INTERNATIONAL JOURNAL of CONTEMPORARY EDUCATIONAL RESEARCH

Volume 8 | Issue 3 | Year 2021 | e-ISSN: 2148-3868

JCER

IJCER

International Journal of Contemporary Educational Research

September 2021 **Volume: 8** **Issue: 3** **e-ISSN: 2148-3868**

http://ijcer.net/

Indexing
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Article History
Received: 05.02.2021
Received in revised form: 03.06.2021
Accepted: 06.06.2021
Available online: 03.09.2021

To cite this article:

Rocha-Erkaya, O. & Ergünay, O. (2021). Pre-service ELT teachers' prospective needs and desires for their pre-service teacher education. *International Journal of Contemporary Educational Research*, *8*(3), 1-12. DOI: https://doi.org/10.33200/ijcer.909940

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 1-12 ISSN: 2148-3868

Pre-service ELT Teachers' Prospective Needs and Desires for their Pre-service Teacher Education[i]

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Abstract

The purpose of the study is to explore the voices of pre-service ELT teachers on their prospective needs and desires for their pre-service teacher education curriculum. A qualitative research was conducted with freshman and sophomore students at an ELT Department in a Faculty of Education of a public university in Turkey. To reach an in-depth understanding of participants' knowledge, qualitative data were collected through 10 focus group discussions which 66 pre-service ELT teachers attended. Inductive analysis revealed that participants' prospective needs are categorized under two emerging themes: (a) instructional/practical and (b) attitudinal/behavioural development. In addition, the prospective desires of them are categorized under two emerging themes: (a) instructional/practical development and (b) content development. Finally, the participants emphasize reducing the number of theoretical courses from the program and increasing practical courses instead.

Key words: Pre-service ELT teachers' prospective needs and desires, Teacher competencies, Curriculum evaluation, Professional development

Introduction

The overall goal of training effective teachers has never been stopped being discussed among the policy makers, teacher educators and scholars. Pre-service education curricula, the success in applying them and academic achievement of the preservice teachers pursuing these curricula are thought to be highly correlated with their future teacher efficacy (Brownell, & Pajares, 1999; Caprara et al., 2006; Goddard et al., 2000). Thus, when designing a curriculum for the English Language Teaching (ELT) Department at any university in the world, curriculum designers should take pre-service teachers' needs and desires into consideration. It is crucial to understand that pre-service teachers must be well prepared not only in the content area but also in the pedagogical and professional areas which seem to prepare them for a better career. Accordingly, the Higher Education Council in Turkey redesigned the Teaching ELT program in 1997, having the 21st century demands in mind. The intention of the Council, according to Kırkgöz (2005), was not only to add more methodology courses to the program but also to increase the number of hours that students spent in teaching practice in both elementary and secondary schools. Additionally, Kırkgöz (2007) states that the Council understood the importance of adding a course entitled Teaching English to Young Learners to the program, so students would learn how to teach this group of students before they started their teaching practice in schools. The reform was then introduced to all ELT departments in the country.

In 2006, the Council attempted to reform the ELT program once again in order to introduce changes in the curriculum. In 2007, the new reform was put into effect and the program included many required and few elective courses (Karakas, 2012). Altunya states that the program consisted of courses related to general knowledge, English language, and teacher education (as cited in Karakas, 2012). Additionally, Seferoglu (2006) believes that the program emphasized courses on methodology and teaching practice. As a result of the changes, in the first year of the program, students had a chance to brush up on the four language skills as well as on lexis and grammar. As ELT students advanced in their program of studies, courses were geared towards their career,

[i] The research was not funded by any public or commercial sector. Some initial findings were orally presented at Global Conference on Education and Research 2018, Las Vegas, Nevada, USA.
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culminating in the last year of the program with a focus on observation and teaching practice in elementary and secondary schools.

Some news about a new reform in all teacher education curricula, including the ELT program, had been spreading since 2017 and a revised program was recently introduced by the Higher Education Council (CoHE, 2018). The revised program is claimed to be based on the recent teacher competencies introduced by the Ministry of National Education (MoNE, 2017). These competencies are framed under three categories, namely professional knowledge, professional skills, and attitude and values. Table 1 presents the main and sub-categories of the current teacher competencies:

Table 1. Teacher Competencies (MoNE, 2017)

Professional Knowledge	Professional Skills	Attitudes and Values
• Knowledge of subject matter • Knowledge of pedagogical content • Knowledge of applicable legislations	• Skills in planning instruction • Skills in developing proper learning environments • Skills in managing instruction • Skills in assessment and evaluation	• National, moral, and universal values • Attitude towards students • Communication and cooperation • Personal and professional development

As illustrated in Table 1, the three recently introduced areas of teacher competencies involve 11 sub-categories. The document through which the new competency areas are presented also includes a detailed explanation for each area and the sub-categories. Another change in the curriculum is in the number of hours in the program which has decreased from 175 to 155 hours, reorganizing the balance among different areas of teacher education as content knowledge (45-50%), professional knowledge (30-35%) and cultural knowledge (15-20%), and an increase in the number of elective courses in these three areas. It seems positive that the program has been built through a participatory approach based on several meetings and workshops with educators from different parts of the country. The changes in teacher education curricula appear to be in line with suggestions by Ell et al., (2019), a researcher based in Australia, in that they put forward the enhancement of student learning and the development of competent teachers with the help of essential "knowledge, skills and dispositions" (para 2) to reinforce learning.

A very recent decision announced by CoHe (2020) also highlights the dynamic and continuing tendency to review and revise the pre-service teacher education curricula. The decision enable each university and faculty of education to revise and redesign their pre-service education curricula according to their specific contexts and needs. Although the overall framework for all teacher education curricula is set as including content knowledge, professional knowledge and cultural knowledge, the universities are now authorized to redesign their pre-service teacher education curricula. This very recent amendment introduced by CoHE once again underlines the significance of conducting research studies, mapping the specific needs and desires of both target groups and stakeholders in institutional contexts, and revising the preservice education curricula accordingly. To this end, exploring the opinions of pre-service teachers on the overall structure of pre-service teacher education curriculum that is pursued by them appears to provide a better understanding of the effectiveness of these curricula and to contribute to set better grounds to review and revise them.

Literature Review

Much research has been conducted in the area of pre-service teachers' needs to become efficient teachers; however, so far most have been on the views of researchers based in Turkey and abroad (Coskun, & Daloglu, 2010; Fillmore, & Snow, 2000; Lazar, 2018; Mann, 2005; Sheridan, 2011; The Professional Development of Teachers, 2009; Wichadee, 2011). Additionally, in-service or experienced teachers have participated in research studies on what pre-service teachers need to be prepared for in-service teaching (Faez, & Valeo, 2012; Farrell, 2018; Gandara et al., 2005). What is lacking in this array of research is more on the perspectives of those who should be considered a priority, pre-service teachers in Turkey. Pre-service teachers are those who experience first-hand their own transformation from English language students to teachers. Nevertheless, few researchers have asked pre-service teachers directly what they need and desire to become competent teachers of English.

In-service Teachers' Perspectives

The perspectives of in-service teachers about pre-service teachers' development should be considered. The former once experienced first-hand what it was to be on the other side of the fence. After a while, as in-service teachers, they began to put into practice what they had learned as pre-service teachers. To illustrate, Faez and Valeo (2012) include in their research in-service teachers working less than three years. Their research is about how they perceived their own preparation as teachers of English to speakers of other languages (TESOL) right after graduation and up to three years of experience, how successful they felt after some practice in adult education classrooms, and how useful the courses they took towards their degree were. The findings show that as the in-service teachers became more experienced, they realized that they were more prepared. Another study by Farrell (2018) focuses on novice in-service teachers discussing problems that usually surface once pre-service teachers become in-service teachers. Farrell explains the gap between before (during preparation) and after (during development), and how this gap could be bridged, stating that in-service teachers face a different reality once they graduate. They have to take care of everything by themselves, from planning classes to teaching, and so on. They do not have anyone on whom they can rely. Thus, Farrell makes several practical recommendations for pre-service teachers to feel more confident moving to the role of in-service teachers. He suggests that their program of study should equip them with three areas: "the content of L2 [what they need] . . . the pedagogies . . . taught in L2 teacher education programs [how they should teach], the institutional forms of delivery through which both the content and pedagogies are learned [how they learn how to teach]" (p. 439).

Furthermore, Gandara et al. (2005) have investigated in-service teachers' professional development needs, knowledge and efforts. In their literature review, the researchers list what has been said about teachers' needs to become successful: "ability to communicate with students [and] . . . engage students' families, knowledge of language uses, forms, mechanics, and how to teach these, and a feeling of efficacy with regard to teaching English language learners" (p. 3). The results of their study show that teachers found that their most important need was to be able to communicate with their students and their families, and that was very challenging due to their inability to speak the parents' language and parents' inability to speak English. Another important need was being well prepared for the profession. According to the researchers, teachers should trust their ability to do their work efficiently and should be supported by administrators and colleagues.

Pre-service Teachers' Perspectives

Pre-service ELT teachers should be considered top priority when researching their needs and desires for their transformation into efficient in-service teachers. The literature, however, lacks research on the topic. Sheridan (2011) refers to this issue as "the lack of voice of pre-service teachers." She continues by saying: "… Much of the discourse mirrors the understanding and practices of experts rather than pre-service teachers" (p. ii). The literature supports the fact that pre-service teachers have not been voicing their opinions on the topic as often as they should (Coskun, & Daloglu, 2010; Fillmore, & Snow, 2000; Lazar, 2018; Liu, 1998; Mann, 2005; The Professional Development of Teachers, 2009; Wichadee, 2011). One of the studies that has used pre-service ELT teachers as participants in Turkey, which to a certain extent is related to the topic of the present research, is the study of Seferoglu (2006). However, she explores in-service teachers' perceptions of an area that most first and second year pre-service teachers are not prepared to discuss, that is, methodology and practice teaching courses. In Seferoglu's (2006) study, participants found no link "between the course materials and practical application in real classrooms" (p. 372). They also affirmed that they did not have much micro-teaching practice or school teaching practice. In addition, they wish that they had had the opportunity to observe several different teachers teaching students in different grades. Furthermore, Gan's study (2013) also deals with pre-service teachers' experiences in a teaching practice course at a university in Hong Kong. The pre-service teachers found the course to be an unsettling experience because they were unable to manage the class. Moreover, Wu and Garza's (2016) research also focuses on pre-service teachers professional learning experiences, more precisely on their interaction with various aspects of a teaching practice course, that is to say, from peers, to materials, to tasks to see how they developed. The results show a strong relationship between the pre-service teachers and their peers. As for the materials that they had studied, the results indicate that they learned from them and might be able to use them when teaching. In addition, about the activities they took part in, they also learned from them and might use the knowledge gained in the future.

Nevertheless, Sheridan (2011) focuses on pre-service teachers' views of in-service teachers' qualities--"attitudes, knowledge and skills" (p. ii). In her dissertation, Sheridan acknowledges the fact that pre-service teachers' perspectives have not been top priority. As a result, she decides to determine pre-service teachers' thoughts on, ". . . the qualities of an effective secondary school teacher (attitudes, knowledge and skills) as they

[sic] progress through their [sic] four-year undergraduate degree" (p. 1) . One of the qualities that Sheridan states that pre-service teachers should have is different types of knowledge: "subject content, educational theory, pedagogical knowledge and professional knowledge" (p. 36). According to Sheridan, in-depth content knowledge helps pre-service teachers to make a connection between theory and practice, and results in more successful students. She goes on to say that ". . . the knowledge about the content to be taught; knowledge of pedagogical strategies for teaching the content; and knowledge about students" (p. 40) are all linked together. Therefore, the knowledge in these areas should all be considered important. Her findings obtained from the focus groups have resulted in five themes and respective categories: "content/knowledge . . . interpersonal. . . management and organizational. . . instructional techniques (pedagogical). . . [and] professional. . ." (p. 122).

Purpose of the Study

This study was undertaken with the purpose of exploring pre-service ELT teachers' views on their prospective needs and desires for their pre-service curriculum. Particularly, it sought to address the following questions:

1. What do pre-service ELT teachers believe is necessary for them to develop into competent teachers?
2. What do they desire to study to develop into competent teachers?
3. What courses do they perceive should be included in or removed from the program of study to prepare them for their profession as ELT teachers?

The Study Context

The study was carried out at the ELT Department in the Faculty of Education of a public university in Turkey. Although the faculty has a 20-year experience in teacher education, the ELT Department has been preparing EFL teachers for the past 5 years. The Department was established with a limited number of academic faculty members and efforts have been made by these members over the years to do their best to provide pre-service teachers with whatever they need to be competent teachers. Currently, the Department comprises of six full-time lecturers, two part-time lecturers from another Department and three part-time lecturers from another university in the city, and more than 200 students. Teacher training has been conducted with research-based curriculum development efforts. In this regard, the students' views on their needs and desires are considered extremely important when introducing elective courses, and planning workshops and seminars.

Method

Research Design

Qualitative research design was used in the present study. The researchers tried to reach an in-depth understanding of participants' knowledge of the targeted issue (Creswell, 2013). The rationale for selecting this design was to specify the current and prospective needs and desires of the ELT pre-service teachers in-depth. As such, the study also seemed to function as providing insights to practitioners to develop better pre-service teacher education curricula and sources for pre-service teachers as Long (2005) highlights.

Data Collection

The data were collected by means of 30-minute focus groups (n=10 focus groups in two separate sessions with two different instructors) on the research topic. Gill et al. (2008) define focus groups as those in which participants discuss a specific topic, and the researcher–a facilitator or moderator–uses this method when s/he needs to generate a rich understanding of participants' experiences and beliefs. Each group was made up of 6-8 students (n=66 students) and were given a form involving open-ended questions referring to three research questions. The questions on the form were as follows: *What do you think is necessary for you to develop into competent teachers? What do you desire to study to develop into competent teachers? What courses do you think should be added to or removed from the program?*

The students were asked to discuss the questions in their focus groups and report their roles on the form. As for their roles, they were asked to choose a leader (note-taker and observer to make sure everything went well during the discussion), presenter (presenter of results to the group and class), time keeper (allocator of time for each question and observer of effective use of time) and monitor (observer to make sure everyone participated). Then, the researcher explained each one of the four roles. Once the discussion was over, the leader finalized the discussion group report and the presenter shared it with the group and class orally in the classroom. The

presenter also gave a copy of it to the researchers for analysis. By following these steps, on one hand, the participants were given the opportunity to make presentations in align with the course objectives. On the other hand, the researchers would have the opportunity to have written records of what had been discussed in each focus groups.

Participants

The study was carried out with freshman and sophomore students of ELT department at a public university. As the overall purpose of the study is to examine the perceptions of pre-service teachers on their needs and desires for the following years in the pre-service education, the participants were confined to the freshman and sophomore students who were in their initial years in the program. To this end, specifying the preliminary and prospective needs and perceptions of pre-service teachers is targeted in the study.

More specifically, the participants were a total of 66 volunteer pre-service ELT teachers enrolled in two sessions of Oral Communication II (a first year course), taught by two different instructors acting as the researchers. 31% of the participants were males and 69%, females. 32% were enrolled in the 2nd semester and 69%, in the 3rd and 4th semesters of the program. The average age of the male students was 22.5 and that of female students was 24.5. The percentage of students who attended the Preparatory English Program from one to two semesters before being admitted to the ELT Department was 55%and from three to four semesters was 12%. The percentage of those who scored 70 or higher in the proficiency exam given by the Preparatory English Program before the fall semester started and, therefore, did not attend the English program, was 33%. This proficiency exam which is prepared and applied by the department of foreign languages includes three sections. First, students take a test of eighty multiple choice items which assess students' listening comprehension, reading comprehension and use of language (grammatical and lexical competence). In the second sections, they are asked to write an academic paragraph about a given topic. Finally, they are interviewed for at least fifteen minutes or more to assess their speaking skills in the English language. The exam is designed towards assessing B2 English language level outcomes and the students who achieve the required language level can start the ELT department at the beginning of the academic year.

Data Analysis

An inductive approach was used for the data analysis. The analysis involved three interwoven flows of activity: data condensation, data display and conclusion drawing/verification, as suggested by Miles et al. (2014). First, the reports including responses to the questions provided by each group were copied for both researchers. Each researcher used the three research questions as the overall framework for classifying the data and then coded the data independently. Specifically, each researcher first identified the initial codes for each research question separately. The rationale for this separate flow is to increase the inter-rater reliability. After this initial coding, a meeting was carried out and the codes for each research question were finalized by two researchers together. Next, these finalized codes were categorized and themes were developed for each research question which resulted in two themes for the first and second research questions, and three themes for the third research question. The finalization of these themes was made by both researchers jointly. Then, the findings related to all research questions were presented through an interpretative approach based on the emerging codes and themes. To display the data, the second flow of data analysis, figures were designed. They include the research questions and consolidated codes and categories on a matrix of rows and columns. After that, through several meetings, the researchers drew and verified conclusions.

Ethical Measures

Before the data collection period, students were informed of the purpose of the study and consents to participate in the study were taken from each of them. As such, volunteer participation in the study was ensured by the researchers. In addition, the participant students were explicitly informed that their responses would not have any positive or negative effect on their assessment procedures in the courses they had taken during the time of the study. This measure was taken as the researchers were also teaching courses in the department that the participants were already enrolled in. As for the institutional research permission, the head of the department at the time of data collection confirmed that the research could be conducted with volunteer participation, which was another ethical measure taken in the current study.

Results and Discussion

The analysis of the data obtained from the focus group forms regarding the three research questions has been presented below:

RQ1. ***What do pre-service ELT teachers believe is necessary for them to develop into competent teachers?***

The first research question refers to participants' needs to become competent ELT teachers. Their responses have been categorized into two emerging themes: instructional/practical development and attitudinal/behavioural development. Figure 1displays the codes for both emerging themes.

Pre-service teachers in this study have an idea of what they need to transform themselves into competent teachers, and their knowledge may be based on their experience as students and on what they have heard from their peers about the program of studies (see Figure 1). The participants appear to understand what should be applicable for all teachers: the fact that they will have to prepare for classes before teaching, find the right materials for their classes, and know what type of technology to use and how to use it. Some reported views of the groups on these findings are as follows:

> *A good teacher should know the techniques of teaching quite well and prepare the courses well (Focus Group 4 [FG4]).*
> *Being good at using technological devices is a must for becoming a competent teacher (FG2).*
> *To become an effective teacher, you need to find new and innovative teaching materials to get your students' attention (FG6).*

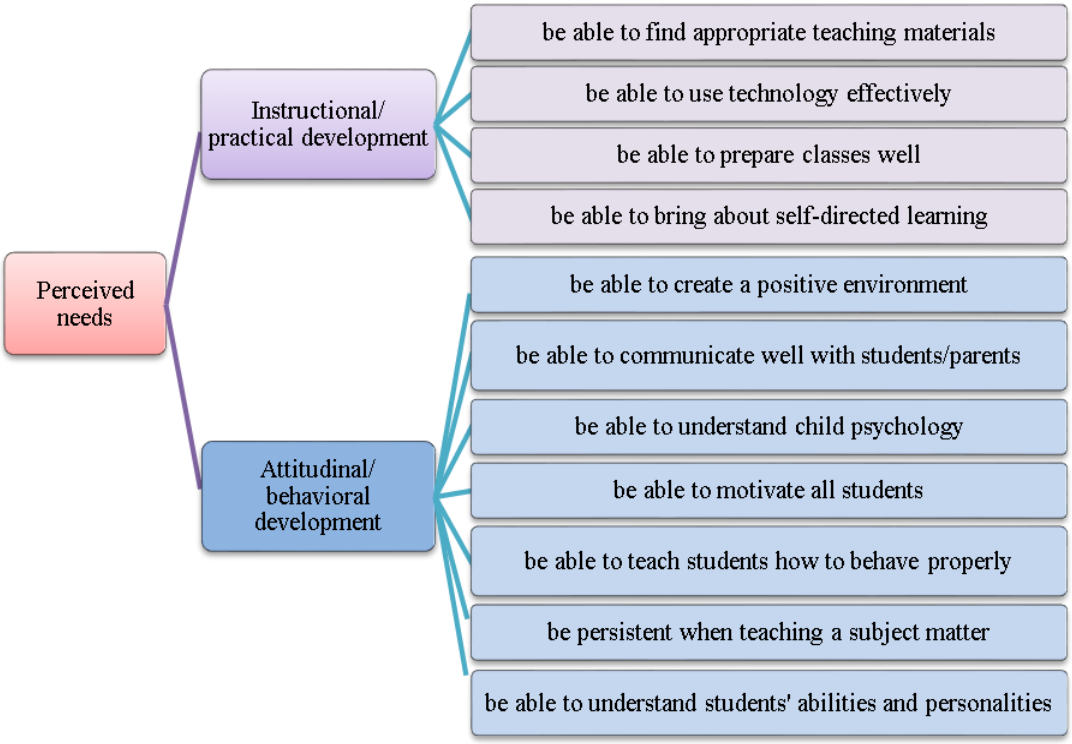

Figure 1. Perceived needs to become competent ELT teachers

In addition, one of the groups highlights designing instructional materials as '*The first thing a teacher should do is to prepare materials related to specific topics' (FG4)*. They know that even public elementary, middle and high schools in Turkey use technology to teach English.

