducted by Doęan (2019), the posttest worry subscale data was significantly lower than the pretest, which was associated with the cognitive behavioral approach. As a matter of fact, the content of the psychoeducation program sessions in this study was prepared based on the cognitive behavioral therapy. In the creative drama-based prevention program prepared to prevent test anxiety of gifted children, it was observed that there was a significant difference in test anxiety scores of the individuals in the experimental group and the control group ( Karatař & Tagay, 2019). This may be due to the fact that preventive education programs prepared with cognitive behavioral foundations provide students with skills such as correct thinking, getting rid of faulty automatic thoughts, recognizing where the mistake is in the behavior, and that students’ test anxiety decreases after the training.

When examining the findings and the table concerning Hypothesis 2 ‘There is no significant difference between the pretest and posttest worry subscale mean scores of the experimental group individuals who participated in the psychoeducation program’, it was observed that there was a significant difference between the pretest and posttest anxiety scores of the control group individuals and the posttest anxiety scores were significantly higher than the pretest anxiety scores. The increase in anxiety was thought to be associated with limited time until the test, decision of distance education after formal education and uncertainty of the test curriculum. In the literature it was seen that there was no change in the control group posttest data in experimental studies (Alver et al., 2011; Seer, 2013; Kaya, 2015; Tařpınar & Bařgöl, 2017; Karabur & Tun, 2017; Gen & Kutlu, 2018; Doęan, 2019; Kral, 2019, Yapan, 2021). In addition, the fact that the individuals in the control group did not know the methods of coping with anxiety with the approach of the exam, could not manage the time well in the exams, and could not determine the most efficient study method for themselves while learning the subject they were missing may have caused their anxiety to increase.

When examining the findings and the table concerning Hypothesis 5 ‘There is no significant difference between the posttest mean scores of the experimental group individuals who participated in the psychoeducation program and the posttest mean scores of the control group individuals’, Hypothesis 6 ‘There is no significant difference between the posttest worry mean scores of the experimental group individuals who participated in the psychoeducation program and the posttest worry mean scores of the control group individuals’, and Hypothesis 7 ‘There is no significant difference between the posttest emotionality mean scores of the experimental group individuals who participated in the psychoeducation program and the

posttest emotionality mean scores of the control group individuals', it was observed that there was a significant difference between the posttest test anxiety scores of the experimental and control groups and the posttest anxiety scores of the experimental group were significantly lower than the posttest anxiety scores of the control group. In a study examining the effect of Solution-Focused Short-Term Therapy and Cognitive Behavioral Therapy on test anxiety, it was determined that the decrease in the Test Anxiety Scale scores of the Solution-Focused Short-Term Therapy group was significantly different from the scores of the students in the other two groups. According to the results of the findings obtained from the research; When the Pre-Test-Post-Test Scores of the Students who received Solution Focused Therapy and Cognitive Behavioral Therapy were compared, it was observed that there was a decrease in the test anxiety post-test scores after the Solution Focused Short Term Therapy and Cognitive Behavioral Therapy application (Özkan, 2021). In another study, which aimed to develop an automatic virtual reality application focused on Cognitive Behavioral Therapy (CBT) and test its effectiveness with the aim of providing a preventive support system for students who are preparing for the exam and experiencing anxiety, it was observed that there was a significant difference in students' test anxiety after the cognitive behavioral application (Akdağ Çebi, 2021). Since the students were given trainings such as efficient study, effective use of time, and listening skills after the training, these trainings may have enabled the students to know themselves better and to control their anxiety.

When examining the findings and the table concerning Hypothesis 8 'There is a significant difference between the posttest total scores of the experimental group individuals who participated in the psychoeducation program and their follow-up session total scores', it was observed that there was a significant difference between the posttest test anxiety total mean scores of the experimental group individuals and their posttest follow-up session test anxiety total mean scores and the posttest anxiety scores of the experimental group were significantly lower than the posttest follow-up session anxiety scores. Also in their study, Karaburç & Tunç (2017) revealed that one-month and three-month follow-up sessions were conducted after psychoeducation sessions. Follow-up sessions contribute to examining the effect time of the program. After the follow-up session conducted in this study, anxiety scores slightly increased, which might be associated with the approaching test date and curriculum uncertainty caused by distance education.