Another finding related to instructional and practical development is promoting self-directed learning. The report by FG5 involves a direct reference to self-directed learning:

> *We should support students in self-directed learning. Particularly, effective teachers must create positive environments for students where each learner feels safe to share thinking, ask questions and participate in conversations naturally (FG5)*

The quotation by FG5 also implies the pre-service teachers are aware that they should teach their students to learn by themselves. The report by FG5 refers to self-directed learning as creating positive learning contexts where learners freely ask questions and share their thoughts.

RQ2. ***What do they desire to study to develop into competent ELT teachers?***

The second research question is on participants' desires to become competent ELT teachers. Their responses have resulted in 10 emerging codes that have been categorized into two themes related to participants' desires. The themes and codes are displayed in Figure 2.

The researchers observed participants' considerable enthusiasm about making suggestions for their preservice programs in focus group discussion. Their list of needs in Figure 1 ended up supporting their list of desires in Figure 2. For example, the items in the instructional/practical development displayed in Figure 1 (needs) relate to the items in the Instructional/practical development in Figure 2 (desires). Hence, in the former, participants' needs refer to their professional development and courses that they believe are necessary for self-development. Some student voices related to instructional/practical designs are as follows:

> *A competent teacher needs deep knowledge in the area of educational psychology (FG3).*

> *To become good teachers, we need to study psychology to understand the children's abilities, emotions and the issues they have encountered in their families and social lives (FG5).*

> *Maybe one of the most important course is educational psychology to become a good teacher. This is because it trains teachers to monitor and reflect on different learning situations (FG6).*

> *More classes on communication are needed to be in harmony with kids (FG10).*

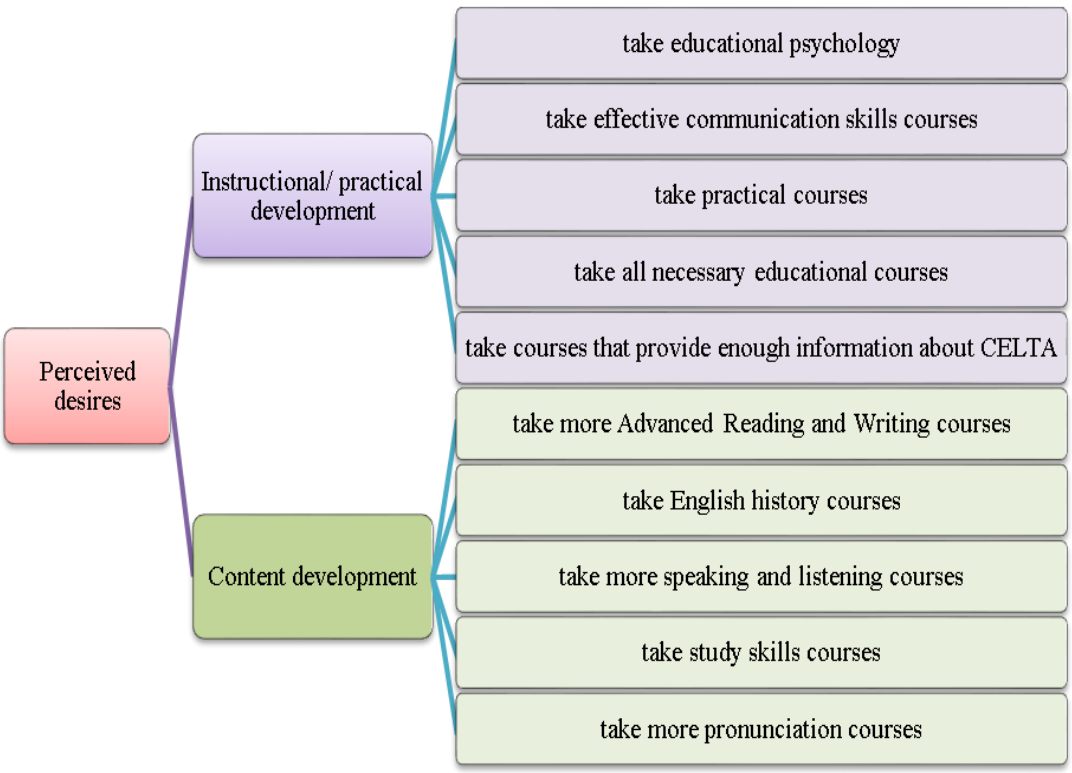

Figure 2. Perceived desires to become competent ELT teachers

In addition, some of their needs in Figure 1, such as "*be able to communicate well with students/parents*" and "*be able to understand child psychology*" resulted in these desires in Figure 2, "*take effective communication skills courses*" and "*take educational psychology*" respectively as quoted above. These findings are supported by Gandara et al. (2005), too. The in-service teachers that Gandara et al (2005) examined also agreed that for them to develop into competent teachers, they had to communicate well with students and parents, to use the language correctly, and be well prepared in pedagogical and professional areas in addition to content areas. Moreover, based on the results of his study, Farrell (2018) confirms the importance of teachers being prepared in the three areas listed by Gandara et al. (2005), and so does Sheridan (2011).

In reference to content development shown in Figure 2, some of the pre-service teachers were about to finish their second semester of courses, but the majority were already taking courses from the 3rd and 4th semesters, with the exception of very few courses. This was because the latter finished the preparatory English language program a semester before the former. As a result, the latter knew what they desired to take more of and what they thought was necessary for them to take further, such courses as English history to understand the English culture better and study skills to learn the skills necessary to succeed in their courses. The participants probably felt that their knowledge in the four language skills as well as phonetics could be enhanced, too, because they desired to take more of these courses they had already taken. The importance of being very competent in the content area is supported by Farrell (2018), Gandara et al. (2005) and Sheridan (2011), too.

RQ3. ***What courses do they perceive should be included in or removed from the program of study to prepare them for their profession as ELT teachers?***

The last research question seeks the participants' opinions of the courses that they have taken and their recommendations for adding courses to the program and/or removing courses from the program. The emerging codes and themes related to the third research question are shown in Figure 3.

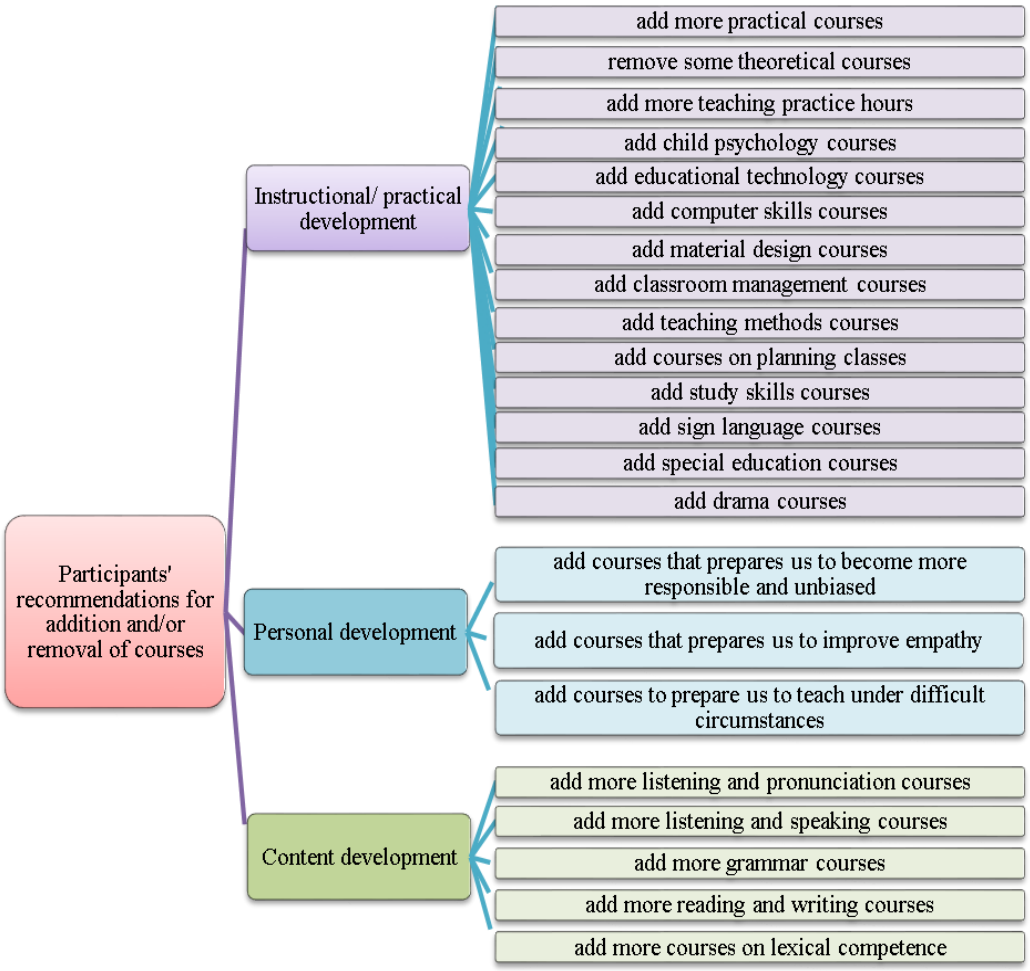

Figure 3. Participants' recommendations for addition and/or removal of courses

The findings imply that theoretical courses, in general, made the list of courses that the participants believed that should be removed from their program of study:

> *We want less theoretical courses; more interactive courses (FG10).*

This finding can make sense from a student perspective and be interpreted as preservice teachers might think that theoretical courses offer very little or no excitement whatsoever from their perspectives. It must be noted here that pre-service teachers seem to look forward to courses that will develop them into professionals, what they themselves call, "exciting courses." Nevertheless, instructors understand the importance of theoretical courses for the development of future teachers: These courses represent the backbone for what awaits the pre-service teachers. Without these courses, pre-service teachers cannot rationalize their practice. For example, in the first semester of the third year, pre-service teachers take Literature and Language Teaching I, a theoretical course. This course emphasizes the theoretical and historical backgrounds of literature, approaches to use, popular culture in the teaching of EFL and benefits of using literature to teach EFL. In contrast, Literature and Language Teaching II emphasizes the practical aspects of using literature to teach EFL. Without the first course, pre-service teachers are unable to use literature to teach EFL in an informed manner. Fillmore and Snow (2000) affirm that both theoretical and practical courses have a place in pre-service teachers' program of study.

The responses given by the participants in Figure 3 confirm the existing courses in the first year and suggest courses for later years; nevertheless, the latter are already found in the curriculum. This may reveal that participants do not know about the existence of these courses or they may have learned about these courses from their peers. Also, some courses that are not offered in the Department, but participants think that they should be added, such as Study Skills (FG3 and FG8) and Sign Language (FG1 and FG2), may be explained by the fact that pre-service teachers may feel that they need help to do well in courses, and that students who are hearing impaired or have other disabilities are being placed in "inclusion" classes (regular classes).

Courses on personal development emerge as the second theme. Some quotations by the focus groups on personal development courses are as follows:

> *We should be trained for conditions that we may face while communicating with students. The program should make us responsible and unbiased (FG6).*
>
> *We need courses that will improve our empathetic emotions (FG7).*
>
> *It [pre-service teacher education] should prepare us for harsh areas like suburbs or Eastern cities [Terrorist attacks may eventually occur in the Eastern part of the country] (FG10).*

About adding courses to help with their personal development, it may not be possible because how can courses teach students to be more responsible, unbiased and empathetic, or to be able to teach in dangerous environments, areas in which terrorism exists? Some of the teacher educators may be role models. In fact, the present study does have neither positive nor negative finding on this critical role of teacher educators in preservice teacher education. Considering the influence of teacher educators' on preservice teachers' professional understanding and practices, it can be suggested when teacher educators behave responsibly, and are unbiased and empathetic, pre-service teachers may be inspired from them. On the other hand, it can be noted here that principles and values are mostly learned at home. If pre-service teachers have not acquired them by the time they enter college, it may be difficult for them to do so at this point or they may have to try hard to learn by themselves. Nevertheless, these appear to be among the professional learning needs that should somehow be catered for during the pre-service education period and enhanced through in-service training programs formally or in professional learning communities in the schooling context in informal ways. In relation to content development, participants' responses overlap their desires displayed in Figure 2. This can be explained by their expectations to enhance their content knowledge.

As far as teaching practice, participants have responded that they believed more practice hours should be added:

> *We should go for practicum every year. For example, there should be practicum schools near the Faculty of Education. What I mean is that we can practice teaching all the information we learn, so that we can get feedback (FG9).*

Maybe they were told by their peers that the school practice was not enough. This is confirmed by Seferoğlu (2006) in a study conducted in Turkey. Moreover, by looking at Figure 3, the researchers understand that most

of the courses in the pedagogical and content areas of development highlighted by the participants to be added to their teacher education program have been supported by Farrell (2018), Gandara et al. (2005) and Sheridan (2011).

Conclusion

The current study was designed to scrutinize the voices of pre-service ELT teachers on their needs and desires about their pre-service teacher education program. The first major finding refers to participants' eagerness to reveal their needs and desires for their professional development as they all seemed to actively participate in the focus group discussions and to undertake their roles willingly. This might be interpreted as that the study allowed them to articulate their opinions about the pre-service teacher education program. Secondly, they appeared to be aware of their demanding contexts of learning how to teach and to be competent teachers. In addition, they all seemed to be highly motivated towards their profession and to care about their professional development. The third major finding is that the study enables researchers to reflect on pre-service ELT programs, in general, and on their concerns about the courses and methods they use. It appears that students' voices–even those of freshmen–should not be underestimated, which implies further regular studies in our department to strengthen the pre-service teacher education program.

Although the study was initiated towards enhancing our understanding of pre-service ELT students' voices on their needs and desires for their professional development, the findings have also enabled us to suggest several implications for enhancing the pre-service ELT program. First, the study reveals that pre-service ELT teachers have asked for courses on developing their attitudes and emotions towards the profession. This desire is associated with the recently announced teacher competencies and renewed national pre-service teacher education program in that pre-service teachers highlight their needs and desires on their attitudinal/behavioural development, noticeably more than in other areas, content knowledge and practical development. Fortunately, the newly introduced pre-service ELT program involves compulsory courses which are devoted to enhancing attitudinal/behavioural development. Yet, although the titles of these courses have been decided, their descriptions are brief and need to be extended, according to their contexts. Furthermore, all the professional development courses do not have sufficient class hours to give opportunity to all individual students to practice and get feedback on their performance. In the new ELT program 22 practice hours have been abolished CoHE (2020). Thus, pre-service teachers' voices must be included when designing the content of these courses. In particular, the perceived needs and desires of the participants in the current study lead us to integrate pre-service ELT teachers' attitudes and professional values into compulsory courses, such as Educational Sociology, and Morals and Ethics in Education. In addition, the number of elective courses has been increased in the revised ELT program, which sets departments free to choose elective courses. The evidence from this study contributes to determining elective courses in the department in that offering Values Education course will fulfil the pre-service teachers' needs. In addition, the very recent delegation of authority by CoHE (2020) in designing pre-service teacher education programs in faculties of education appear to lead comprehensive curriculum evaluation and development studies at institutional levels in Turkey. The findings of the present study which showcase the beliefs and desires on the pre-service ELT curriculum they pursue can set a well-grounded framework for designing further institutional pre-service teacher education curricula in the present study context. The findings can also be useful for designing pre-service ELT curricula in similar institutional contexts.

To conclude, several limitations to the present study need to be acknowledged and a set of recommendations for future research are presented accordingly. First limitation of this study seems to involve freshman and sophomore ELT pre-service students instead of junior and senior ones. This is because the overall aim of the study was not to evaluate the pre-service teacher education curricula but to examine the opinions of ELT pre-service students on their programs that they will pursue in further years. Yet listening to the voices of junior and senior students who have taken more courses in their preservice education programs might provide a more detailed framework of the needs and desires as they have much experience within the curricula. Secondly, the study is restricted to qualitative data obtained from 66 participants in 10 focus group discussions. Further research using mixed method designs and involving more ELT pre-service students within the program and/or voices of teacher educators in the faculty is highly recommended to elaborate the perceived needs and desires. This might lead to a more consolidated pre-service teacher education program, based on the needs and desires of both sides. Finally, it appears that policy makers, curriculum designers and teacher educators/trainers not only from Turkey but also from English speaking countries (Ell et al., 2019; Liu, 1998) and other countries may benefit from similar studies when designing more efficient pre-service teacher education curricula.

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International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

Developing Language Assessment Literacy of EFL Pre-service Teachers through Classroom Assessment Course

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Article History
Received: 04.05.2021
Received in revised form: 26.05.2021
Accepted: 11.06.2021
Available online: 03.09.2021

To cite this article:

Ölmezer Öztürk, E. (2021). Developing language assessment literacy of EFL pre-service teachers through classroom assessment course. *International Journal of Contemporary Educational Research*, *8*(3), 13-22. DOI: https://doi.org/10.33200/ijcer.932721

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 13-22 ISSN: 2148-3868

Developing Language Assessment Literacy of EFL Pre-service Teachers through Classroom Assessment Course

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Abstract

The study reports on how Classroom Assessment Course changed the perspectives of EFL pre-service teachers related with language assessment and contributed to their language assessment literacy development. The participants included 48 junior students in an English language teacher education program of a state university in Turkey. All the participants enrolled in a course named Classroom Assessment and the data were collected through reflection reports and a focus group interview within the scope of this course that was conducted in a 14-week period. The coding phase of the data analysis was carried out through in-vivo coding and the codes were combined under more general themes to be presented. The findings revealed that the participants' perspectives in language assessment significantly changed at the end of Classroom Assessment Course. While their initial thoughts included some negative connotations regarding assessment itself, its purpose and the role of teachers in language assessment, they turned to be just the opposite towards the end of the semester. Moreover, the participants also expressed that they started to feel themselves more competent in language assessment as prospective teachers and got more enthusiastic to study on this topic in the future. Demonstrating the contribution of Classroom Assessment Course to language assessment literacy development of pre-service teachers, the study offers some policy and research suggestions to improve assessment literacy of EFL teachers in similar contexts.

Key words: Language assessment literacy, EFL Pre-service teachers, Classroom assessment

Introduction

Though neglected in the past, assessment has been gaining a growing interest in education, especially language education because assessment is a crucial part of teaching and learning process (Cheng & Wang, 2007; Russell & Airasian, 2012). Relying on the term assessment, classroom assessment has also flourished for the reason that teachers are required to assess their learners for many purposes throughout the school day (Russell & Airasian, 2012), and that assessment is a natural component of everyday instruction (Shermis & Di Vesta, 2011). Chappuis, et al. (2012, p. 3) listed five key qualities of classroom assessment as follows:

1. They are designed to serve the specific information needs of intended user(s).
2. They are based on clearly articulated and appropriate achievement targets.
3. They accurately measure student achievement.
4. They yield results that are effectively communicated to their intended users.
5. They involve students in self-assessment, goal setting, tracking, reflecting on, and sharing their learning.

To be able to carry out these mentioned qualities of classroom assessment successfully and effectively, there is a need for language assessment literacy (LAL) of language educators (Coombe, Vafadar, & Mohebbi, 2020) since for good classroom assessment practices to take place, teacher competency does matter and language assessment literacy is a must for teachers. There is an array of experts who gave their own definitions of LAL in the literature; thus, there is no exact and agreed definition of it among researchers. Rooted more generally in education assessment literacy, LAL was defined by Baker and Riches (2017) as the competencies required in language assessment. Focusing on competencies as well, Inbar Lourie (2008, p. 389) stated that "language assessment knowledge base comprises layers of assessment literacy skills combined with language specific

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competencies, forming a distinct entity that can be referred to as language assessment literacy". Furthermore, O'Loughlin (2013, p. 363) voiced that those competencies LAL covers should help one "understand, evaluate and create language tests and analyse test data". Last but not the least, Vogt and Tsagari (2014, p. 377) came up with their own definition of LAL as "the ability to design, develop and critically evaluate tests and other assessment procedures, as well as the ability to monitor, evaluate, grade and score assessments on the basis of theoretical knowledge". As is obvious in the aforementioned definitions, LAL is directly related to language assessment, and not only includes theory related to language assessment but also includes using this theory appropriately and efficiently in assessment practices.

Stoynoff and Coombe (2012) voiced that there exist many factors why language teachers should have LAL. First one is the change in the content of the course books which has opened a gate for the combination of theory and practice. The next one is that though teachers did not take a language assessment course in the past, the situation is getting better now suggesting that more and more pre-service teachers have been exposed to language assessment courses. The last one is the changing perception of language assessment that adopts a more cognitive and social-constructivist stance. This changing perspective was highlighted by Stiggins (2007) as well who stated that language teachers were not expected to have LAL in the past, but now there is greater emphasis on and expectation of them in relation to their LAL levels.

As is seen, LAL is highly emphasized in the literature as it is the core of the professional development (DeLuca, et al., 2018), and "sine qua non for today's competent educator" (Popham, 2009, p. 4). However, despite the growing importance and attention given to LAL, Stiggins (1991, p. 535) stated that "we are a nation of assessment illiterates". Popham (2004) also came up with similar comments saying that the training in LAL is not adequate for language teachers; so it is a professional suicide" (p. 82). This insufficient training was touched upon by Inbar-Lourie (2017) as well, and Lam (2015) uttered that language teachers are not prepared to carry out their assessment-related responsibilities. In addition to those, Lee (2017) drew attention to the potential hazard assessment illiterate teachers may cause by verbalizing that language teachers have many assessment-related responsibilities, and added that if they are assessment illiterate, then they may "jeopardize learning and teaching with direct consequences for students' future learning" (p. 147).

Upon the importance of LAL of language teachers, many researchers began to study LAL from different aspects. Some focused on the needs of pre-service and in-service teachers in relation to LAL (Baker, Tsushima, & Wang, 2014; Fulcher, 2012; Inbar-Lourie, 2008; Malone, 2013; Mede & Atay, 2017; O' Loughlin, 2013; Scarino, 2013), some gave trainings to teachers in order to increase their LAL (Baker & Riches, 2017; Malone, 2013; Mertler, 2009), some investigated their perspectives on LAL (Berry, Sheehan, & Munro, 2019; Öz & Atay, 2017; Sellan, 2017; Tsagari & Vogt, 2017; Volante & Fazio, 2007), and some focused more on language assessment knowledge and investigated whether language teachers are language assessment literate or not (Davidheiser, 2013; Mertler, 2003; Ölmezer-Öztürk & Aydın, 2019; Tao, 2014; Xu & Brown, 2017).

Apart from aforementioned studies, there were also some researchers who investigated LAL of language teachers in relation to the language assessment courses in pre-service education, and tried to increase their LAL levels with the help of these courses. To start with, Lam (2015) looked into two language assessment courses in five Hong-Kong institutions and how these courses contributed to LAL of pre-service teachers, but the findings revealed insufficient training and support for LAL. Next, Hatipoğlu (2015) investigated 124 Turkish EFL pre-service teachers' knowledge and expectations in relation to English Language Testing and Evaluation Course. The results demonstrated that the learners had insufficient assessment knowledge after all four years in pre-service education, and they expected to learn exam-related issues and how to help their learners get prepared for exams. Şahin (2019) also examined English Language Testing and Evaluation Course with respect to LAL of EFL pre-service teachers by gathering both qualitative and quantitative data from the participants. The findings indicated that one language assessment course was not enough to develop LAL of pre-service teachers in terms of theory and practice.

Though the importance of LAL for EFL teachers is stressed in the studies above, it is still the case that EFL teachers do not have sufficient LAL which is a big weakness for a teacher whose main responsibilities also include assessment-related practices. As LAL covers both theory and practice (Malone, 2013; O'Loughlin, 2013; Scarino, 2013) and as the studies have showed that the amount of training in pre-service education may not be enough for pre-service teachers to be language assessment literate (Ölmezer-Öztürk & Aydın, 2019), the theory part is missing in the learners who graduate from teacher education programs. As many researchers touched upon the theory component of the term by stating "LAL is a repertoire of knowledge of using assessment methods" (Taylor, 2009, p. 24), "familiarity with testing definitions" (Malone, 2013, p. 329), and "one of the three skills needed for LAL is the principles, that is, the concepts underlying testing" (Davies, 2008,

p. 338), the importance of helping pre-service teachers gain this knowledge during their initial training becomes more crucial. At this point, it can be seen that there is a need for increasing the exposure of pre-service teachers to language assessment before they start their professions. Based on this, this study aims to investigate whether and in what aspects taking a language assessment course called Classroom Assessment contributes to their LAL development. The following research question was addressed throughout the study:

1. How does Classroom Assessment Course contribute to language assessment literacy of EFL pre-service teachers?

Methodology

Research Design

This study employs a qualitative research design which aims to explore views and opinions of the participants to present an in-depth perspective regarding the phenomenon under investigation (Patton, 2002). In a qualitative research design, "a researcher collects and interprets data, making the researcher as much a part of the research process as participants and the data they provide" (Corbin & Strauss, 2015, p. 3). In the current study, the researcher, as the lecturer of the course, acts as a part of the research process including the data collection, teaching of the course and data analysis phases. Based on these explanations, this study aims to provide a picture of LAL development among EFL pre-service teachers through Classroom Assessment Course.

Setting

The current study took place at an English Language Teacher Education Program of a state university in Turkey. In this program, pre-service teachers have to take a range of courses from linguistics, to methodology courses, from skills to literature throughout four years, and when they pass all the courses, they could graduate from the university and have the right to work as an English language teacher. One of these courses pre-service teachers have to take during four-year education is Language Testing and Evaluation Course, a 4th year course, in which they learn how to assess reading, writing, listening and speaking skills of learners. A new program offered by Higher Education Council (HEC) in 2018 added one more language assessment course called Classroom Assessment which is a 3rd year course. Addition of this new course is promising in the sense that presence of just one course in the last year of the program was not sufficient to increase LAL of pre-service teachers, and it was limited to one term which was not enough to cover the topics related to language assessment.

Thus, with the help of Classroom Assessment Course, pre-service teachers are exposed to language assessment more and get more aware of the importance of language assessment before they become seniors. Throughout the term that lasted 14 weeks, the participants were exposed to language assessment focusing on a different point each week, and they were supposed to learn the importance of assessment, how planning is important in this process, the role of feedback in language assessment, assessment types, improvement of student learning through assessment, analysing ready-made exams and the question types, the betterment of the items in the exams having flaws, etc. Thus, this course included both theory and practice though practice was embraced less than theory due to time constraints.

Participants

The participants were junior pre-service teachers who were in the fifth semester of their program. They got skills courses in their first year to improve their foreign language skills, and general field courses in the second year such as linguistics, English literature and language acquisition to have a general understanding of the field. At the time of the study, their third year started and they were taking some more teaching-related courses such as language teaching methodology and teaching English to young learners to improve their skills as teacher candidates. One of these courses was Classroom Assessment Course and 48 students who enrolled in this course formed the participants of the current study. 26 of the participants were female and 22 of them were male, and their ages ranged from 19 to 22. As for all of the participants, it was the first time they encountered a language assessment course in their educational life.

Data collection tools and process

The data collection process of the study included two reflection reports and a focus group interview. First of all, some guiding questions for the reflection reports and questions for the focus group interview were prepared.

After that, these questions were controlled by two experts in the fields of English language teaching and educational assessment in terms of their appropriacy with the research focus, wording and orthography. After getting feedback from the experts and making the necessary revisions, the final format of the questions was prepared, as shown in Table 1.

Table 1. Guiding questions of the reflection reports

Data Collection Tool	Questions
Reflection Reports	• What comes to your mind when you hear the word assessment? What do you feel about it? • What do you think about the role and purpose of assessment in language classrooms? • What do you think about the role of teachers in language assessment? • What kind of techniques do you think should be used in language classrooms for assessment purposes?
Focus Group Questions	• What were your expectations of this course? • How has this course contributed to you as a prospective teacher?

All 48 participants were required to write two reflection reports as the course requirements. They wrote their first reflection report in the first week of the course. Throughout the semester, they actively took part in Classroom Assessment Course, the content of which consisted of certain topics including assessment literacy, the purpose of assessment, assessment methods, alternative assessment and assessment of language skills. In the final week of the semester, the participants wrote their second reflection reports. What is more, a focus group interview was held with the willing participants after the second reflection reports. Eight participants (4 female and 4 male) participated in a focus group interview since they were willing and voluntary to reveal and share their ideas with the researcher and their friends. In this focus group interview, they dwelled more on the reflection reports, and gave some more information about their perspectives and the contribution of this course. In a motivating and stress-free environment, all the discussions took place, and the researcher had the chance to gather in-depth and detailed data about the participants' perspectives regarding the contribution of this course to the LAL development of the participants.

Data analysis

In the data analysis phase, first of all, the focus group interview was transcribed verbatim and all the collected data were prepared for analysis. Then, the researcher went through the files to have a general understanding of the material. After that, the coding process started and the familiar chunks were code-labelled through in-vivo coding which "uses words or short phrases from the participant's own language in the data record as codes……that prioritize and honor the participant's voice" (Miles, et al., 2020, p. 65). All the coding process was assisted by an academician who was teaching in the faculty of education and had five years of research experience in coding and qualitative data. The agreement ratio on the codes labelled by these inter-raters was 84% and the remaining in-vivo codes were agreed on through negotiations at the end. After this coding process, the codes driven from the data were grouped under more general themes to be presented with their frequencies under the pre-determined research foci of the study.

Trustworthiness

Since the current study employed a basic qualitative research design, several procedures were followed to ensure its trustworthiness, stated by Lincoln and Guba (1985) as the concept referring to the validity and reliability of qualitative research studies. First of all, the data were triangulated with the help of different types of data collection tools as reflection reports and a focus group interview. Besides, the coding process during the analysis phase was assisted by a colleague to ensure interrater reliability. The last procedure that was employed to contribute to trustworthiness of the data collection and analysis process was member-checking in which the participants were asked to check the transcriptions of the focus group interview in terms of the accuracy of their own account.

Findings

The data obtained from all the participants via reflection reports revealed that the participants' perspectives related to language assessment have significantly and noticeably changed when compared to the beginning of the term (before they took Classroom Assessment Course). The findings derived from the data related to the participants' perspectives are as follows:

Table 2. Findings of the reflection reports

Research foci	**Before the course**	**After the course**
Opinions and feelings about assessment in language classrooms	*Increasing stress *Anxiety-provoking *Not contributing to learning	*Facilitating learning *A must for effective learning *Not as anxiety-provoking as thought before
Purpose of assessment in language classrooms	*To measure performance *To determine the level of success *To decide students should pass or fail	*To provide feedback *To improve student learning *To diagnose weaknesses and strengths
The role of the teacher in assessment in language classrooms	*Preparing exams *Scoring *Judging in a harsh manner	*Evaluating the process *Guiding *Giving feedback in a kind and positive manner *Interpreting the grades
Assessment techniques in language classrooms	*Traditional exams *Quizzes *Multiple choice tests	*Portfolios *Performance-based exams *Less traditional exams

The first focus of the questions in the reports was to uncover the opinions and feelings of the participants regarding assessment in language classrooms. The findings showed that while the participants had quite negative connotations with language assessment such as increasing stress, provoking anxiety and providing no contribution to learning, this negative perspective disappeared at the end of the semester. With the help of the course, the participants started to think that language assessment was a must for effective learning and it had a more facilitating role than the anxiety provoking one. The following excerpts from a participant's reflection reports provide an example how their perspective changed at the end of the semester.

> "I never liked being assessed, I always felt nervous in all my exams. When I was a student, I always thought why we needed those exams because we just memorized something and teachers were asking about this memorized knowledge……They were the routines of our school life but they never contributed to me." (Participant 22 – report1)

> "…….I was quite negative about this issue of assessment at the beginning, but now it is crystal clear to me that assessment is something that should be done to facilitate students' learning." (Participant 22 – report2)

Another point that significantly changed in the participants' perspectives was the purpose of assessment in language classrooms. At the beginning of the course, the participants commonly thought that assessment was used in language classrooms for giving grades and deciding on whether students should pass or fail. However, at the end of the semester, the participants embraced different ideas on the purpose of assessment in language classrooms and thought that it was used to give feedback to students, to improve their learning, and diagnose their strengths and weaknesses during the learning process. The following sentences from the reflection reports of the same participant emphasize how her perspective changed regarding the purpose of assessment.

> "The aim of assessment is to measure student performance by applying them some tests and giving a grade at the end." (Participant 34 – report1)

> "In language classrooms, assessment should be used for a number of ways which include identifying the problematic sides of their learning process and giving feedback about to what extent they achieved……..In a way, the main role of assessment is to improve students' learning." (Participant 34-report2)

When the findings from the reflection reports were considered, it was also seen that the participants' perspectives related with the role of teachers in language assessment also changed. Whereas, at the beginning of the course, they perceived the role of teachers in the assessment process as preparing exams, scoring or judging due to the exam results, their opinions on teachers' role completely changed at the end of the course and they started to perceive teachers as encouraging, helping figures who interpret the grades and give feedback for students' improvement. This change can also be seen in the sentences below taken from a participant's reflection reports.

> "To my own experience, teachers generally prepare exams and score them…….They sometimes give some feedback based on the mistakes students make, but in general, their role is mostly the same." (Participant 5 – report1)

> "…….Teachers interpret the grades for students and give feedback for their improvement……..Their major role is not to prepare exam but to know how to use the scores they get from various types of assessment in a process for students' improvement." (Participant 5 – report2)

The last point that changed in the participants' perspective was about the assessment techniques used in language classrooms. At the beginning of the course, the participants expressed that traditional exams that included true/false, matching or fill-in-the-blanks questions, vocabulary or grammar quizzes and large scale multiple choice tests were the assessment techniques used in language classrooms. However, at the end of the semester, they started to believe that the amount of these traditional exams should be decreased and portfolios or performance-based exams should be integrated into the assessment process in language classrooms. The sentences below summarize how the participants' perspectives changed on these assessment techniques:

> "To assess students' performance, the best way is to prepare a combination of different question types such as matching, or long answer……..No single type of questions should be used if we want to measure our students' performances better…….Finally, we should have those exams frequently." (Participant 21 – report1)

> "Measuring students' performances in language classrooms should be based on a process……Portfolios in which students can have the opportunity to compile their products and demonstrate a long term performance should be used in language classrooms as assessment tools." (Participant 21 – report2)

In addition to the reflection reports that aimed to reveal the participants' changing perspectives throughout the semester, a focus group interview was also conducted to find out the contribution of classroom assessment course in the eyes of the participants. The findings derived from the interview are shown in Table 3.

Table 3. Findings of the focus group interview

Research focus	**Themes**
Contribution of classroom assessment course	*understanding assessment better *feeling more knowledgeable as a prospective teacher in assessment *enthusiasm to study on assessment

The findings demonstrated that Classroom Assessment Course the participants took during the semester also helped them understand the notion of assessment better, feel more knowledgeable in this field and increase their enthusiasm to study more on language assessment, all of which contribute to language assessment literacy development of the participants.

The first point that the participants thought as a major contribution of this course was that they understood assessment better. According to their expressions, the notion of assessment was directly associated with exams and scores which made them perceive it as a stressful process for students and heavy workload for teachers. However, after the course, their opinions completely changed and the following utterances by an interviewee highlighted how his perspective changed:

> "Now I know what assessment means, in its real sense. I mean, what I used to know was a very little part of it, this is what I understood. Now, I know assessment is for learning, I mean it has an important supportive role in learning

> process. With all its types and techniques, we need to use it as a tool for improving learning." (Interviewee 4 – focus group interview)

The participants in the interview also expressed that they started to feel more knowledgeable as prospective teachers in language assessment after taking this course. They thought that knowing about language assessment, its role in language learning, assessment types, assessing language skills etc. made them feel competent as teacher candidates, increasing their self-efficacies as prospective teachers. The expressions of a participant in the interview summarize this contribution.

> "Honestly, I am really happy to have taken this course this semester…….It was very informative and I learnt a lot of things about assessment, from its real role and to some specific techniques to assess skills, feeling like an expert (smiling) in language assessment…… I feel myself lucky because I know there are not even many teachers knowing about this stuff but I know all about them as a pre-service teacher, that makes me very happy." (Interviewee 2 – focus group interview)

The last point that the participants considered as a contribution of Classroom Assessment Course was the enthusiasm to study on assessment. During the interview, it was observed that the participants were feeling quite positive for having taken the course and in addition to feeling more knowledgeable in language assessment, some of them expressed a certain enthusiasm to learn more and improve themselves in this field of study. At this point, Interviewee 7 expressed her ideas quite willingly during the interview.

> "Probably the biggest gain for me is that I enjoyed reading and learning about language assessment. It is quite different than the teaching of a language, and quite dynamic, I mean I feel that I will always keep myself fresh and updated if I study on it……I want to get a Master's degree when I graduate and for now, I clearly want to study on something related with language assessment." (Interviewee 7 – focus group interview)

When the findings of both the reflection reports and the focus group interview are examined, it can be seen that Classroom Assessment Course the participants enrolled in not only changed their perspectives positively on the role and purpose of language assessment and teachers' role in this process but also helped them understand the nature of assessment, made them more knowledgeable and aware in the field of language assessment. Taking all these into consideration, it can be said that the Classroom Assessment Course contributed to language assessment literacy development of the participating EFL pre-service teachers.

Discussion

Studies focusing on assessment-related competencies of language teachers and defining language assessment literacy (LAL) to put forward a framework mutually highlight the importance of EFL teachers' assessment knowledge and familiarity with assessment-related concepts (Fulcher, 2012; Inbar-Lourie, 2008; Malone, 2013). In that sense, making pre-service teachers familiar with those concepts and any contribution to increase their knowledge and familiarity with language assessment in their initial training during the pre-service program are highly suggested by the same literature. The findings of the current study, at this point, present an insight on how a Classroom Assessment Course can potentially change the perspectives of pre-service teachers on assessment-related issues and contribute to their LAL development.

One of the major findings of the study was related to the purpose of language assessment in the lenses of the participants. While it was directly in relation to only measuring performance or pass-fail decisions at the beginning of the semester, their perspective shifted towards assessment for improvement and learning, which is ideally the current tendency in the last decade regarding how teachers should see and practice assessment in their classrooms (Chappuis & Stiggins, 2016; William, 2011). Moreover, the participants also reported their changing perspectives on the role of teachers in language assessment, from a scorer to a guide and interpreter of exam results for the betterment of the learning-teaching process. It is undeniable that assessment process includes various duties and tasks such as developing tests, scoring and interpreting, and teachers are responsible for them as part of their profession (Mertler, 2003). However, with the emerging concept of assessment for learning, teachers are expected to become more aware of and conscious about what, how, and why they are making use of assessment practices to make better instructional decisions (Stanford & Reeves, 2005). For this reason, helping pre-service teachers gain such a perspective during their initial teacher training years is not only noteworthy for their learning to teach process but also contributes to their LAL development. Finally, changing the perspectives of pre-service teachers on assessment techniques that should be used in language classrooms was another major finding. At first, the participants were aware of just the traditional methods of testing and assessment; however, at the end of the semester, most of them expressed that they were in favour of using

process and performance based on assessment techniques in language classrooms that are regarded as a prerequisite for the quality of the instruction and learning (Stiggins, 1999).

The other set of findings derived from the focus group revealed that, with the help of Classroom Assessment Course, the participants understood the concept of assessment better and they started to feel more competent and knowledgeable in language assessment. The studies recently focusing on the assessment knowledge and level of EFL teachers (Ölmezer-Öztürk & Aydın, 2019; Öz & Atay, 2017; Vogt & Tsagari, 2014) demonstrated a low level of LAL and certain problems related with assessment competencies of EFL teachers. As a solution for this, they suggested an increase in the number of courses and training opportunities for EFL teachers in both pre-service and in-service levels. For instance, studying with 288 pre-service EFL teachers, DeLuca and Klinger (2010) reported that the testing and assessment course contributed positively to their knowledge and confidence. In the same way, Hatipoğlu (2015) also mentioned the positive attitudes of the participating pre-service teachers towards English Language Testing and Evaluation Course. Being parallel with the results of these studies, the current study provided important findings on how the integration and implementation of a potential course on assessment would serve in training more assessment literate teachers in language teacher education programs.

Conclusion

In the last decade, language assessment literacy (LAL) has been one of the primary concerns of both researchers and practitioners in the field. In addition to the studies identifying the needs, levels and competencies of teachers related with language assessment, there have been several attempts that call for the exploration of courses, trainings or methods that would potentially contribute to LAL development of both pre-service and in-service teachers (Hatipoğlu, 2015; Tsagari & Vogt, 2017). Addressing this need for research, this study outlined the changing perspectives of EFL pre-service teachers through Classroom Assessment Course. The results of the reflection reports of the participants put forward a significant change in the perspectives of EFL pre-service teachers regarding their feelings about assessment, the purpose of assessment in learning process, the role of teachers in assessment and the assessment techniques used in language classrooms. Besides, the findings derived from the focus group interview revealed that the participants understood the concept of assessment better, felt more knowledgeable in assessment as pre-service teachers and had more enthusiasms to study on assessment at the end of Classroom Assessment Course.

Being conducted within a specific course content and with a limited number of participants are the limitations of the current study. However, with the methodology it follows and the findings derived from the data collection tools present an understanding on how EFL pre-service teachers can be made more aware of assessment during their pre-service education and how a course content can contribute to their LAL development. In this regard, the findings of the current study also serve as suggestions to be implied in pre-service language teacher education programs with similar contextual characteristics to the one in this study. In other words, it can be seen that language teacher education programs should be enriched with more optional or compulsory courses to train teacher candidates on language assessment and educate more assessment literate language teachers. As for research suggestions, it is believed that the research focus should urgently shift from identifying language teachers' needs and levels related with assessment literacy to exploring the effectiveness and contribution of courses, trainings or workshops on EFL teachers' LAL development. Besides, how teachers reflect on such opportunities and how these opportunities are reflected in teachers' short term and long term practices should also be investigated. In that way, the unique and most effective ways of developing EFL teachers' assessment literacy can be explored and important steps to have more assessment literate teachers can be taken.