According to the anxiety score change, it can be asserted that psychoeducation programs decrease test anxiety, which is compatible with the results of similar studies. In the meta-analysis study conducted by Van Daele et al., (2012) on psychoeducation studies it was concluded that short-term psychoeducation programs are very effective on subjects like test anxiety and even more effective on female students. As a matter of fact, in this study the experimental subjects consisted of only female students, which may be an example to why the study has a greater effectiveness. In a study on state test anxiety and gender, it was concluded that female students, whose meaning of test anxiety differs in terms of gender, experience more test anxiety than male students (Onat Kocabıyık & Donat Bacıoğlu, 2020).

In Turkey, higher number of young population has obligated students to do certain eliminations in university placement and choice of profession. Employing qualified individuals in universities and areas of profession has become a prerequisite of high efficiency and progress. This has increased the importance of tests and brought along test anxiety. Students' success in the university exam may affect their department, which may in turn indirectly affect their life, living standards, relationships, social circle and many more areas. Considering from this point of view, test anxiety has become one of the unique subjects to be investigated and discussed. Therefore in this study which aimed to remove the obstacle caused by test anxiety to display the actual performance and conduct the test process in the most effective and efficient way, the effect of psychoeducation programs on test anxiety was tested. As a result of the sessions, all hypotheses, except for Hypothesis 2 were declined and it was concluded that psychoeducation programs had a decreasing impact on test anxiety.



In line with the findings acquired and information in the literature the following recommendations were offered for researchers and implementers.

### **Suggestions for researchers**

The number of studies on test anxiety at secondary education level is limited. Accordingly, the future related studies would contribute to the literature.

The studies on test anxiety have indicated that most of them have been conducted via the correlational model. Considering the repetition in the study method and model, it will be beneficial to also use different models in quantitative research models for the subject.

It is seen that test anxiety studies have been usually conducted via quantitative methods rather than qualitative methods. However, test anxiety is a subject open to qualitative studies which are included in the psychological counseling and guidance curriculum within the scope of educational guidance. Therefore, it is possible to get high efficiency also from qualitative studies and support the literature in this direction.

Considering that test anxiety is not only observed in schools, but it may also be encountered in every area of life such as meetings and job interviews, it can be useful to conduct studies in different study areas and with different participants.

A culture-sensitive national scale measuring cognitive, affective, and behavioral dimensions of test anxiety can be developed. In the literature it is seen that many different test anxiety inventories have been used. Use of a specific local inventory can provide healthier outcomes in terms of comparing the studies.

### **Suggestions for implementers**

As test anxiety increasingly continues toward the test date, application of psychoeducation programs at the beginning of the process rather than toward the test date may provide higher efficiency and prevent participant loss.

Including the issue of test anxiety in guidance planning every year rather than only during the final year (the exam date )may enable students to acquire skills and make these skills permanent.

Handling situations like test anxiety which are intensely experienced from time to time with group studies rather than individual studies may enable the individual to overcome and share the sense of loneliness and negative cognitive situations concerning himself/herself.

As group dynamism will be more compelling in a study to be conducted online via distance education compared to the face-to-face education, starting the training early with participants and rehearsing with them may help to detect individuals who will not provide an appropriate environment for distance education or continue the training.

Following the studies the efficiency of the program can be reinforced to conduct the follow-up study.

Psychoeducation programs can be extended not only in the area of test anxiety but also in other educational areas.

### **Limitations of the Research**

1. Anxiety scores in this study, Albayrak-Kaymak (1985) and Öner (1990) with the scores obtained from the "Exam Anxiety Inventory" translated into Turkish by is limited.

2. Study group of the research, Elazig Cumhuriyet Girl Anatolian Religious High School 10 experiments and 10 students attending the 12th grade of High School Science and Social Sciences Project School limited to a total of 20 female students forming the control group.