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International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

Comparing Preschool Curricula of Turkey and Ohio in the Context of Value Education

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Article History
Received: 04.05.2020
Received in revised form: 03.03.2021
Accepted: 16.03.2021
Available online: 03.09.2021

To cite this article:

Yenen, E. T. & Ulucan, P. (2021). Comparing preschool curricula of Turkey and Ohio in the context of value education. *International Journal of Contemporary Educational Research, 8*(3), 23-38. DOI: https://doi.org/10.33200/ijcer.732076

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 23-38 ISSN: 2148-3868

Comparing Preschool Curricula of Turkey and Ohio in the Context of Values Education*

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Abstract

This research has been performed in order to compare the preschool education in Turkey and Ohio early learning standards and the values in the introduction and objective section of both curricula. The study was carried out using document analysis. The data collected in the research covers the Preschool Curriculum of Turkey Ministry of National Education (MNE) 2013 and the Early Learning Standards of the USA, Ohio. The programs of both countries have been accessed through their official websites. In Turkey a single and joint program, prepared by the Ministry of Education, is used in Preschool education. In the state of Ohio, preschool education institutions organize their programs according to common standards. According to the survey, the values about Atatürk and being tidy exist only in the objectives of preschool education program in Turkey. The values of conservation of resources, conservation of natural life, cultural heritage, balance, and creativity are not included in the preschool curriculum objective statements of Turkey but they are integrated in the explanations. However, these values already exist in the Ohio early learning standards. On the other hand the values such as justice, scientific thought, courage, environmental awareness, effective and efficient use of language, discipline, etc. are included in the Ohio early learning standards.

Key words: Preschool, Curriculum, Early learning standarts, Values education, Turkey, Ohio

Introduction

Throughout the human history, numerous and different forms of definitions have been put forth by scientists, rulers, clergy or researchers who have been trying to draw attention to the concept of value, which has been expressed on religious or secular platforms and has numerous discussions, researches or studies. According to Ryan & Bohlin (1999) character is the sum of our intellectual and moral habits. So, the character is a combination of our good habits, virtues and bad habits that make us who we are. These good and bad habits point to us and continuously affect how we react to events and challenges in our lives (Ryan & Bohlin,1999 p. 9). Rokeach and Regan (1980) defines the value as persistent beliefs that determine whether the consequences of specific behaviors or a specific situation is acceptable for personal or social purposes. In other words, the value is a continuous formation of beliefs related to the preferred style of behavior or the final state of existence. On the other hand, Schwartz (1999) defines the concept of value as beliefs that lead to human behavior, choices or evaluation of these behaviors and choices that are intended to be achieved and that are striving for it.

In the researches carried out in the field, it has been observed that values of education has been approached with different dimensions in different names, such as moral education, personality education, character education, but it has been kept up-to-date in all cultures and societies throughout the history of education. Aristotle's famous saying 'Educating the mind without educating the heart is no education at all' can give insight about the history of values education. Quality education is the education that includes the values education (Lovat & Clement, 2008). In addition to innovations, changes and advantages brought about by technological development; the people of the 21st century are increasingly experiencing various problems related to violence, social problems, lack of respect for each other. For this reason, parents and educators in particular, and usually countries, focus on teaching the values as part of the solution. While humanity benefited from technology in many areas such as transportation, communication, trade, economics education and migration through globalization, different cultures have opened their doors to each other and necessity to live together has arisen for many societies

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because of the intensity of their communion. Creating a better world for everyone is at the heart of the educational concern. However, when activities based on raising awareness about values are introduced, students can adopt value-based behaviors and benefit at the highest level when appropriate and effective guidance is provided to discover the values (UNESCO, Living Values Education, 2005).

Values are regarded as teachable and learnable phenomena. However, in the 21st century. The transfer of values to the next generation in the world has been a process in which more difficulties were encountered compared to previous years. While many values adopted and supported by society could be transferred through life in the past, today only experience is not enough. School and family have to take more effort and responsibility than before because the child is exposed to a wide variety of stimuli and forms a system of values by being affected by many factors. It is a social duty not to leave the development of values in children to coincidences and out-of-control mechanisms (Gömleksiz, 2007).

The education system of a society and its institutions and organizations are important units that display the values of that society. As a social institution, the school ensures that social, cultural, universal and social values are transferred to children through educational programs. The school should not only ensure academic success, but also ensure a child to learn about the culture and values of society (Sapsağlam, 2016). It is possible to educate qualified and moral individuals in a society with the education of values given in schools (Aspin, 2000; Halstead & Pike, 2006). Dewey (2013) also stated that schools play an important role in the moral development of children and they should offer opportunities to transform these values into behavior. Schools that reflect ethical values to learning environments contribute to social transformation (Cooper, 2014). Therefore, the acquisition of values in early childhood is important for the continuity of societies. Values education, which is vital for societies, is passed on to the younger generations through the educational programs of the countries. States present their general and specific objectives in educational programs. These goals include many elements from academic skills to culture, values and health. When we look at the main objectives of both countries that are the subject of the research; among the main objectives of the Turkish National Education System preparing students for life in a healthy, happy way and to equipping them with knowledge, skills, values, attitudes, behaviors and habits that will enable them to become good people and good citizens. In this context the objective of values in the education process and transferring to new generations are very important in terms of achieving the goals and cultural continuity (MNE, 2017). On the other hand, the US Department of Education makes the following statements about the type of person who wants to be trained. "*We want our children to develop respect and compassion for others. We want them to be honest, decent and considerate to comply with the law, cooperate with others and act responsibly. We want them to make sound moral choices. The benefits of encouraging the values of the child are great: those who grow stronger, consistent and with positive values are happier, they are better at school, and they are more likely to contribute to society*." (US Department of Education, 2003).

Given that values education is given in schools from an early age, a comparative study of pre-school education programs in the context of values education will provide an opportunity to look at the values education literature from a perspective that has rarely been studied before. Besides enhancing the wealth of our perspective in the field of values education, this study hopes to ensure that the lack of interest on evaluating pre-school education program on approaches and applications in a holistic manner in the context of values education in Turkey. First of all, it is an important need to determine which approaches are taken as basis in relation to gaining social skills, moral values, attitudes and behaviors in the preschool period in Turkey, questioning and evaluating these approaches and comparing them with the United States, which is a pioneer in values education, in terms of contributing to the field.

In the study, one of the important reason for comparison with the pre-school curricula of Turkey and Ohio, a state from the United States, is the fact that the United States is a country that stands out in values education and has a wide variety of program studies in preschool education. Values education has a rich history in the United States, especially in public schools, in terms of the activities teachers do to build a good character both in lessons and in other activities (Turan, 2014). When we investigate at the history of American education, it is seen that there is an effort to add value, which is expressed with the concepts of moral education first, then values education and character education (Watz, 2011). Today, prepared with the encouragement and support of the federal government character /values education programs have become more prominent and are still compulsory in many states. The multiplicity and diversity of character/values education programs, the freedom provided to states, educational districts and even different schools in the same region, and the competitive attitude supported by state funds increase the wealth in this field (Kesgin, 2015).

Every society has its own unique values. In this context, to educate qualified citizens, values education should be given in schools. Because schools are an indispensable pioneer in teaching values education (Aspin, 2000). In different countries, many programs are implemented under the name of personality training to teach values, starting from pre-school education and continuing within a systematic program. These programs, which are based on the development and learning of the child, bear similarities in terms of both application and content. The values that are tried to be gained with regard to values education constitute the common point of the programs (Pekdoğan, 2017).

In this context, the question of when to start values education has become one of the research areas of values education. Many educators and specialists focus on early childhood. Values develop by benefiting from many sources and the first bases of information about values are formed in this period (Balat & Dağal, 2009; Ogelman & Sarıkaya). Early childhood is a critical period in which the physical, social, emotional, cognitive, psycho-motor, language and moral development of a child is the fastest and covers the age range up to the age of seven (Hildebrandt & Zan, 2008; Piaget, 2002). Studies related to the subject state that values education in early childhood has positive effects on children. Trout (2008), in the study examining the effects of values education on children in the pre-school period, found that children five years of age and under had higher scores in understanding, recognizing and converting values compared to children who were educated before the program existed. In general, Preschool education institutions which have traits of being the next step of education in early childhood, have a great responsibility to provide and support the child's cognitive development as well as their social and emotional development. However, this support can be provided by a healthy planning and implementing the teaching of values that direct the attitudes and behaviors. Thus, children who determine the future of societies are not only the future of their family, of their environment and of the society in which they live, but also they are the future of humanity. Therefore, the objective of values from the early years of life will not only result in the development of value, but will also make it an honorable and harmonious member of humanity while developing the child from social emotional aspect (Johansson, et. al. 2014; Recchia & Beck, 2014; Sigurdardottir & Einarsdottir, 2016; Thornberg, 2016).

Curriculum development studies are performed and carried out by the Ministry of National Education in Turkey. In Turkey, the year of 1994 may be regarded as a turning point in the Preschool curriculum development process. Prior to 1994, there was no centralized curriculum that would meet common needs in this field and which had adequate target and target behaviors in terms of the qualifications required in a curriculum. The first draft curriculum in early childhood education was adopted in 1989 and an official Preschool education program was prepared for the first time in 1994. In line with changing needs and developments, Preschool education programs were developed in 2002 and 2006. Preschool education programs prepared in 1994, 2002 and 2006 were organized in accordance with the age of children and their developmental characteristics. (Dilek, 2017; Gelişli & Yazıcı, 2012, Kandır, Özbey & İnal, 2010; MNE,1994). Within the scope of the project of strengthening preschool education with the data obtained from national and international scientific researches and evaluation processes of the program, various arrangements were made in the Preschool education program in 2012 and pilot applications were introduced in the same year. In the 2013-2014 school year, it was generalised across the country (MNE, 2013). There is no separate section or practice on values education in preschool programs. However, values such as love, respect, cooperation, responsibility, tolerance, solidarity and sharing are among the basic principles of preschool education. In 2013, the program included the title 'taking into consideration cultural and universal values', and the expression "*Values are not considered as a separate field of education in the program, but they are emphasized in the gains and indicators in an holistic way*" was stated as a special emphasis on values education (MNE, 2013, p. 17).

In the United States, Early Childhood Education programs are not central. Each state establishes and implements its own educational standards. However, there is an organization called the National Association for the Education of Young Children, which studies on common standards and is widely accepted throughout the country. National Association for the Education of Young Children is a non-profit private organization. It is not funded by the government. It is a professional member body that proposes standards for the field. It also provides accreditation for child development education programs and higher education programs that train teachers. Some states have mandated NAEYC accreditation for teacher-training undergraduate programs of universities. Accreditation of the institution for many child development programs is a way to ensure that these candidate parents are of high quality. This organization provides unity between research, policies and practices to encourage all children, who are 0-8 years old, to receive high quality education. It also supports the development of various dynamics related to the early childhood profession and anyone who gives service educate or works for children. In addition, the organization carries out the world's largest conference on early childhood education every year (NAEYC, 2018).

The Ohio State Department of Education in the United States of America launches the vision of early childhood education as 'All children are precious, healthy and happy'. The same unit also expresses its objectives that children have high quality education and care and environment, they have service and support for their comprehensive healthy development and families have meaningful community and parent support. On the web page of the early learning department, there are also a number of resources designed for all share holder to meet all public needs (Early Childhood Ohio, 2017).

In 2007, the School Readiness Solutions Group published a book entitled "Giving children a chance: Ohio School Readiness practice strategies," which contains the key principles of the Ohio Early Childhood System. These principles are based on responding to children's versatile and healthy development. In order to achieve this, the support to be given to families starting from the prenatal period, the role of the government and institutions are summarized and the importance of equality, sustainability and high quality is emphasized in all services to be provided (Early Childhood Ohio, 2017).

As it can be seen, both nations want new generations to have values and begin values education as early as possible. In Turkey as in the whole world, the importance of early childhood education is increasingly better understood. However, the socio-economic and political changes in the country affected this area as well as all other areas, and delays were experienced in the renovation and development works. Research on children in pre-school period, their parents and teachers and values education needs to be increased and expanded in Turkey (Ogelman and Sarikaya, 2015). Acquiring the values of abstract concepts to preschool children requires a well-organized structure considering their developmental characteristics. For this reason, it is of great importance to examine how the elements related to values education are included in educational programs. In addition, the results of several small-scale studies conducted by various researchers document that pre-primary education contributes to better education, professional and social outcomes for disadvantaged children in the long term as well as children with normal opportunities and developmental characteristics, and is cost-effective. However, the results of large-scale, long-term studies also indicate that early childhood education positively affects the economic success and health status of individuals over the following year (Melhuish, 2011; Reynolds et al., 2011).When examined the literature, various comparative researches about values education were found (Bursa & Çengelci-Köse, 2017; Dede, 2014; Harlin & Morgan, 2009; Thornberg & Oğuz 2013). On the other hand, in the related literature, any various comparative research about Preschool programs / standards between Turkey and Ohio were not found. It is thought that the evaluation of the values in early childhood education standards in a different country in the context of values education in comparison with the Preschool education program in Turkey will contribute to the literature. In addition, it is thought that determining how values education is applied in pre-school education programs comparatively, determining the problems encountered in the teaching process and making suggestions for the development of applications will contribute to the field. This research is limited to examining the pre-school education programs of two countries. The data in the research is limited to written sources; reports, official documents, official websites, books and article obtained in the state of Ohio, where is one of the researchers was on duty on about TUBITAK project named values education in pre-school, and simultaneously obtained in Turkey.

The purpose of this research is to compare the values in the introduction and objectives chapter of early childhood education program and standards applied in Turkey and Ohio. For this purpose, the following questions were asked:

- Which values have been included in the introductory chapter of the Preschool education programs of the Ministry of National Education in Turkey since 2013?
- Which values have been included in the introductory chapter of Early Learning Standards in Ohio since 2012?
- Which values reflected on the objectives of the 2013 preschool curriculum of Turkey?
- Which values reflected on the early learning standards in Ohio?
- What are the similarities and differences in terms of values presented in early learning educational programs/standards in Turkey and Ohio?

Method

Research Design

This study was carried out within the framework of a qualitative research approach. Document analysis method, one of the qualitative research methods, was used in this study. The examination of the document covers the

analysis of written materials that contain information about the targeted cases or cases intended to be analyzed. It can be used as a research pattern as well as a data collection technique (Yıldırım & Şimşek, 2006, p. 187).
Descriptive analysis was used to obtain data, as the unit of analysis, the basic concepts that express the values and the objective phrases/standards that express values are based on. The programs/standards of both countries have been reached through official websites. Values in curricula of Turkey and Ohio related pre-school education were examined the scope and purpose of the study and survey data were classified separately for both countries, edited, interpreted by determining similar and different aspects. In this context;

- First of all, the target groups (student groups) in the pre-school education programs of both countries were determined in the research.
- Development areas in the programs were compared.
- Topics included in the pre-school education programs of both countries were introduced.
- Then, in the findings section, the values in the programs of both countries were presented in separate tables.
- Finally, similarities and differences regarding the values included in the programs of both countries were explained.

In the study, programs and explanations were carefully read and gains about values were determined separately by both researchers in order to increase internal validity and to prevent the reflection of the observers' prejudices on the research. The data obtained by the researchers were compared in terms of consistency. In addition, the results were evaluated and compliance was checked by an independent researcher. After the consistency and compliance checks the data were shown to three field experts; one of whom is in the department of basic education and has works on values education, one of whom is in English department and the other one is a pre-school education expert. As a result of the controls, the names of some values that cause misconceptions were changed.

In order to increase the reliability of the study, it was explained in detail how the study was designed and conducted. The data obtained from official programs were categorized and under which headings the values were examined. The method of the research, the sources of data collection, how the study was analyzed, and what kind of stages in the study were explained. The data obtained in the study were presented to the reader in a descriptive manner without any comments.

Data Sources

The data collected in the study cover the Turkey MNE 2013 Preschool Curriculum and the Early Learning Standards of the USA Ohio. The data presented in the study are written sources such as; reports, official documents, official websites, books and article obtained in the state of Ohio and Turkey. One of the important reasons for choosing Ohio State in the study is that one of the researchers has been to Ohio within the scope of the TÜBİTAK project named values education in pre-school.The values in the education programs/standards applied in Turkey and Ohio Preschool education institutions were analyzed with the dimensions of "introduction and objectives/standards". Ohio State Early Childhood Education does not include a single program, consists of a multi-faceted and multi-participating system. It has different structure from the one and common program approach applied in Turkey. For this reason, in the analysis of the data, an approach which is appropriate to both programs has been adopted and it has been tried to be handled systematically within itself. In this study, the introductory chapter of the MNE 2013 education program implemented in Turkey includes general aims of national education, principles and characteristics of preschool education. On the other hand, early childhood care and services are organized in accordance with the common standards of many organizations working in coordination in Ohio State. Therefore, it differs according to its structure. For this reason, in the analysis of MNE 2013 education program, the understanding of creating a systematic within itself and in the analysis of Ohio early childhood education standards, the understanding of creating a systematic within itself was adopted.

MNE 2013 preschool education program was prepared for 36-72 months old (age of 3-6) children and the definition of this age group was made as "Child". Development areas were separated in the program and age groups were defined as 36-48 months old children, 48-60 months old children and 60-72 months old children in each development area. Despite the fact that the behavioral examples of these age group were included in each area of development, a common understanding was adopted in their achievements and indicators. The target group of the MNE 2013 Preschool Education program includes 60-72 months old children, so 6 years old children, who are not included in the research. There is no program for children younger than 36 months. Therefore, the data were analysed through common objectives.

In the state of Ohio, infancy- childhood periods have been named. In early learning standards; the term infant is used for individuals up to 8 months, the term Young Toddlers for which there is no term in Turkish is used for the period between 6-18 months of infant and child and the term Older Toddlers is used for the period between 16-36 months. Standards are prepared for children from birth to 60 months age. The target groups of the programs and standards subject to document analysis which are within the scope of the research are given in the table below

Table 1. Target groups of programs and standards included in the scope of research.

Preschool Curriculum of Turkey			**Ohio Early learning standards**		
Target group	Definition	Scope of the Research	Target group	Definition	Scope of the Research
			Birth-8 months	Infant	-
			6-18 months	Young Toddlers	-
			16-36 months	Older Toddlers	-
36-48 Months	Child	+	3-5 years old	Pre-kindergarten	+
48-60 months	Child	+	3-5 years old	Pre-kindergarten	+
60-72 months	Child	-			

Data Collection and Analysis

Research data were obtained by document analysis method. Program instructions and official documents constituted the data source in the related research. In this respect, MNE 2013 preschool education program and the early childhood education program implemented in Ohio obtained from official ministry website as a source of data. Before the findings section, the areas of development covered in the programs were compared and topics included in the pre-school education programs of both countries were introduced.

The preschool programs that are implemented in Turkey and Ohio show various similarities and differences. The main difference is that while there is only one program implemented by the Ministry of National Education in Turkey, common standards that were created jointly by all partners that provide education and care in the framework of early childhood education services are used in Ohio.

The basic similarity is that the areas of development in the program content are expressed very close to each other. The areas of development in the programs that are implemented in Turkey and Ohio are shown in the table below.

Table 2. The areas of development covered in the programs

Turkey	Ohio
Language Development	Approaches to Learning
Social and Emotional Development	Cognitive Development and General Knowledge
Motor Development	Language and Literacy
Self-care Skills	Social and Emotional Development
Cognitive Development	Physical Health and Motor Development

There are five areas of development in preschool program in Turkey: Cognitive development, language development, social and emotional development, motor development, and self-care skills. In Ohio, on the other hand, learning approaches are considered as a separate area. Other areas are cognitive development, general knowledge, language and literacy, social and emotional development, and physical health and motor development.

Preschool Curriculum Implemented in Turkey

In preschool education in Turkey, a single and a joint program prepared by the Ministry of National Education is implemented. The Ministry of National Education 2013 Preschool Education Program is based on the "Preschool Education Program for Children of 36-72 Months", which was implemented to be developed in 2006. Within the scope of Empowering Preschool Education project, status analyses were made, as a result of feedback from various researches and implementations at the national and international level, a program development study was conducted once again in 2012 and 2013 school years. The program aims to promote healthy growth and self-care of children and to prepare them for elementary school by supporting all developmental areas of children. Thus, the program provides for the children's gaining of rich learning experiences. In preparation of the program, the developmental characteristics and needs of children were taken

into consideration, environmental conditions were reviewed and the program was decided to be a progressive one. At the same time, the program is in a spiral and an eclectic structure (MNE, 2013).

The program that is being implemented in all preschools throughout Turkey, consists of six chapters apart from the presentation part. In this study, the findings have been analyzed under four main headings. The aspects that have been evaluated regarding the content analysis of the values are shown in the table below.