3. The research variable is the ones prepared to prevent test anxiety limited to the psychoeducation program.

4. Research data is limited to an eight-session psychoeducation program.

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## REFERENCES

- Akdağ Çebi, C. (2021). *Sınav kaygısı için bilişsel davranışçı terapi temelli sanal gerçeklik destek programının geliştirilmesi ve etkinliğinin test edilmesi*. Yüksek Lisans Tezi. Ankara Yıldırım Beyazıt Üniversitesi. Sosyal Bilimler Enstitüsü, Ankara.
- Alver, B., Dilekmen, M., Seçer, İ., & Çiftçi, M. (2013). The Examination of the Burnout Levels of Psychological Counselors According to Perceptions of School Environment. *International Online Journal of Educational Sciences*. 5(1). 72-81
- Baldık, Ö. (2004). *Ansiklopedik eğitim ve psikoloji eğitim*. Timaş.
- Baltaş, A.(1999).*Stres altında ezilmeden öğrenmede ve sınavlarda üstün başarı*, 17. baskı. Remzi Kitabevi.
- Beck, A.T.(2008).*Bilişsel terapi ve duygusal bozukluklar*. Litera Yayıncılık.
- Beck, A.T.: Emery G.(2011).*Anksiyete bozuklukları ve fobiler*. Litera Yayıncılık.
- Bozanoğlu, İ. (2005). Bilişsel davranışçı yaklaşıma dayalı grup rehberliğinin güdülenme, benlik saygısı, başarı ve sınav kaygısı düzeylerine etkisi. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 38(1), 17-42.
- Butcher, J. N., S. Mineka, and J. M. Hooley.(2013). *Anormal psikoloji* (Çev. O. Gündüz). Kaknüs Yayınları.
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö.E., Karadeniz, Ş. ve Demirel, F.(2011). *Bilimsel araştırma yöntemleri*. Pegem Akademi.
- Corey, M.S., Corey, G., & Corey, C.(2013). *Groups:Process and Practice* (Ninth Edition). Belmont, CA: Thomson Brooks/Cole.
- Cuijpers, P, Smit, F. & Bohlmeijer, E.(2016). *Efficacy of cognitive-behavioural therapy and other psychological treatments for adult depression: metaanalytic study of Publication bias*. *Br j psychiatry*, 196. 173-178.
- Cülen, H. (1993). *Bazı psiko sosyal faktörler açısından çocukların anadolu lisesi sınavı öncesi kaygı düzeyleri*. Yayınlanmamış Yüksek Lisans Tezi. D.E.Ü. Sosyal Bilimler Enstitüsü, İzmir.
- Çakır, G.(2011). *Grup çeşitleri*. Demir Ayhan ve Koydemir Selda (Ed), *Grupla Psikolojik Danışma*. Ankara.Pegem Akademi.
- Demirci, İ., & Erden, S. (2016). Bilişsel davranışçı yaklaşıma dayalı grupla psikolojik danışma uygulamasının 8. sınıf öğrencilerinin sınav kaygısına etkisi. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 43(43), 67-83.
- Doğan, N.(2019). *Psikoeğitime dayalı grup yaşantısının öğretmen adaylarının sınav kaygısına etkisi*. Yüksek Lisans Tezi. Ufuk Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.
- Ergene, T.(2003). Effective Interventions on Test Anxiety Reduction: A Metaanalysis. *School Psychol Int*,24, 313-28.
- Genç, H. ve Kutlu, M.(2018). *Sınav kaygısını azaltmaya yönelik bir psiko-eğitim programının sekizinci sınıf öğrencilerinin sınav kaygısına etkisi*. İnönü Üniversitesi Eğitim Bilimleri Enstitüsü Dergisi. 5(9), 19-30.
- Gliner, J.A., Morgan, G.A., Leech, N.L.(2015).*Research methods in applied settings an Integrated approach to desing and analysis*, 2. baskı. Ankara, Nobel Kitabevi.