Table 3. Chapters of the Ministry of National Education 2013 Preschool Curriculum Implemented in Turkey

Chapters of the curriculum to be evaluated in this study	**Chapters of the Preschool Curriculum**
Introduction	Presentation General Purposes of Turkish National Education Objectives of Preschool Education Basic Principles of Preschool Education 1. The Importance of Preschool Period 1.1. The Importance of the Family 1.2. The Importance of Teachers 2. Introducing the Preschool Education Program
Objectives	Developmental Characteristics, Objectives and their Indicators
Learning Process	Planning and Implementation of Preschool Education 4.1. Preschool Education Environment and Learning Centers 4.2. Activity Types and their Descriptions 4.3. Monthly Education Plan 4.4. Daily Education Flow
Evaluation	5. Evaluation of Preschool Education 5.1. Evaluation of Children 5.2. Evaluation of the Program 5.3. Self-Evaluation of the Teacher

In this study, the chapter to be discussed as "Introduction" in document analysis covers the chapters of Presentation, The General Purposes of Turkish National Education, The Purposes of the Preschool Education, The Basic Principles of the Preschool Education, The Importance of Preschool Period, and the Introduction to the Program of the Preschool Education. The chapter on Objectives covers The Developmental Characteristics, Objectives, and their Indicators.

The Early Childhood Education Program Implemented in Ohio

Every State in the United States is implementing its own program. In the State of Ohio where the study was conducted, the early childhood education institutes regulate their programs according to the common standards. These standards were widened by the joint work of Ohio Department of Education, Ohio Department of Job and Family Services, Ohio Department of Health, Ohio Department of Mental Health and Addiction Services, Ohio Department of Developmental Disabilities, Ohio State Office of Health Transformation and were acknowledged by all institutions that provide children care and education services to those who are in the period from birth till kindergarten as of 9th of October, 2012. Even though preschool institutions adopt a different program, they regulate their program according to these standards (Early Childhood Ohio, 2018). The schema regarding standards in question is shown in the table below.

Table 4. Standards of the Early Childhood Education in Ohio

Relevant Area	Strand	Topic
Social and emotional development area	The concept of self	Recognition and expression of emotions, The concept of self, sense of self-comfort, self-regulation, self-competency
	Relationships	Bonding, interaction with peers and adults, communication and empathy

Physical Health and Motor Development	Self-care, safety applications	Large muscles: balance and coordination, Small muscles: touching, gripping, reaching, changing, mouth movements
	Physical health	Being aware of the body, physical activity, nutrition, self-care, safety applications
Approaches to learning	Entrepreneurship	Entrepreneurship and curiosity, planning, action, and reflection
	Responsibility and persistence	Caution, persistence
	Creativity	Innovation and discovery, Expressing ideas and emotions through art
Language and literacy development	Listening and speaking	Objective of language clearly, narration, social communication
	Reading	Early reading, reading comprehension, fluency, writing, concept, phonological awareness, recognition of letters and words
	Writing	Early writing, writing process, writing applications and composition
Cognitive development and general knowledge	Cognitive Skills	Symbolic thinking, reasoning, and problem-solving
	Mathematics	The perception of numbers / Number relations and operations / Algebra (Grouping and classification, modeling) / Assessment and data/ Geometry
	Social work	The concept of self (Social identity) / History (Historical thinking and skills, cultural heritage) / Geography (Spatial thinking skills) / Government-Management (Citizenship skills, rules, and laws) / Economics (Scarcity, production and consumption)
	Science	Scientific inquiry and application / Earth and space science / Scientific physics (Energy) / Biology (Exploring the world of living things)

As can be understood from the table, each development area is divided into strands (main branches) and each main branch is subdivided. The area of social and emotional development consists of the main branches of self and relationships, learning approaches consists of entrepreneurship, responsibility and persistence, creativity, physical health and motor development consists of self-care skills, safety, assessment and data practices, physical health, cognitive development and general knowledge; cognitive skills, mathematics, social studies and science. Language and literacy development area consists of the main branches of listening and speaking, reading, writing.

Results

The Values in the "Introduction" chapter in 2013 Preschool Curriculum of the Turkey

In this study, the chapters under the titles of "General Objectives of Turkish National Education, Objectives of Preschool Education, General Principles of Preschool Education, The Importance of Preschool Period, The Importance of the Family, The Importance of the Teacher, Introduction to Preschool Education Program" are named "Introduction" in the 2013 Preschool Education Program of the Ministry of National Education.
The emphasized values in this chapter are summarized in Table 5.

Table 5. The values stated in the "introduction" chapter in 2013 preschool curriculum of Turkey

Introduction	Value expressions
General Objectives of Turkish National Education,	Atatürk's nationalism; national, moral, humanitarian, spiritual and cultural values; love of family, country and nation; duty and responsibility towards the Republic of Turkey, healthy personality and character, respect for human rights, social responsibility
Objectives of Preschool Education	Gaining good habits, speaking Turkish correctly and beautifully

Basic Principles of Preschool Education	Understanding of democratic education, speaking Turkish correctly and beautifully, love, respect, cooperation, responsibility, tolerance, mutualisation, solidarity and sharing, self-confidence, self-respect, self-control
The Importance of Preschool Period (The importance of the family, the importance of teachers)	Ability to develop positive attitudes towards learning, self-worth and self-competence, Appreciation, love, trust
Introduction of the Preschool Education Program	Cultural and universal values, respect for diversity, coexistence in harmony

The general objective of Turkish National Education is expressed under four articles. These articles underline what type of citizenship the Republic of Turkey wants. These values are directly emphasized in these articles. The general objectives of preschool education cover children's cognitive and emotional development, speaking Turkish correctly and beautifully, and forming good habits. The Article 7 (MNE, 2013) within the basic principles of preschool education, gives direct place to the values as follows: *"With the education given in preschool period, children's feelings and behaviors like love, respect, cooperation, responsibility, tolerance, mutualisation, solidarity, and sharing should be developed. Education should ensure that the child respects and trusts himself and should bring him or her self-control."* In addition, it is emphasized again and again that correct and beautiful speaking of Turkish and that education must be provided within the understanding of democratic education. In the chapter on the importance of preschool education, family values such as close, warm and sensitive relations, and trust are emphasized in order to ensure social harmony and success and it is expressed that children who grow up in a family environment where values are experienced will have values such as social competence, self-worth, and self-competence. Values of love and trust must come to the forefront in the relationship between the teacher and the child. It is stated that *"It is important for children to recognize the values of the society they live in, to adopt the cultural and universal values in the aspect of being raised as individuals who have the sense of responsibility."* under the title of *"Considers Cultural and Universal Values"* of the introduction chapter of preschool education program. In this way, the program encourages respect for diversity and gaining experience in living together in harmony with individuals with different characteristics. In the program, it is expressed that values education is not considered as a separate field, but the objectives and their indicators are emphasized in a holistic manner. Therefore, the preschool program does not directly cover the objective, the activity, and the evaluation processes of values education. Since the program is emphasized in a holistic way, it is necessary to make inferences about the values.

The Values Stated in the Introduction Chapter of the Early Childhood Education Standards in the State of Ohio

The Ohio state early childhood education does not include a single program; on the contrary, it is a multi-faceted and highly participatory system. For this reason, it has a different structure than the one and common program concept applied in Turkey. Each development area is treated separately but with a holistic approach in teacher's guides that cover the standards for each development area and the application of these standards. This is why a special section that can be defined as "Introduction" does not exist. However, there is a brief introductory chapter to the introduction of the standards. At the beginning of each development area, there is a general description of the area. The parts of these descriptions that can be related to the values are summarized in the table below.

Table 6. The values stated in the ıntroduction chapter of the early childhood education standards in the State of Ohio

Development Areas	**The Values**
Social and emotional development	**Objective:** Successfully building social worlds, developing positive relationships with peers and adults **Focus:** Studies related to improving children's ability to handle attention, emotions, and behaviors
Physical Health and Motor Development	**Objective:** Children's development of a healthylifestyle **Focus:** Gaining healthy habits, self-help, healthy nutrition, being physically well by developing the body in an effective and efficient way in daily life practices
Approaches to learning	**Objective:** Improving children's goal settings for themselves, planning,

	and objective skills by allowing them to utilize opportunities at the highest level and empowering children's social interactions **Focus:** Entrepreneurship, curiosity, motivation for coping with difficulties, the underlying attitudes and tendencies towards the experiences of social interaction and learning
Language and literacy	**Objective:** Communicating effectively with their peers and adults, **Focus:** Improving the skills of children of using the language effectively and efficiently for expressing themselves
Cognitive development and general knowledge	**Objective:** Developing cognitive processes for learning in other areas, acquiring information about the social and physical world **Focus:** Mathematics, social studies, science

In the introduction, there is a brief description of each area separately, each area's objective and focus are summarized by providing justification. It also covers the objective of the emotional area as it supports all development areas in a multifaceted way by not using direct value expressions. On the other hand, in the introduction part, it is explained with various examples that language development is not independent of cognitive development and that physical development is not independent of social and emotional development, thus providing the fact that an area cannot be limited to only itself. So, the introducing part of the standards develops a general point of view towards children's knowledge, skills, attitudes, and behaviors of all development areas.

Values Reflected on the Objectives of the 2013 Preschool Education Program of the Ministry of National Education

Table 7. Values reflected on the objectives of the 2013 preschool curriculum of Turkey

Development areas	**Objectives**	**Relatable Values**
Language Development	Uses attentive words in his/her speech.	Kindness
	Waits for his/her turn to talk.	Respect
Social and Emotional Development	Expresses himself/herself in creative ways.	Scientificity
	Expresses someone else's feelings towards an event or a situation.	Altruizm
	Expresses his/her positive or negative feelings in a proper way towards an event or a situation.	Acts positively
	Defends his/her and others' rights.	Human rights
	Motivates himself/herself to accomplish a job or a task.	Ambition
	Respects diversity.	Respect for diversity
	Describes different cultural features.	Responsibility
	Fulfills responsibilities.	Responsible consumption, Resource conservation
	Takes responsibility for Atatürk-related activities.	Atatürk
	Complies with the rules in environments.	Compliance with the rules
	Maintains aesthetic values.	Aesthetics
	Recognizes the value of works of art.	Self-confidence
	Self-confident.	The rules of social life
	Explains that individuals have different roles and duties in social life.	Peace, Reconciliation
	Solves his/her problems with others.	
Self-care skills	Employs the rules about self-cleaning.	Cleanliness
	Makes the necessary arrangements in the living quarters.	Regularity
	Has an adequate and balanced diet.	Healthy nutrition
	Protects himself/herself from dangers and accidents.	Safety
	Takes health-related measures.	Healthcare

According to the information shown in Table 6, the objectives that can be directly relatable to the values stated in the 2013 Preschool Education Program of the Ministry of National Education fall into three development areas. These development areas are language, social and emotional development, and self-care skills. The objectives that can be related directly to the values fall densely within the field of social and emotional development with 14 objectives. These objectives can be relatable to twelve objectives. In the area of self-care skills, there are five objectives directed to the values. These can be relatable to five values. There are two

objectives directed to the values in the area of language development, and these can be relatable to the values of kindness and respect.

Table 8. The values reflected on the early learning standards in Ohio

Main branch	**Subject**	**Values**
Self	Recognition and expression of emotions, Self-regulation The understanding of competence	Self-worth, Altruizm, Patience, Responsibility, Self-confidence
Relationships	Bonding, Interaction with adults Interaction and communication with peers, Empathy	Love, Respect and obedience, Cooperation, Reconciliation, Altruizm
Motor Development	Large muscles: balance and coordination Sensory-motor	Balance
Physical health	Physical movements, Nutrition, Self-care Safety applications	Being gamesome, Safety, Healthy nutrition, Cleanliness, Healthcare
Entrepreneurship	Entrepreneurship and curiosity,	Courage, Curiosity
Responsibility and persistence	Caution, persistence	Responsibility, Ambition, Persistence, Discipline
Creativity	Innovation and discovery Expressing ideas and emotions through art	Scientificity, Innovativeness, Entrepreneurship, Appreciation, Aesthetics
Listening and speaking	Objective of language clearly, narration, social communication	The rules of social life, Kindness, Friendliness, Usage of language effectively and efficiently
History	Historical thinking and skills, cultural heritage	Cultural heritage
Geography	Human systems	Respect for diversity, Human rights and responsibilities
Government (Management)	Citizenship skills, Rules and laws	Cooperation, Justice, Reconciliation, Compliance with the rules, Respect for laws
Economics	Scarcity, production, and consumption	Opinion, Preserving sources, Consumption responsibility
Scientific inquiry and application	Questioning, cause, and effect	Scientific thought
Earth and space science	Exploring the natural world	Being productive
Biology	Exploring the world of living things	Respect for natural life, Nature conservation, Environmental awareness

Objectives that can be associated with Ohio Early Learning Standards directly, fall into all development areas. There are 16 values that can be associated with the 19 objectives in the cognitive development and general knowledge development areas, 9 values that can be associated with 10 objectives in the social and emotional development area, 6 values that can be associated with 8 objectives in the physical health and motor development areas,10 values that can be associated with 11 objectives in the approaches to learning development area, 3 values that can be associated with 3 objectives in the language and literacy development area.

Table 9. Similarities and differences regarding the values included in the programs of Turkey and Ohio

	Values in Turkey	Values in Ohio
Similarities	Peace	Peace
	Altruizm	Altruizm
	Aesthetics	Aesthetics
	Respect for diversity	Respect for diversity
	Human rights and responsibilities	Human rights and responsibilities
	Compliance with rules	Compliance with rules
	Kindness	Kindness
	Positive Behavior	Positive Behavior
	Healthy nutrition	Healthy nutrition
	Respect	Respect
	Responsibility	Responsibility
	Self confidence	Self confidence
	Cleanliness	Cleanliness
	Reconciliation	Reconciliation
	Safety	Safety
	Consumption responsibility	Consumption responsibility
	Preserving sources	Preserving sources
Differences	Atatürk's nationality	Self respect
	Regularity	Nature conservation
		Cultural heritage
		Balance
		Scientificity
		Justice
		Entrepreneurship
		Patience
		Autonomy

The values of determination, peace, altruizm, aesthetics, respect for diversity, human rights and responsibilities, compliance with rules, kindness, positive behavior, health, healthy nutrition, respect, responsibility, self-confidence, cleanliness, reconciliation, safety, consumption responsibilty, preserving sources are found in objectives of both countries' preschool education program while the values of Atatürk's nationality and regularity are found only in the objectives of Turkey's implemented preschool education program. The objectives of self respect, nature conservation, cultural heritage, balance, scientificity, justice, entrepreneurship, autonomy and patience are not clearly stated in the Turkish preschool education program but are stated in the descriptions. However, these values are directly stated in Ohio Early Learning Standards.

Conclusion and Discussion

The education of the values corresponds to the development of the ability of the students to assume their responsibilities in general framework, to make the right choices, to improve the quality of the society they live in, to be happy, peaceful, harmonious, and to develop the knowledge, skills, attitudes and behaviors that enable them to live in the body and mind health as individuals. (Aydın and Akyol Gürler, 2013; Berman, 1998; Cüceloğlu, 1998; Çetingöz, 2015; Elias, 2009; Lickona, 1996; Ryan and Bohlin, 1999; Schwartz, 2007).

The aim of the research is to compare the values in the introduction and objectives chapter of early childhood education program and standards applied in Turkey and Ohio. In accordance with the main aim the similarities and differences in terms of values presented in early learning educational programs/standards in Turkey and Ohio were revealed in the study. Preschool curricula of both countries include various values. However, the Preschool/early learning programme/standards implemented in both countries show a variety of differences and similarities in terms of structure and content. Structural differences in pre-school education in the country is the use of Turkey as a single and a joint program prepared by the Ministry of Education in general. On the other hand, in the United States, each state implements its own standards. In Ohio State where the study is carried out, even if preschool education institutions adopt a different approach to education program, they regulate their practices according to the common standards adopted by all shareholders. All documents related to standards and practices are published on the early Childhood Ohio official website (Early Childhood Ohio, 2018).

In the content of the preschool education program in Turkey, includes five different developmental areas. These are expressed as Cognitive development, Language Development, Social and Emotional Development, Motor development, Self-care skills. In Ohio, it is considered as a separate area. Other areas that are cognitive development and general knowledge, language and literacy, social and emotional development, physical health and motor development and approaches to learning. Each development area is divided into strands (main branches) and each branch is divided into sub-branches.

In the context of values indicated in the programs it is clearly understood that the values show diversity. Besides the universal common values of both countries such as peace, kindness, respect…, there are also some national values that they take attention. For example in the U.S. Ohio self respect, autonomy, nature conservation, cultural heritage etc. stand out as national values, while in Turkey Atatürk's nationality and regularity are presented as national values. A classification was made concerning the values in Turkey by Acat and Aslan (2012). The Public and National values in this classification are expressed as patriotism, secularism, nationalism, ownership of Turkish culture, sensitivity to national symbols and reformism/revolutionism. On the other hand, Bacanlı (2011) argues that the national values are formed by common preferences and desires of individuals who form a society and a culture. The main emphasis here is the common nature of the shares. So individuals share common values. Therefore, the transfer of value to the next generation is the transfer of common values and preferences. A table of values belonging to various nations has been created by Ekşi and Katılmış (2011). In this table, Turkish national values are listed as being fairness, independence, peace, scientific, hardworking, solidarity, sensitivity, honesty, equality, tolerance, freedom, respect, love, hospitality, responsibility, cleanliness, patriotism, importance of being healthy and caring for family unity. So, it can be said that in the introduction chapter of the Preschool education program of the Ministry of National Education, all national values are emphasized.

Each field of development has been handled separately but with a holistic approach in the documentation of Early Learning Standards applied in Ohio State and teacher guidance on the implementation of these standards. Therefore, there is no special chapter that can be defined as "introduction". However, there is a brief introduction to the introducing of standards. At the beginning of each development area there are general explanations on that area. In the explanations, development areas are introduced and they are summarized in which direction these areas focus. This section does not contain direct value expressions, but it supports all development areas in a versatile way. In this section, it is explained by various examples that no field is independent from each other. The introduction chapter of Ohio early learning standards provides an overview of the children's knowledge skills attitudes and behaviors of all areas of development.

This perspective supports the general character education of the United States. The US Department of education website states that the program for character education in American schools began in the 1840s. It explains that it adopted a common understanding of character education in 1994, it renewed this understanding with the slogan of No Child Left Behind and with the law enacted and expanded the support for Character Education in 2001 It also points out that one of the six goals of the US Ministry of Education is to promote strong character and citizenship among the youth of the Nation. The United States draws attention to the fact that the way children are a responsible citizen is through having a strong character and emphasizes national values when defining a strong character. The US Department of education refers to people with strong characters who are compassionate, honest and fair, set goals and meet, good judgment, respect others, respect and protect the beliefs, have a strong sense of responsibility, citizens who are concerned about their communities, protect self respecting (US Department of Education,2018). In the list made by Ekşi and Katılmış (2011), The United States national values are included as liberty, privacy, the rule of law, human dignity, justice, loyalty, international human rights, equality, responsibility, honesty, diversity, respect for authority.

It can be said that the values of the objectives in the MNE 2013 preschool education program can be associated directly with the language, social and emotional development areas and with the development areas of self-care skills. On the other hand, the values of the objectives in Ohio Early Learning Standards can be associated with the development areas of the whole. According to the results of the research, peace, altruizm, aesthetics, respect for diversity, human rights and responsibilities, compliance with rules, kindness, positive behavior, health, healthy nutrition, respect, responsibility, self-confidence, cleanliness, reconciliation, safety, consumption responsibilty, preserving sources were presented in both countries' programs. While the values of Atatürk's nationality and regularity were reflected only in Turkey, values of self respect, nature conservation, cultural heritage, balance, scientificity, justice, entrepreneurship and patience were only stated in Ohio. What is noteworthy here is that, unlike Turkish curriculum, the diversity of values is striking in the programs in Ohio.

Research shows that the values of whole humanity around the world are common unchanging and rooted. These values are classified in many different ways. Universal values which are common are constants. They don't change. In most of the studies carried out on the subject, values such as love, respect, responsibility, fairness, caring, tolerance, honesty and sharing take the first place (Akin, 1995; Gürhan, 2017; Josephson & Hanson, 2002; Komalasari & Saripudin, 2017; Lickona 1991; Schwartz, 2012; Zajda, 2009). Many countries have received values education in their curricula. When the values of these countries are examined, it is seen that values such as truth, love, freedom, equality, justice, respect for oneself and others, responsibility and being peaceful are common (Doğanay 2007). Universal values and countries' common values are largely parallel. However, it is not enough to teach these values theoretically; individuals should be able to demonstrate knowledge, skills and attitudes that they can use in daily life (Fixler 2000). Therefore, in addition to the values that need to be taught, it is of great importance what kind of approaches teachers follow in passing on values to new generations. Values education in Turkey has undergone different stages. The values education was sometimes taught as a separate course and sometimes it was tried to be given to the students in other courses. On the other hand, it is observed that Ohio State Early Learning standards are very rich and explanatory in terms of reflecting values.

Recommendations

In this study preschool education programs in Turkey and Ohio were compared to in the context of values education. When the preschool education programs of both countries are examined, it is striking that there are more development areas in the preschool education program in Ohio. In this context, the values given to the students along with the universal value has been determined to be more than that of Turkey. In line with the results of the research the following suggestions can be given for the implementation of values education in pre-school education:

- It can be advised to offer a wider range of values education by expanding development areas in Turkey's pre-school education program.
- It is understood that national values such as Atatürk's natioanality and regularity and classical universal values such as peace, respect and cleanliness are emphasized in pre-school education program in Turkey. In addition to these, values for the individual's self-development such as self-esteem, autonomy and entrepreneurship should be included and expanded as in the program in Ohio.
- Considering that values are abstract concepts and difficult to acquire in this age group, concrete experiences can be included in in-school and out-of-school activities in the programs.
- In the pre-school education program, concrete and fun activities in accordance with the development and cognitive characteristics of children about values education can be increased.

For further studies:

- Pre-school education programs of different countries can be compared in different contexts or in the context of values education.
- Values education practices in different countries can be examined with survey, interview and observation techniques.
- The relationship between perceptions of values with different variables such as age, gender, socio-economic level and developmental areas such as social, cognitive and physical can be examined.

Acknowledgements or Notes

This study is derived from a project supported by TÜBİTAK (1059B191600044).

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International Journal of Contemporary Educational Research (IJCER)

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An Action Research to Improve Change and Continuity Perception in Social Studies

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Article History
Received: 23.12.2020
Received in revised form: 06.05.2021
Accepted: 06.05.2021
Available online: 03.09.2021

To cite this article:

Sel, B. & Sözer, M.A. (2021). An action research to improve change and continuity perception in social studies. *International Journal of Contemporary Educational Research*, *8*(3), 39-54. DOI: https://doi.org/10.33200/ijcer.845692

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 39-54 ISSN: 2148-3868

An Action Research to Improve Change and Continuity Perception in Social Studies

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Abstract

The purpose of this study is to develop the students' skills of change and continuity through activities based on the objects in fourth-grade social studies. In alignment with the scope, an action research design was used in which the researcher is also the executor. A criterion sampling was used for recruitment which resulted in 17 fourth-grade students agreeing to participate in the study. Data collection tools included achievement test, open-ended questions, semi-structured interview forms, video recording and student journals. Wilcoxon signed ranks test, grading key and content analysis were used in the analysis of the data. The results of the study showed that there is a significant difference between the pre-test and post-test scores of students in object-based activities. Within the scope of change and continuity, it was seen that students can identify similarities and differences, make estimations on the perception of future time, discover the effects of sociocultural context along with change and continuity, provide chronological visual evidences, and put them in order. However, it was found that students can't develop multiple causality relationships related to change, that they interpret causes in relation to change and continuity from a limited perspective, that they do not consider different disciplines when expressing the powerful effects of technology in change processes.

Key words: Change and continuity, Social studies, Time skills.

Introduction

One of the most important barriers to understanding the history is the difficulties that students experience in understanding the change and continuity emerging in the process and comparing the similarities and differences between periods (Maxim, 1997; Waldron, 2003). The interaction that occurs within the scope of the concepts of change and continuity in the context of historical thinking causes students to experience numerous problems related to these concepts (Seixas & Peck, 2004). In addition, one of the least studied dimensions of children's historical thinking skills is the way they understand how and why people's lives have changed in the process (Barton, 2001, p. 887). Yet, Whitehouse (2015) considers change and continuity as a significant component of a holistic historical reasoning process. Understanding the change and continuity in historical events means setting forth the inner structure of the historical events and the clear and comprehensible interpretation related to the events (Tuna & Budak, 2013, p.637). Understanding the change and continuity enables students to see the past not as a homogenous whole or a series of events but as a complex flow of currents and counter-currents (Ford, 2015, p.10). In this context, the awareness of chronology is essential for the perception of change and the ordering of the events with chronology can be seen as a qualified start (Seixas & Morton, 2012; Wilschut, 2012). Perceiving chronology includes succession, change, continuity, the causes and consequences of change, or the speed of change and continuity; this is the focus and main principle of historical understanding and questioning (Cooper, 2012; Hoodless, 2002). Chronological thinking, unlike chronology, is more than just ordering facts and events as a more complex phenomenon that reveals cause-effect relationships and changes occurring in the process (Drake & Nelson, 2005, p. 81). Chronological thinking, unlike chronology, includes understanding the cause and effect relationship as a more complex phenomenon and the change in time (Aktın & Dilek, 2016, p. 130). With this aspect, perception of change and continuity constitutes one of the basic elements of chronological thinking and related historical understanding. Moreover, in the literature, it is visible that the perception of time and the ability to perceive the change and continuity are generally evaluated within

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This study is derived from the first author's doctoral thesis named "An Action Research Based on the Pedagogies of the Object for Improving Students' Skills of Change and Continuity in Social Studies".

the scope of the cause-effect relation (Cooper, 2004, Ellis, 2007, Ford, 2015; Seixas & Peck, 2004), future time (Hudson et al., 1995; Silverman, 1996; Thompson, Barresi & Moore, 1997), and sociocultural aspect (Barton, 2001; Cooper, 2001, 2012; Ford, 2015; Hodkinson, 2004; Seixas & Peck, 2004).

One of the basic elements that need to be addressed within the scope of change and continuity is considered causality. Change occurs due to multiple reasons and results in many different consequences (Ford, 2015, p. 9). It is important for students to understand causality relationships so that change and its consequences can be clearly perceived. Children with the skill in question find the opportunity to understand that the events occurring in the past, present or future happen based on certain cause-effect relationships rather than randomness. As the concepts of change and continuity and cause and effect are closely related, the tasks assigned to the students should generally involve these two elements (Seixas & Peck, 2004, p.6). According to Blow (2011), the concept of change is mostly ignored in the classroom and there are two underlying factors for this situation: The first factor is that the difference between teaching what changed in the past (for example, the French Revolution was a great change in history) and teaching the meaning of historical change (for example, was the French Revolution a big change for countries other than France?) can be easily blurred. The second factor is the frequently encountered failure to discover the nature of change-related concepts such as cause and effect. Therefore, it can be said that within the scope of change and continuity perception, causality is a factor as important as chronological thinking.

The perception of future time is also considered another element that requires to be approached within the framework of change and continuity. According to Silverman (1996), foresight requires children to understand the relationship between change and continuity and to know something about the rate of change for changing qualities. While children acquire the essential ways of organizing the complexity of the past with the ability to perceive change and continuity (Seixas, 2006, p.6), they can also create a vision regarding the future. In fact, especially change is a process with different speeds and patterns. The moments when the change process changes direction or speed are “milestones” (Seixas & Morton, 2012). Therefore, the child who designs “history” regarding the future must coordinate many levels of change and continuity together (Silverman, 1996, p.11). In this line, Counsell (2011) draws attention to the analysis of change and continuity (use of its scope/nature/type, speed, and proportional characteristics), and the types of questions related to change (e.g., “when?...questions”, questions about starting and ending periods, questions about the characterization of the periods, questions about the speed or nature of the change.

Another factor to be considered in the teaching of the skill to perceive change and continuity is the sociocultural context. Historical changes arise from the actions of the historical actors and the social, economic, etc. conditions affecting these actors (Ford, 2015, p. 9). For example, continuity preserves its existence in the most concrete and obvious way for centuries in rituals, celebrations, traditions, language, in short, in culture. It may be important to build the perception of change and continuity as a part of the student's sociocultural environment. In fact, the most accessible historical information for primary and secondary school children is related to the changes in material culture and patterns of daily life (Levstik & Barton, 1994, p. 43). While students produce an understanding of history, they are more dependent on cultural transfer than the techniques they use in mathematics or science (Brophj & Vansledright, 1997, p.27). In the research conducted by Barton (2001), “cultural tools” that shape the understanding of change over time were taken as the basis, and in both the USA and Northern Ireland, socio-cultural differences in the way young children express how and why social and material life have changed over time. In a similar study conducted by Epstein (1997), the importance of sociocultural approaches in the historical understanding process was emphasized, and the experiences of students themselves or their families regarding ethnic identities and / or immigrant status were determined to be important factors in building their ideas about concepts such as historical understanding, representation, change, and empathy. In the study carried out by Levstik and Barton (1994), the focus was on the change over time, and it was seen that the most obvious and widespread response given by children was to detail the changes in material culture and everyday events.

As can be seen the ability to perceive change and continuity is also important in terms of teaching social studies for creating both chronological thinking and causality, and sociocultural context and a future perspective.
Although the ability to perceive change and continuity is included in many national and international curricula as a skill, the concepts in question bring along some problems in terms of the teaching dimension by their nature. Although change and continuity are obviously in the center of the history, effective teaching of these processes inevitably brings forward important difficulties (Vella, 2011, p. 16). For instance, it is difficult to define what is meant with “change” as the focal point of the students’ analyses (Counsell, 2011, p.114). Problems experienced in the perception of change and continuity are often reinforced through teaching programs and in-class practices (Demircioğlu, 2005; Hayırsever, 2010; Kiriş Avaroğulları, 2014; Martin, 2013;

Öztürk, 2011). There are many studies which demonstrate that the ability to perceive change and continuity is positioned in the curricula in a "vague and inadequate form (De Groot-Reuvekomp, Von Boxtel, Ros & Harnett, 2014; Martin, 2013; Sel & Sözer, 2020). However, asking questions about time and change is the main element of historical inquiry, but teaching programs do not allow this to happen (Cooper, 2012, p.3). Although there are various deficiencies in the curricula within the scope of the ability to perceive change and continuity, a similar situation is reflected in the social studies textbooks. It was observed that the content in social studies textbooks was not sufficient to get the students to gain the ability to perceive change and continuity (Hayırsever, 2010), that in the majority of the fictional content in social studies and history textbooks, the change in space and space-related change were neglected, causing various historical anachronism problems (Öztürk, 2011) and that although this skill was similarly emphasized in the history curriculum, there was no balanced and adequate distribution (Kiriş Avaroğulları, 2014). In the studies on educational practices, in addition to the problems faced in curricula, it was observed in many studies conducted in the literature that in comparison to change, perception of continuity was more difficult for students (Çelik, Karadeniz & Cabul, 2018; Kabapınar & İncegül, 2016; Marancı, 2017; Safran & Şimşek, 2006; Tay, 2007). Accordingly, considering the rich and wide content covered by the social studies course, it is important to include continuity as much as change.

The ability to perceive change and continuity should not be seen as a simple "sorting" or "dating" process that is almost traditional through only time-related techniques and a strict perspective; it should also be built by considering factors such as cause-effect relationships, future time perspective, sociocultural context, etc. An understanding of change and continuity disconnected from the sociocultural context with a focus on the mechanical aspect of time is contrary to the nature of the relevant concepts. In this context, it has been stated that within the sociocultural context in question, cultural objects, which are frequently used in daily life and with which people are in a constant interaction, are important tools, that It is important to use material objects in teaching the ability to perceive succession and continuity in education (Wood, 1995, p.13), that continuity can be observed by students in social life and tools and equipment (Levstik & Barton, 1997, p.75), that students can acquire the sense of continuity by researching and exploring the past of their own families (Seefeldt, Castle & Falconer, 2015) and that the use of objects in teaching the ability to perceive change and continuity is important (Alleman & Brophy, 2003; Bage, 2000; Galan, 2016; Levstik & Barton, 1997). In this direction, the change and continuity occurring in items / objects are accepted as a projection or symbol of the experiences in economic, cultural, and political fields in relation to the people, societies and periods to which the item belongs to, sometimes directly and sometimes indirectly.

In this research, both the inadequacies in the social studies curriculum and textbooks and the difficulties experienced in practice were taken into consideration in the light of the studies examined in the literature regarding the ability to perceive change and continuity in the social studies course, and it was aimed to improve students' perception of change and continuity by using action research method based on cultural / historical objects. In this context, answers to the following sub-problems were sought:

1. Considering the object-based activities, is there a significant difference between the students' pre-test and post-test success scores?
2. What are the levels of students' expressing change and continuity and explaining with examples after the objects-based activities held in the fourth-grade social studies course?
3. What are the students' views on the objects-based activities carried out in the fourth-grade social studies course?

Method

Research Model

In the research, based on the collaboration with the relevant classroom teacher and students to develop the ability to perceive change and continuity in the social studies course, action research in which the researcher was also a practitioner was employed. In this context, the social and collaborative "participatory action research" model, in which the changeable situations put forward by Hendricks (2006) are determined within the scope of the theoretical framework, was utilized. Within the framework of action research, both qualitative and quantitative perspectives were adopted. Action research is based on not only qualitative methods but also quantitative and mixed methods (Chandler & Torbert, 2003; Creswell, 2002; Ivankova, 2014, Norton, 2009;

Torbert, 2000). According to Marti (2016)[†], the use of qualitative methods is considered as the most common way to integrate the conventional research methods into action studies; however, measurement is generally required to support the social action regarding how "things" are distributed, and the use of quantitative methods is not rare. Furthermore, Norton (2009) states that quantitative analysis methods (an experiment, an attitude scale or questionnaire; an observation study which involves counting; one that produces any information that is quantifiable) are useful for pedagogical action research.

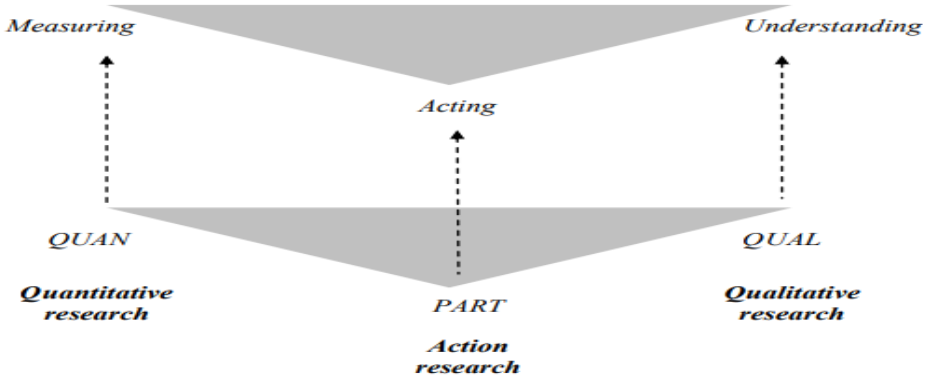

Figure 1. Methodological approaches, methods and aims. Baseline (and simple) model. (Marti, 2016, s.170)

As seen in Figure 1, Marti (2016) addresses this process as surveys and statistical analyses to collect quantitative data about the world (QUAN), qualitative interview, participant observation, and discourse analysis to discover the meanings from the actor's perspective (QUAL), and actions, meetings, and workshops containing a performative component to discuss the change (PART). In this research, in compliance with the nature of action research, the qualitative approach, as well as the quantitative approach and the conventional approach, were used to reveal the developmental process. At this point, it is necessary to note that the action research was not designed to prove or refute a hypothesis or to provide data that can be generalized over a larger population. The quantitative methods in an action research project should be used to portray what is happening in a certain situation (Johnson, 2014, p. 128).

When the literature is analyzed, it is seen that there are various views about the processes and stages of the action research (Elliot, 1991; Johnson, 2014; Mills, 2007). In this study, the action research steps designed by Kemmis and Mctaggart (1988) were used. According to the model in question, action research consists of planning, taking action, observing the process and result, reflecting, re-planning, repeating action, observing the process and result once more and reflecting again.

Action Process

In the first stage, the focus area was determined following the literature review; afterwards, the planning phase for the activities to be carried out in the action phase was started. In order to realize planning, within the scope of needs analysis, social studies curricula were examined, the literature review was carried out, and a preliminary interview was held with the classroom teacher about the inadequacies in the classroom. Based on this, the activities to be carried out were aimed to focus on the sub-components of the ability to perceive change and continuity (using chronology skills and chronological concepts within the scope of change and continuity, having a sense of future time, discovering similarities and differences during change and continuity, discovering the effects of sociocultural context during change and continuity, establishing a cause-effect relationship, and associating change and continuity experienced with different disciplines).

As can be seen in Figure 2, after needs analysis, three cycles were determined in cooperation with the classroom teacher, namely "preparation of object time capsule, thematic timeline based on the object and project on the history of the object", reflection and re-planning processes were carried out after each cycle was completed with the classroom teacher.

[†] Marti (2016) asserts that action research employs both qualitative and quantitative methods, but the special role of the latter in such studies is discussed very rarely. In its designs, action research concentrates on how qualitative methods can be integrated into participant dynamics. On the other hand, the specific contribution of quantitative methods to action research has been ignored in this field for a long time (Chandler & Torbert, 2003, p.148).

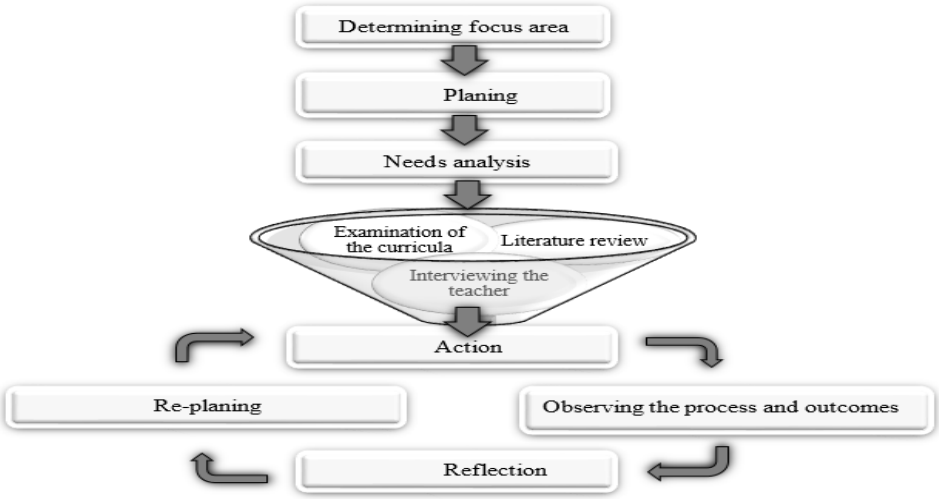

Figure 2. Action research application process.

In the first cycle, the students were asked to open the object time capsules[‡] consisting of old objects and prepared by the researcher, and a discussion was held on what has changed in terms of objects, what objects have maintained their continuity, the factors that have caused change and continuity in question and their consequences, the positive and negative reflections of this situation (health, communication, economics, etc.), the similarities and differences compared to today, and what kind of change the objects would display in the future, and worksheets were distributed. Then, they were asked to prepare time capsules based on the objects they thought would give more information about change and continuity 100 years from now, and the time capsules were presented in the classroom. The first cycle took place within three weeks. After the first cycle, inadequate and superior situations were evaluated together with the classroom teacher, and the second action plan was determined in this way.

In the second cycle, a video of a sample project on the history of the object was shown to the students, and in addition to the material change and continuity experienced in the objects, an in-class discussion was held on change and continuity in the lives of family members in sociocultural, social, economic, etc. areas along with the objects. The students were asked to determine an object and an elderly family member by whom they can reflect the change and continuity in a qualified manner, and to carry out a historical object study regarding the story of the change of a historical object and report it. Research reports were presented in class along with the object. The second cycle took place within four weeks. After the second cycle, inadequate and superior situations were evaluated together with the classroom teacher, and the second action plan was determined in this way.

In the third cycle, thematic time strips based on the object were used to place and display the change and continuity of a historical object on a specific chronological axis. In the first stage, an in-class discussion was held over the sample thematic time strip and whether the images related to the object represent the relevant period, what changes occurred in the objects as time progressed, the consequences that were created by these changes and continuity, why the change was needed, after how much time the change took place, the course of the speed of the change, and the importance of chronology in expressing continuity were emphasized. Then, students were asked to prepare their own time strips for the object they determined, to visualize and explain the change and continuity in this direction by considering the related time factor. The third cycle took place within three weeks.

[‡] All activities within the cycles have been prepared in relation to the acquisitions in the "culture and heritage learning area" in social studies.

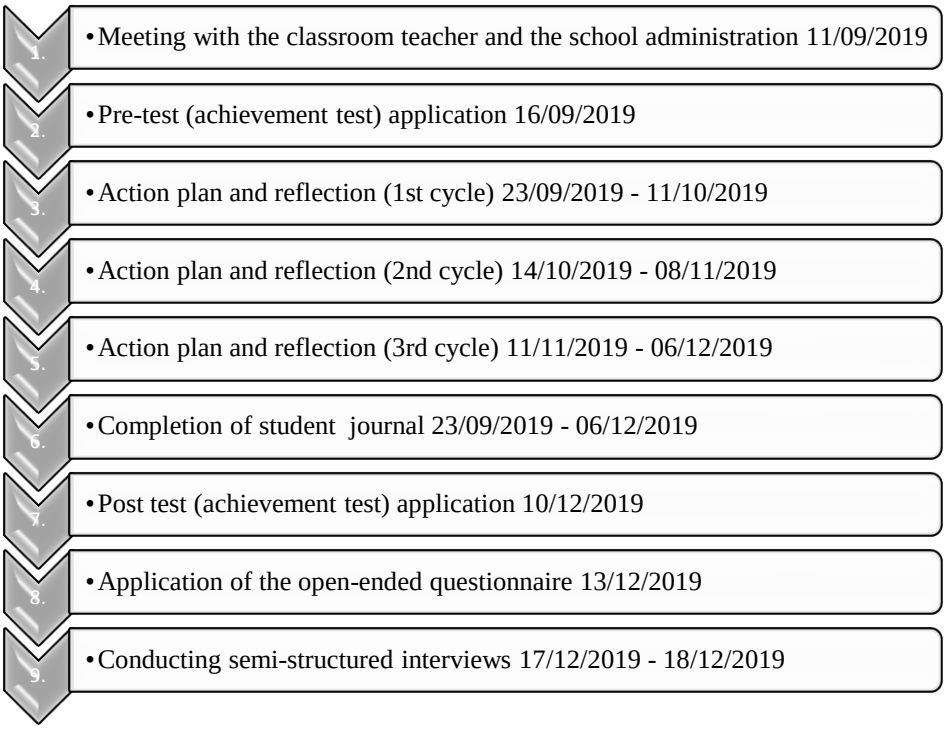

Figure 3. The processes of the action phase.