- Güçray, S., Çekici F. ve Çolakkadıoğlu O.(2009). Psiko-eğitim gruplarının yapılandırılması ve genel ilkeleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 5(1), 134-153.
- Kafes, A.Y., Çiller, A., Altın, B., Avcı, A., Uyar, E. & Şakiroğlu, M. (2022). Üniversite Öğrencilerinin Pandemi Dönemine İlişkin Kaygılarının Demografik Değişkenler Ve Covid-19 Tanısı Alma Açısından Karşılaştırılması. *Elektronik Sosyal Bilimler Dergisi*, 21(81), 135-151.
- Karaburç, G. ve Tunç, E.(2017). Sınav kaygısını azaltmaya yönelik bilişsel-davranışçı yaklaşıma dayalı grup rehberliği programının etkisinin incelenmesi. *Erzincan Üniversitesi Eğitim Fakültesi Dergisi*, 19(1), 199-213.
- Karakaya, E., ve Öztıp, D. B. (2013). Cognitive Behavioral Therapy in Children and Adolescents with Anxiety Disorder. *Journal of Cognitive-Behavioral Psychotherapy and Research*, 2(1), 10-24.
- Karataş, Z. & Tagay, Ö. (2019). Yaratıcı drama temelli sınav kaygısı ile başetme çalışmasının özel/üstün yetenekli öğrencilerin sınav kaygısına etkisi . *Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi* , 21 (1) , 97-107 . DOI: 10.32709/akusosbil.452169
- Kaya, M. (2015). Psycho education program for prevention of test anxiety on 8th grade students to reduce anxiety and indecisiveness". *European Journal of Interdisciplinary Studies*, 1(1), 37-43.
- Onat Kocabıyık, O. & Donat Bacıoğlu, S. (2020). Durumluk sınav kaygısını yordamada ruminatif tepkiler ve cinsiyetin rolü . *Kastamonu Eğitim Dergisi* , 28 (5) , 2165-2172 . DOI: 10.24106/kefdergi.4087
- Kral, T.(2019). *Fark'andalık temelli psikoeğitim programının ergenlerde sınav kaygısı yönetimine etkisi*. Yüksek Lisans Tezi. Bahçeşehir Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul.
- Lowe, P. A. (2021). Examination of latent test anxiety profiles in a sample of u.s. adolescents. *International Educational Studies*, 14(2), 12-20.
- Neuderth, S., Jabs, B., ve Schmidtke, A.(2009).Strategies for Reducing Test Anxiety and Optimizing Exam Preparation in German University Students: A Prevention Oriented Pilot Project of The University of Würzburg". *Journal of Neural Transmission*, 116(6), 785-790.
- Öner, N.(1990) Sınav Kaygısı Envanteri El Kitabı. Yüksek Öğrenimde Rehberliği Tanıtma ve Rehber Yetiştirme Vakfı.
- Öz Ceviz, N., Tektaş N., Basmacı G. & Tektaş, M. (2020). Covid 19 pandemi sürecinde üniversite öğrencilerinin kaygı düzeylerini etkileyen değişkenlerin analizi. *Uluslararası Eğitim Araştırmacıları Dergisi*, 3(2), 312-329.
- Özkan, M. (2021). *Grupla yapılan bilişsel davranışçı terapi ve çözüm odaklı kısa süreli terapinin lise öğrencilerinde sınav kaygısına etkisinin karşılaştırmalı incelenmesi*. Yüksek Lisans Tezi. İstanbul Gelişim Üniversitesi. Lisansüstü Eğitim Enstitüsü, İstanbul.
- Piştıf, S. ve Şanlı, E.:(2013).“Bilişsel davranışçı terapide metafor kullanımı”. *Bilişsel Davranışçı Psikoterapi ve Araştırmalar Dergisi*, 2,182-189.
- Rehab, T. (2021). Effects Of Test Anxiety, Distance Education On General Anxiety And Life Satisfaction Of University Students. *Psycho-Educational Research Reviews*, 1(10), 107- 117.
- Seçer, İ.(2013).“Grup Rehberlik Programının İlköğretim 7. Sınıf Öğrencilerinin Sınav Kaygı Düzeyleri Üzerindeki Etkisi”. *Academic Sight/Akademik Bakış* 38, 1-13.

- Spielberger, C. D. (1980). The test anxiety inventory. Palo Alto, CA: Consulting Psychologist Press Inc.
- Taşpınar G. N. ve Başgül, Ş. S.(2017). Psikodrama ve bilişsel davranışçı terapi yöntemi ile grup çalışmasının sınav kaygısı üzerindeki etkileri”. *Bilişsel Davranışçı Psikoterapi ve Araştırmalar Dergisi*, 6(1). 22-30.
- Van Daele T, Hermans D, Van Audenhove C, Van den Bergh O. (2012). Stress reduction through psychoeducation: a meta- analytic review. *Health Educ Behav*.39(4):474-85. DOI: 10.1177/1090198111419202. Epub 2011 Oct 10. PMID: 21986242.
- Von der Embse, N., Barterian, J., ve Segool, N.:(2013).Test anxiety interventions for children and adolescents: a systematic review of treatment studies from 2000–2010. *Psychology in the Schools*, 50(1), 57-71.
- Yapan, S. (2021). *Kabul ve kararlılık terapisi ve bilişsel davranışçı terapi temelli psikoeğitim programlarının sınav kaygısına etkisi*. Doktora Tezi. Gaziantep Üniversitesi Eğitim Bilimleri Enstitüsü, Gaziantep.
- Zengin, B. & Şengel, Ü. (2020). Üniversite Öğrencilerinin gelecekleriyle ilgili kaygı ve beklentilerinin belirlenmesi. *Optimum Ekonomi ve Yönetim Bilimleri Dergisi*, 7(2), 435- 454.
- Zülemyan, A.:(1979). *A comparison of cognitive therapy, modified desensitization, cognitive behaviour, modification and control groups of reducing test anxiety*. Yayınlanmamış Yüksek Lisans Tezi. Boğaziçi Üniversitesi/Sosyal Bilimler Enstitüsü, İstanbul.