Study Group

The study group is composed of 17 fourth-grade students receiving education at a primary school affiliated to the Ministry of Education in Turkey in 2019. Voluntary participation of the students in the research was ensured, necessary official permissions were obtained related to the research, and code names were assigned to the students. In accordance with the nature of the action research, it is important that the study group must be in the context of the problem within the scope of the ability to perceive change and continuity. For this reason, in the research, particular attention was paid to ensure the existence of some deficiencies related to the ability to perceive change and continuity among the students regarding the current problem status, to determine the status of the existing problems by referring to the teachers' opinions, and to ensure that the students participate voluntarily. Before the action process, a semi-structured interview was held with the classroom teacher. In parallel with the data obtained from the literature review during the interview process, it was stated by the classroom teacher that it is much more difficult for students to perceive continuity according to change. In addition, the classroom teacher stated that the close environment of the children and the sociocultural context were ignored. She stated that the fourth-grade social studies curriculum does not include change and continuity, except for certain themes, that the positive and negative aspects of change are addressed, visuals and textbooks are used in practice, and the time and measurement tools are insufficient. Based on the data obtained in this process, the needs analysis process has been completed and the planning phase of the activities has started.

Data Collection Tools

Within the scope of the research, a four-choice multiple-choice achievement test for the first sub-problem, an open-ended questionnaire for the second sub-problem, semi-structured interview forms and student journals for the third sub-problem were used.

In the first stage, a four-choice multiple-choice draft form was prepared by the researcher regarding the ability to perceive change and continuity for the "Culture and Heritage" learning area[§]. Then, by taking expert opinion, Lawshe (1975) technique was used to determine the content validity. Within the scope of Lawshe technique, 8 experts were consulted and the content validity index of the test was determined as 0.81. Considering the critical

[§] This learning area has been chosen for both the achievement test and the open-ended question form since it includes more acquisitions about the ability to perceive change and continuity.

values determined by Lawshe (1975) together with the opinion of 8 experts, since the content validity index was greater than 0.78, it can be stated that the content validity of the achievement test developed was high. The rates of content validity were calculated by proportioning the number of the experts who considered the item "necessary" to the half of the number of the experts who presented their opinions about the item.

For the achievement test, the pilot application was carried out with a total of 178 students studying in the fourth grade, and after the pre-application, each correct answer was scored as "1" and each wrong answer was scored as "0". Factor analysis based on tetrachoric correlation matrix was applied for the construct validity of the developed achievement test. Tetrachoric correlation matrix is used when the data are artificially categorized into two categories although they display a continuous and normal distribution (Baykul, 1999; Şencan, 2005). As a result of factor analysis based on tetrachoric correlation matrix, six items were discarded, and it was observed that the achievement test consisting of 33 items had a one-dimensional structure.

In terms of reliability, the KR-20 value of the achievement test was determined to be 0.91. KR-20 value for tests containing 10-15 items should at least be 0.50, and for tests containing more than 50 items, it should be 0.80 and above (Kehoe, 1995, p.1). For the item statistics of the achievement test, the item difficulty and the single point double series correlation coefficients of the test were calculated. The item difficulty index of the items ranged between 0.41 and 0.84. The critical range for item difficulty values of a four-option test designed to measure the skill level is supposed to be between 0.20 and 0.80 (Crocker & Algina, 1986). Accordingly, it can be said that the prepared achievement test contains low, medium and high difficulty level items. The item discrimination of the items varied between 0.36 and 0.67. In terms of item discrimination index, items with a value of 0.40 and above are considered as highly discriminating items, items between 0.30 and 0.39 are accepted as items that are suitable but need improvement, items between 0.20 and 0.29 are thought to be items that are marginal and need correction, and items below 0.19 are accepted as items to be removed (Ebel & Frisbie, 1986).

Secondly, in the open-ended questionnaire prepared based on images, expert opinion was taken for content validity. The content validity index obtained according to the Lawshe technique was found to be 0.79. Considering the critical values determined by Lawshe (1975) together with the opinion of 8 experts, since the content validity index was greater than 0.78, it can be stated that the content validity of the open-ended questionnaire developed was high. Difficulty indexes of the items in the open-ended questionnaire were between 0.63 and 0.78, and discrimination indexes ranged from 0.39 to 0.67.

Thirdly, a semi-structured interview form consisting of six questions was prepared by the researcher. Expert opinion on the interview form was obtained. Also at the beginning of the research, notebooks that can be used daily were distributed to the students by the researcher. After each activity, from the students to the diary; what he/she learned that day, what he/she felt, what processes he/she had difficulties, how he/she produced solutions, etc. they were asked to write. It is very difficult for the researcher to evaluate himself systematically, as the researcher is also practitioner in the action research process; for this reason, video cameras can be used to record all or part of the lesson (Johnson, 2005). Video recordings are considered invaluable for qualitative research as they allow analysis of events and micro-scale analysis (Glesne, 2013, p.110). In this context, the research process was supported through video recording and a digital camera was used.

The Role of the Classroom Teacher in the Action Research Process

Cooperation between stakeholders who are parties to the problem and sharing experiences form the basis of action research. A preliminary interview was held with the classroom teacher in order to determine the focus area during the needs analysis stage of the planning process. After each action plan that was carried out during the action research process, evaluation was made with the classroom teacher, strengths and weaknesses were determined, and opinions were taken to prepare the next action plan. It is very important to evaluate the learning products obtained during the process with the classroom teacher in terms of perceiving change and continuity, and to interpret the development of the students in this sense together. In addition, an effective cooperation was made in terms of informing the parents of the students, ensuring the order of the class, realizing the activities and data collection processes.

Ethical Principles in the Action Research Process

Ethical principles to be considered in action research have been classified as preparation of ethical documents (ethical statement, permission request document and official permit document), negotiation

(principals/administrators, participants and parents), ensuring confidentiality (confidentiality of information, data, identity), ensuring the right of participants to withdraw from research, professional and academic behavior commitment, and preservation of goodwill (McNiff & Whitehead, 2010, p.76-78). The personal information of the students and the classroom teacher who participated in the research were kept confidential, code names were given, and necessary permissions were obtained from official institutions and organizations. The students, parents and responsible classroom teachers were informed about the issues such as the purpose of the research, the confidentiality of the data collected, reporting of the results for what purpose they would be used, the privacy of personal information, etc.

Data Analysis

When analyzing and interpreting the data collected in participatory action research, it is important to try to reflect the perceptions of all stakeholders involved in the study (Fraenkel, Wallen & Hyun, 2011, p.594). For this reason, in the analysis of student products and data obtained after each action plan, collaboration with the classroom teacher was made. In the first sub-problem, Wilcoxon signed-rank test was used by employing the SPSS22 program. In the second sub-problem, evaluation was made using a rubric. Each criterion included in the rubric was graded as insufficient (1 point), needs improving (2 points), largely sufficient (3 points) and excellent (4 points). The lowest grade that could be obtained from the rubric was 11, and the highest grade was 44. While determining the range coefficient in the rubric, the formula "(highest grade - lowest grade) / number of criteria" was used. For the third sub-problem, content analysis method was used. Accordingly, the average scores obtained from the grading key were evaluated as follows: “insufficient” between 1-1.75 points, “needs improving” between 1.76-2.51, “largely sufficient” between 2.52-3.27, and “excellent” between 3.28-4.00.

Results and Discussion

Findings obtained in line with the first and second sub-problems are presented under two separate headings.

Findings Regarding the Difference Between Students' Pretest and Posttest Achievement Scores

The results of the Wilcoxon signed-rank test performed in line with the first sub-problem are shown in Table 1.

Table 1. Wilcoxon signed-rank test results

	n	Mean rank	Rank total	*Z*	*p*
Negative ranks	1	1.50	1.50	-3.334	.001*
Positive ranks	14	8.46	118.50		
Equal	1				
Total	16**				

As seen in Table 1, it was observed that there was a significant difference between the pretest and post-test achievement scores of the students according to the Wilcoxon signed-rank test result ($Z=3.334$, $p<0.05$). Considering the mean ranks and totals of the difference scores, it is seen that this difference was in favor of positive ranks, that is, the post-test score.

Findings Regarding Students' Expression of Change and Continuity and Explanation with Examples

For the second sub-problem of the research, an open-ended questionnaire based on images was applied to the students, and the data obtained were analyzed with an open-ended questionnaire rubric. Findings related to the mentioned analysis are presented in Table 2:

** Since one of the 17 students who constituted the study group could not participate in the post-test application, the analyses were performed on a group of 16 people.

Table 2. Results from the open-ended questionnaire

	Item no	*n*	$\overline{X}$	Level
Image A	A1	17	2.59	Largely sufficient
	A2	17	2.53	Largely sufficient
	A3	17	1.76	Needs improving
	A4	17	3.09	Largely sufficient
Image B	B1	17	2.70	Largely sufficient
	B2	17	2.76	Needs improving
	B3	17	2.65	Largely sufficient
	B4	17	3.06	Largely sufficient
Image C	C1	17	2.59	Largely sufficient
	C2	17	1.76	Needs improving
	C3	17	3.06	Largely sufficient
Overall average	11	17	2.57	Largely sufficient

As it can be seen in Table 2, A1, A2, A4, B1, B3, B4, C1, C3 items were evaluated as "largely sufficient" and A3, B2, and C2 items were evaluated as "needs improving." The general average obtained from open-ended questionnaires prepared based on images A, B, and C ($\overline{X}$ = 2.57) was determined to be “largely sufficient”.
When the students' scores obtained from open-ended questions were evaluated, within the scope of change and continuity, the level of responses given to the item (A1) which examines the status of “using chronology skills and chronological concepts” was determined to be "largely sufficient." In this item in question, the students were asked to rank the living spaces in the images from past to present in a chronological order and to explain the reason for their ranking. Below are some examples of answers given to item A1 by the student coded K10::
“Because these buildings are everywhere. The buildings reflect the present time. They have balconies, multiple floors, solid materials, doors, and windows. Others are old...” (K10).

When the answer given by the student coded K10 is examined, it is seen that the living spaces were sorted chronologically and that the reason for the chronological order was explained by considering the changes in the structural features of the houses and similar residences in the vicinity.

The level of responses given to the items (A4, B4, and C3) that examine the status of “having the sense of future time” was determined to be “largely sufficient”. For example, regarding the possible changes that may occur regarding the future in item C3, the students were asked to imagine a machine that would save time and electricity, which could be used to meet the need for cleaning in the future and to explain its features. Accordingly, some of the answers given by the students are exemplified as follows:

“The name of the machine is an ultra mega washing machine. It has the features of working with natural boron reserves and drying. It will also produce its own power...” (K5).

When the above answer given by the student coded K5 is examined, it is seen that regarding change in the future, s/he dreamed of a machine that could work with the natural boron mineral and produce its own energy.
The level of responses to item (B3) prepared for “discovering the effects of the socio-cultural context throughout change and continuity” was evaluated as “largely sufficient”. In this regard, students were asked to take into account the changes experienced between child games and today's children's games, and to express the effects of this change on sharing and friendship values. The answer given by the student coded E6 is given below:

“Sharing and friendship were very nice in the past. However, later, digital games appeared. Children became introverted, and their social ties got broken. They do not talk to anyone anymore. Everyone is competing. But friendship existed in the past...” (E6).

Emphasizing the digital games, the student coded E6 stated that the change in question locked children within the home, negatively affected their social relationships and led them into a race.

Within the scope of change and continuity, the level of responses to the items related to "establishing cause-effect relation" (A3, C2) was determined as "needs improving". In this context, for example, in item C2, students were asked to evaluate the results of the change experienced in meeting the cleaning needs of people positively and negatively. However, the vast majority of the students had difficulties in revealing the positive and negative results of the change, and but they came up with mostly one-dimensional results. The positive and

negative results of the change could not be evaluated from multiple perspectives. The response given by the student coded E5 is as follows:

"*The positive results of the change: Technological devices have made today's tasks easier. The negative results of the change: Detergents used today are harmful to health as they are made of chemicals..."* (E5).

The student coded E5 explained the positive result of the change as the facilitation of the human life and the negative result as the harm caused by cleaning materials in human health.

In item A3 regarding establishing a cause-effect relationship within the scope of change and continuity, the students were asked to evaluate the negative results of the change in the houses human life from the perspective of environmental problems. The vast majority of the students could not evaluate the results of the change in the context of "environmental problems", and they gave more general and sometimes irrelevant and distant answers. *"It is possible that neighborhood relationships existed among people in Image 6 while neighborhood relationships of people came to an end due to the increasing number of the buildings in Image 8."* (K6).

The student coded K6 tried to explain the results of the change in the houses in terms of communication, far from the relevant context (environmental problems).

While the students had difficulties in answering open-ended questions in different areas as regards establishing cause-effect relationship (changes in the construction of houses and meeting the cleaning need) within the scope of the ability to perceive change and continuity in general, they were able to provide relatively more qualified answers to the questions asked in areas close to their environment and everyday life (changes in traditional children's games). In this regard, students were asked to consider the changes between the children's games that have been forgotten and the children's games of today, and based on the images; they were requested to evaluate this change in terms of "health" and "communication". The similar response of the student coded K2 to the same question is as follows:

"Negative results in terms of health: We may have weaker eyesight, our bodies can be harmed, we may be exposed to radiation. Negative results in terms of communication: People are alienated from each other, their psychology may be deteriorated, and their communication comes to an end..." (K2).

It is seen that the student coded K2 associated the results of change in terms of health with vision problems, inactivity, and exposure to radiation, and in terms of communication with psychological problems and inability to communicate.

In general, when the findings obtained from students' responses to open-ended questions within the scope of the ability to perceive change and continuity were evaluated, it was seen that they gave responses at the level of "largely sufficient" for items regarding using chronological concepts and skills (A1), identifying similarities and differences throughout change and continuity (A2, B1), having a sense of future time (A4, B4, C3), and exploring the effects of sociocultural context throughout change and continuity (B3). However, it was seen that their responses to items (A3, B2, C2) related to associating change and continuity with different disciplines and establishing cause and effect relationship were at the level of "needs improving". In this context, it was observed that students had difficulty in evaluating the positive and negative results of changes in subjects far from their daily life, experiences, and close surroundings, while they evaluated the results of the change in questions prepared based on traditional children's games in a versatile and qualified way. In addition, it is seen that they were able to evaluate the positive or negative results of the change from a limited perspective and that they emphasized the impact of the change on a "single and specific" area only.

Findings Regarding Students' Views on Object-Based Activities

The data obtained from the semi-structured interview process and student journal were analyzed by content analysis method. The categories, codes, and usage frequencies that emerged as a result of the analysis are given below.

Table 3. Results of content analysis

Categories	Codes	f	%
Obtaining information through activities	Learning past life patterns	13	13.82
	Developing predictions for the future	3	3.19
	Learning cultural elements	4	4.25

	Learning the differences between the past and the present	6	6.39
	Make a chronological order	4	4.25
	Discovering new objects	4	4.25
Activities creating positive feelings and thoughts	Events create excitement	5	5.33
	Activities attract attention	7	7.45
	Activities are nice	21	22.34
	Activities are fun	18	19.15
Difficulties/problems experienced during the activities	Activities requiring a long time / being time consuming	4	4.25
	Difficult activities	2	2.13
	Boring activities	1	1.06
	Difficulty in finding historical objects in events	2	2.13
Total		94	100

As a result of the content analysis; three main categories were determined: obtaining information through activities (f=34), activities creating positive feelings and thoughts (f=51), and difficulties/problems experienced during the activity process (f=9).

In the category of "obtaining information through activities", students stated that they most frequently learned about life patterns in the past (f=13), and least frequently developed predictions about the future (f=3). In the category named “activities creating positive feelings and thoughts (f=51”); it is seen that it is dealt with much more frequently when compared to the categories of "obtaining information through activities (f=34)" and "difficulties/problems experienced in the activity process (f=9)". In this context, it is noteworthy that students' views on item-based activities are expressed more affectively. In the third category, "difficulties/problems experienced during the activities", there are negative opinions and thoughts of the students about the activities. In this category, which emerges with a very low rate compared to the other two main categories; it is seen that activities require a long time/time consuming (f=4), activities are difficult (f=2), activities are boring (f=1) and there are difficulties in finding historical items in activities (f=2).

Conclusion

In this study, it was determined that there was a significant difference between the students' pretest achievement scores and the post-test achievement scores in favor of the post-test in the fourth-grade social studies course activities carried out within the scope of the ability to perceive change and continuity. Accordingly, activities of preparing object time capsule, doing a project on the history of the object, and creating a thematic timeline based on the object within the scope of the three actions plan contributed to the development of students' ability to perceive change and continuity. Time capsules offer educational support for children to understand the sequence of the events, the relations between the events, and how these events fit the general scheme of the historical time (Rowell et al., 2007), and to realize how much they have changed and how their environments have changed (Zayimoğlu Öztürk, 2017; Zayimoğlu Öztürk & Öztürk 2018). Additionally, there are studies indicating that the studies on oral history, just like the studies on the history of the material, contribute to the students’ ability to perceive the change and continuity (Dere & Kalender, 2019; Doğan, 2015; Kabapınar, 2014; Kabapınar & Sağlamgöncü, 2016; Von Heyking, 2017; Yazıcı & Mert, 2017; Yow, 2015). Similarly, in the literature, there are studies that state that the use of objects is functional and important in the perception of succession and continuity in terms of both social studies and history teaching (Wood, 1995) and that draws attention to the effective use of objects in this sense (Alleman & Brophy, 2003; Bage, 2000; Galan, 2016; Hickey, 1997; Kabapınar & Sağlamgöncü, 2017; Levstik & Barton, 1997). It is observed that similar results were obtained in the researches which were carried out based especially on the objects that are used in daily life or which have deeper historical/cultural labels. In this context, in the research conducted by Akça Berk and Gültekin (2012), it was stated that even the change of motifs in carpets, rugs, and saddles over time is a reflection of the change in the aesthetic understanding of the society; in the research conducted by Kırpık (2012), it was expressed that based on the hat, various objects or symbols are representative of changes in society and are an important historical reference in this context. Similarly, in the research titled “To touch, to feel, to see: Artifact inquiry in the social studies classroom” conducted by Field, Labbo, Wilhelm and Garrett (1996), it was suggested that as a means of revealing the concepts of social studies and integrating students into the learning process, objects should be used to understand practices and individual values, to make intercultural comparisons, and to compare changes over time. Rule and Sunal (1997) stated that the objects of the past exist everywhere, in the home, school, and society that they have a history and they undergo a change accordingly, and even a frequently used object like "button" can be surprisingly useful in revealing how technology, fashion

and physical materials have evolved over time. Use of a historical or cultural item/object suitable for the ability to perceive change and continuity, especially for young students can contribute to the development of the student's ability to access the unrecorded raw data of the past, to conduct a research in the role of a social scientist on objects and to perceive change and continuity in this direction. In this respect, it is important to concretize abstract concepts such as change and continuity through cultural objects/items from the child's immediate environment which shed light on the past and assume the task of historical memory.

In the context of the second sub-problem, when the findings obtained from the open-ended questionnaire about expressing change and continuity and explaining with examples were examined, it was observed that students responded to the items regarding using chronological concepts and skills, identifying similarities and differences throughout change and continuity, having a sense of the future, and discovering the effects of the socio-cultural context throughout change and continuity at the level of "largely sufficient". On the other hand, it was seen that their responses to the items related to associating the change experienced and continuity with different disciplines and establishing a cause-effect relationship were at the level of "needs improving". While it is important for students to build causality relationships within the scope of perception of change and continuity, it is seen in the findings obtained in the research that students were unable to provide adequate answers. In the studies conducted in the literature with a similar approach, students had difficulty in revealing the cause-effect relationships within the scope of change and continuity and accordingly the effects of change (Barton, 2001; Blow, 2011), and it was observed that the causes of change were often expressed in a "technological" context (Kabapınar & Sağlamgöncü, 2018; Özen, 2010; Şimşek, 2006). In a study conducted by Barton (2001), it was stated that although the young children showed differences regarding the period, they had various difficulties regarding “why” the change was experienced. In this study, the children had some difficulties in evaluating the reasons for the change or the positive and negative outcomes of the results it created, and they were observed to have made more technology related explanations. When the literature is examined, it is seen that “technology” takes the first place in the process of defining change and expressing change with examples within the framework of perception of change and continuity with a similar approach (Kabapınar & Sağlamgöncü, 2018; Özen, 2010; Şimşek, 2006). One of the main reasons here can be seen as the fact that most of the concrete change examples that the child often encounters in daily life are directly or indirectly related to technology. In addition, technological changes are situations that contain more concrete outputs compared to cultural, social, or economic changes, and these concrete outputs play an important role in the child's life. For example, positive or negative outcomes of a technological innovation create effects felt more strongly in the daily life of the child in comparison to other disciplines. In this context, children had less difficulty in expressing the factors that cause change or the results of the change with an emphasis on technological changes in comparison to other areas. In addition, students who had difficulty in answering open-ended questions asked in different fields for establishing a cause-effect relationship were able to provide relatively more qualified answers to the questions asked in areas close to their environment and everyday life. In this context, it is thought that it is important that the examples brought to class within the scope of change and continuity should emphasize the close environment of the child in the first stage.

When the views of students regarding the activities carried out are evaluated, it is seen that there are explanations that address the affective dimension with a much higher intensity than the categories of "obtaining information through activities" and "difficulties/problems experienced in the activity process". In this context; it has been stated that using interesting concrete objects can be intriguing and encourage children to question historical questions (Gandy, 2005), students find the objects intriguing and mysterious (Hickey, 1997); and that objects can encourage them to solve the historical mystery in an interesting way (Russell, 2014). Also; Russell (2014) states that object-based activities include the opportunity to access more than one learning style. In this context, especially historical objects can contribute to students in an affective dimension as well as in cognitive dimension. Based on the findings obtained from the research, the following suggestions were made: preparing object time capsule, doing a project on the history of the object, and creating a thematic timeline based on the object. In this study, it was observed that the use of object-based activities (object time capsule, project on the history of the object, thematic timeline based on the object) in the social studies course contributed to the development of students' perception of change and continuity. In teaching various concepts such as time and chronology, in terms of teachers to avoid dependence on textbooks, the use of historical evidence such as cultural items/objects more in social studies courses should be encouraged. It was observed that students could not associate change and continuity with different disciplines from a singular point of view, could not establish causal relationships, and generally explained change and continuity on the axis of “technology” and gave examples. The skill in question can be incorporated especially in textbooks and social studies curricula by associating it not only with subjects focused on "technology" but also with various disciplines such as culture, geography, tourism, migration, human rights, etc.

Recommendations

Within the scope of the ability to perceive change and continuity, this research employed an action research model with a qualitative perspective. However, there is also a need for correlational, comparison-based, or experimental studies in which the ability of perceiving change and continuity is examined through variables such as age, language, mathematical skills, socio-economic level, etc. Change and continuity perception and causality relationships are closely related. However, in this study, it was observed that the answers given to the items aiming to establish a cause-effect relationship within the scope of the ability to perceive change and continuity were insufficient. In this context, the ability to perceive change and continuity can be limited within the scope of "causality", and empirical studies can be conducted on this relationship.

Limitations

This research has some limitations. Action plans on the ability to perceive change and continuity have focused only on the "Culture and Heritage" learning area. The main reason for this situation is that the social studies curriculum does not include enough ability to perceive change and continuity. In addition, when the sociocultural structure affects the ability to perceive change and continuity, it can be considered as another limitation that the participants live in a similar sociocultural environment. Participants from different sociocultural backgrounds may be considered for further research.

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International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

Entrepreneurship Competencies of School Principals: A Scale Development Study

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Article History
Received: 25.12.2020
Received in revised form: 04.04.2021
Accepted: 24.04.2021
Available online: 03.09.2021

To cite this article:

Demirbilek, M. & Çetin, M. (2021). Entrepreneurship competencies of school principals: A scale development study. *International Journal of Contemporary Educational Research*, *8*(3), 55-80. DOI: https://doi.org/10.33200/ijcer.847110

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 55-80 ISSN: 2148-3868

Entrepreneurship Competencies of School Principals: A Scale Development Study

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Abstract

This research aims to produce a reliable and valid scale that includes the entrepreneurship competencies of school principals according to the perceptions of teachers working in state-owned schools. First, after the literature review, an item pool consisting of five-point Likert item type and seventy-four items was created, and then the relevant items were presented to eleven experts to determine the content validity. After the expert evaluations, the content validity rates of the relevant items were calculated with the Lawshe technique, the nineteen items below the criterion value were removed from the scale, and a scale draft form consisting of fifty-five items was created. To carry out the EFA of the scale, the first application was performed with 436 teachers working in Çekmeköy district of Istanbul province on an online platform in March-April 2020. In the EFA process carried out in line with the data obtained, observations revealed that the scale had a four-factor structure. Then, the Varimax technique was used to clarify the distribution of scale items to factors, and seventeen items that were found to have a load of .30 and above from more than one factor and that the load difference was less than .100 were removed from the scale. As a result of EFA, a scale consisting of 38 items and subdimensions of "Personal Competencies", "Organizational Competencies", "Relational Competencies", and "Commitment Self-Confidence Competencies" which explain 73.32% of the total variance was obtained. Subsequently, reliability coefficients of the scale (Cronbach's Alpha .98), discrimination indices, item-total – item-residual correlations, and correlations between scale total and subdimensions were calculated. Finally, to carry out the CFA, the second application was carried out online with a sample of 724 teachers in May-June 2020 and the obtained goodness of fit values confirmed the scale model. All these obtained values confirm the valid and reliable structure of the developed scale.

Keywords: Entrepreneurship, Entrepreneurship Competencies, School Principals, Scale Development

Introduction

The concept of entrepreneurship has been defined from various perspectives such as introducing a new invention or producing a new product (Schumpeter, 2011), mobilizing resources and maximizing opportunities (Blake & Mestry, 2014), creating new organizations to pursue opportunities (Bygrave, 1992), determining the unused opportunities (Hitt, Ireland, Camp, & Sexton, 2002), a dynamic vision, the process of change and creation (Kuratko, 2017), and the creation of new enterprises and products (Mazzarol & Reboud, 2017). In this respect, entrepreneurship can be considered as the process of directing existing creative mental processes to innovation and change by the individual, creating new initiatives by creating opportunities and taking risks.

Entrepreneurship is an important element, especially in the economic competition of societies and their emergence as an economic power, therefore, entrepreneurship competencies have attracted attention in recent years (Armuna, Ramos, Juan, Feijóo, & Arenal, 2020). Man, Lau, and Chan (2002) state that entrepreneurship competencies encompass a higher level of competence that includes personal characteristics, skills, and knowledge. According to Man et al. (2002), these competencies are; (1) relationship competencies, (2) opportunity competencies, (3) organizing competencies such as team building or leadership, (4) conceptual competencies such as being proactive or taking risks, (5) strategic competencies including project management, (6) engagement competencies that include the ability to overcome hard work. Mitchelmore and Rowley (2010), on the other hand, proposed a four-category framework for entrepreneurship. These are; (1) entrepreneurial

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competencies, (2) human relations competencies, (3) conceptual competencies, and (4) business and management competencies. Chen, Greene, and Crick (1998) discussed entrepreneurship competencies in the context of self-efficacy and suggested a five-category competency framework. These are; (1) innovation, (2) financial control, (3) management, (4) marketing and (4) risk-taking.

A study was carried out by the European Commission in 2016 to increase the entrepreneurship capacity of European citizens and organizations under the name of "The Entrepreneurship Competence Framework" known as "EntreComp". Fifteen competence elements were determined with this study. These are spotting opportunities, vision, creativity, sustainable and ethical thinking, valuing ideas, self-efficacy and self-awareness , perseverance, motivation and, mobilizing resources, economic-financial literacy, taking the initiative, mobilizing others, management and planning, uncertainty & risk, coping with ambiguity, learning through experience and working with others (Bacigalupo, Kampylis, Punie, Van den Brande, 2016).

The literature on entrepreneurship mostly focuses on the personality, traits, and qualities of an entrepreneur. Accordingly, Van der Kuip (1998) summarized the characteristics of entrepreneurs with elements such as motivation, creativity, need for autonomy, independence, taking risks, taking initiative, thinking about possibilities, self-confidence, setting challenging goals, resilience, internal locus of control, and originality (as cited in Onstenk, 2003). Kets de Vries (1993) and Mintzberg (1990) emphasize that entrepreneurs have the power for independence and success and they have a strong need to maintain control. However, the managerial or organizational roles of entrepreneur individuals also cover an important area in these competencies. These managerial competencies can be evaluated as planning, organization, financial management, leadership, and control and these managerial roles have changed with the age towards new management competencies such as facilitator, enabler, and coordinator, change manager, communicator and negotiator, and internal consultant (Onstenk, 2003).

Entrepreneurship competence is an integrated skill related to performing entrepreneurial activities adequately and solving entrepreneurship problems. A competent entrepreneur can use his/her knowledge, attitude, and skills to cope with difficulties (such as tasks, dilemmas, problems, and contradictions arising from the intense competition or changing demands of customers) (Onstenk, 2003). In this sense, Dornelas (2008) formulated elements such as a vision of the future, consistent decision, search for opportunity, dynamism and determination, devotion, passion and optimism, independence, good relations, leadership, organization, knowledge, planning, acceptance of calculated risks and creating value for society as the most important characteristics of entrepreneurs.

Minello et al. (2014) listed entrepreneurship competencies as relationship, opportunity, conceptual, strategic and commitment, administrative (managerial) competencies in the literature. However, McClelland (1961) described the characteristics of entrepreneurs as the need for high success and reasonable risk-taking; J.A. Timmons expressed as commitment and determination, taking responsibility, constantly seeking opportunity, high self-confidence, creativity and flexibility in problem-solving, high energy, long-term perspective and being future-oriented, learning and not being afraid of failure, visionary leadership (as cited in Zimmerer & Scarborough, 1996); Bhatt (2016) indicated as the need for success, spontaneous action, desire to take risks, self-confidence, creativity and innovation, commitment, openness to new ideas, effective time management, leadership and decision-making ability, and desire for independence.

Kuratko and Hodgetts (1998) identified seventeen entrepreneurial characteristics that are likely to be present among entrepreneurs as well as related to the entrepreneurial process. These are commitment, moving on to achieve success, perseverance and determination, opportunity orientation, internal locus of control, persistent problem solving, failure tolerance, calculated risk-taking, innovation and creativity, self-confidence and optimism, initiative and responsibility, team building, uncertainty tolerance, seeking feedback, high energy, integrity and reliability, independence and vision.

Lackeus (2015) defined the knowledge, skills, and attitudes that motivate entrepreneurs towards entrepreneurship and increase their willingness in the process of creating a new value. According to Lackeus (2015), while the elements such as the knowledge possessed and presented about entrepreneurship elements such as mental models that include information about how to do things without risk, resources and probability models, opportunities, value creation, finance, idea generation, marketing, technology, accounting, risk and others and insight including personal compliance knowledge by being an entrepreneur or entrepreneurial constitute the knowledge dimension, factors such as marketing, interpersonal relationships, fundraising, learning, opportunity, and strategic skills constitute the skill dimension, and entrepreneurial passion, self-efficacy, entrepreneurial identity, proactivity, innovativeness, uncertainty tolerance, and perseverance constitute the attitude dimension. Dollinger (2008) made a classification of entrepreneurship as the creation of a new enterprise, individual, environmental, opportunity analysis, and organizational dimensions.

An important field of application of the talent and skill areas of entrepreneurship is educational organizations. In this direction, Abbas (2014) states that entrepreneurship competencies in educational organizations contain two meanings and applications. These are (1) to strive to apply entrepreneurial values in the management of educational organizations and (2) to transform the potential of an educational organizations into economic activities in obtaining benefits that can be used to develop and advance the educational organizations. Mulyasa (2005) states that to create an effective, generative, independent, and developed school, school principals should have ten key competencies to achieve success in leadership processes. These are (1) having a vision, (2) setting an example, (3) responsibility, (4) developing teachers and staff, (5) providing the best service, (6) encouraging a sense of unity and togetherness, (7) managing by prioritizing applications (8) focusing on students, (9) setting leadership style, and (10) utilizing power and expertise to strengthen schools (Abbas, 2014; Mulyasa, 2005, as cited in Syapriyuda & Santosa, 2020). These competence components also constitute important talent and skill gains for school leaders in guiding the entrepreneurship process in schools.

Having entrepreneurial competencies in an educational context, school leadership includes expectations and goals that are integrated into the school's mission, vision, strategic plan and goals by the school's abilities, conditions, and supporting factors. In the context of institutional innovation, entrepreneur principals can develop and implement new ideas that lead to critical change and development in schools. Thus, they also ensure the development of creative and innovative attitudes put forward by teachers and other employees in the process (Wibowo & Saptono, 2018; Pihie, Asimiran, & Bagheri, 2014; Ruskovaara, Pihkala, Rytkölä, & Seikkula-Leino, 2011).

According to Yemini, Addi-Raccah, and Katarivas (2014), the entrepreneurship of school principals is guided by certain visions and values that are important to them and adopted by school employees. In this sense, the success of school principals in entrepreneurship activities depends mostly on the fact that school principals gain the commitment of school personnel to their visions. According to Yemini et al. (2014), entrepreneur school principals are not affected by monetary or financial constraints to realize their entrepreneurial visions, they are not afraid to start a new project even if no funds are provided, in other words, they feel ready to take risks and are self-confident. Alfirevic, Vican, Pavicic, and Petkovic (2018) stated that school principals who have entrepreneurial orientation make use of entrepreneurial opportunities, perceive themselves as creative persons, innovation and success-oriented, good problem solver, communicator, and leader, they can develop new and market-oriented proposals, new business relationships and connections, accept responsibility by taking risks, and consider themselves competent in creating financial resources for the school.

As a result, dynamic factors such as a rapidly changing world, increasing accountability and localization, improving performance in teaching and learning require school principals to have entrepreneurial competencies (Research Centre for Learning and Teaching of Newcastle University, 2015). For this reason, revealing the entrepreneurship competencies of school principals in the school leadership dimension of educational processes will provide an advantage to the education systems of countries in changing education and competition conditions. At the same time, it is important to develop a scale that will reveal these competencies and facilitate the selection of school leaders with entrepreneurial orientation and evaluation of their performance. In this direction, this research aims to develop a reliable and valid scale that includes the entrepreneurship competencies of school principals and the items covering these competencies according to the perceptions of teachers working in public schools.

Method

Research Model

The research was carried out using the screening model to develop the "Entrepreneurship Competencies Scale". Screening models are pieces of research carried out on the whole of the population or on the sample taken from it to make a general judgment about the population consisting of many elements. In this model, there is what is intended to be known and it is there, the important thing is to observe and determine it properly (Karasar, 2012).

Population and Sample

The application of the scale was carried out in two stages. In the first application, "EFA" was performed to determine the construct validity and subdimensions of the scale, and in the second application, "Confirmatory Factor Analysis (CFA)" was performed to verify the scale model obtained. The first application was carried out in March and April 2020, and the second in May and June 2020. Teachers working in the state primary, secondary and high schools (secondary education) in Çekmeköy district on the Anatolian side of Istanbul

constitute the population of the study. The total number of teachers in the research population (primary school-secondary school-high school) is 1826. The sample number calculation method developed by Cochran (1977) was used to determine the required sample size of the population (as Cited in Gürbüz & Şahin, 2018). According to this method, the minimum sample size to be reached in a population of 1826 is presented below;

N: Population size: 1826
n: Sample size: ?
t: Table z value corresponding to the confidence level: z value corresponding to 0.05 (confidence level 95%) is 1.96.
S: The std. deviation estimated for the population: 0.5
d: Acceptable deviation tolerance: 0.05

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

$$n_0 = [(t \times S)/d]^2 \qquad n_0 = \frac{1.96^2 \times 0.5^2}{0.05^2} = 384.16$$

$$n = \frac{384{,}16}{1+384{,}16\,/1826} = 317$$

In the research, the stratified sampling was used to reach the relevant sample, and each education level (primary, secondary, and high school) was determined as a stratum, and participants with a proportional value from each stratum were included in the sample. In the stratified sampling method, the research population is divided into sub-strata that are similar in themselves, and the units to be included in the sample are randomly selected from these sub-strata within the framework of their ratios in the population. Because similar subgroups of the universe are taken into account within the framework of their ratios in the population, the level of representation of the universe by this method is higher than other methods, and at the same time, the sampling error is lower (Gürbüz & Şahin, 2018). Although the minimum number of samples calculated in the study and required to be reached was 317, in the framework of the idea that the reliability and validity of the applied scale would increase and the error about the population would decrease as the sample mass grew (Altunışık, Coşkun, Bayraktaroğlu, & Yıldırım, 2010) and after the systematically marked scale forms were removed, 436 participants were reached in the first application (EFA) and 724 participants in the second application (CFA).

Creating the Pool of Items and Submitting the Items to Expert Opinion

In the process of developing the Entrepreneurship Competencies Scale, primarily, the literature on entrepreneurship and entrepreneurs' characteristics and competencies was reviewed and a candidate item pool consisting of 74 items covering the relevant field was created. According to Clark and Watson (1995), the main purpose of creating an item pool is to sample all the content potentially related to the target structure to be measured. The studies used in the creation of the item pool are as follows;

Table 1. The Researchs Used in the Creation of the Items of the EC Scale

Schumpeter (2011)	Drucker (1985)	Kets de Vries (1993)
Blake & Mestry (2014)	Gupta, MacMillan & Surie (2004)	Gibb (1998)
Bygrave (1992)	Thornberry (2006)	Tolentino (1998)
Mazzarol & Reboud (2017)	Van der Kuip (1998)	Bueno, Leite & Pilatti (2004)
Bhatt (2016)	Mintzberg (1990)	Dornelas (2008)
Minello, Scherer & Alves (2014)	McClelland (1961)	Zimmerer & Scarborough (1996)
Abbas (2014)	Kuratko & Hodgetts (1998)	Pahuja & Sanjeev (2015)

Stevenson & Jarillo (1990)	Currie, Humphreys, Uçbaşaran & McManus, (2008)	Slater & Doig (1988)
Ghasemi, Rastegar, Jahromi & Marvdashti (2011)	Najim et.al. (2013)	Nieman, Hough & Nieuwenhuizen (2004)
Du Toit (1990)	Alberti, Sciascia & Poli (2004)	Ayub & Othman (2013)
Zimmerer & Scarborough (2001)	Norasmah (2002)	Fernald, Solomon & Tarabishy (2005)
Kirkley (2017)	Yemini et.al. (2014)	Alfirević, Vican, Pavičić & Petković (2018)

One of the most important focal points in scale development is the content validity of the created items. Content validity (CV) is often seen as the initial and lowest level requirement for measurement sufficiency. Content validity is checked immediately after the items are created, and it allows making necessary changes and improvements before preparing the scale (Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993). After creating an item pool, candidate items were submitted to the opinion of eleven referees who had the expertise to evaluate the relevant subject area and item properties, eight of whom were experts in the field of Educational Management and could evaluate the field of entrepreneurship, and three of whom were experts in the field of Measurement and could evaluate the item properties. An invitation was sent to the referees by e-mail to evaluate the candidate items, and the referees were requested to grade the items with three levels (must be removed, must be revised, must remain), to evaluate whether the items cover the relevant area and the item properties, and to write in the blank under the relevant item that needs to be revised about what kind of correction should be made.

Calculation of Content Validity Ratio (CVR) and Index (CVI)

The evaluations from the experts (referees) were combined in a single form, and to obtain the content validity ratios of the candidate items, the CVR of each item and then the CVI of the scale were obtained using the Lawshe (1975) technique. CVR are calculated by the number of experts expressing the "necessary (must remain)" opinion for any item over one less than half of the total number of experts expressing an opinion. The CVI is obtained from the mean of the CVR of the items that are significant at the 0.05 level and will be included in the final form. The criterion values for whether the candidate items have content validity or not were transformed into a table by Veneziano and Hooper (1997), and minimum values measuring the content validity according to the number of experts (referees) at a significance level of 0.05 were established. According to these criterion values given below, the minimum CVR value was determined as 0.59 in 11 expert evaluations (as cited in Yurdugül, 2005).

Table 2. Minimum Values for CVRs Determined by Veneziano and Hooper (1997)

Number of Referees	Minimum CVR Criterion
5	0.99
6	0.99
7	0.99
8	0.78
9	0.75
10	0.62
11	**0.59***
12	0.56

* $\alpha = 0.05$ Significance Level

After expert evaluations, the calculated CVR values of the candidate items were compared with the relevant criterion value .59, and 19 items that did not meet the CVR criterion were removed from the scale. At the same time, the CVI was calculated by taking the mean of the CVR values of the items that met the content validity rate criterion. The content validity index rate obtained was calculated as .75. A higher CVI value of .16 than the content validity criterion indicates that the items have good content validity. As a result, it is possible to observe that the remaining items have significant content validity (Lawshe 1975).

Table 3. Content Validity Ratios (CVRs) and Content Validity Index (CVI) Obtained After Expert (Referee) Evaluation of Candidate Items of ECS

Number of Experts			11		
Item Content Validity Criterion			0.59		
Number of Items under the CVR Criterion			19		
Content Validity Index			0.75		
Items	**CVR**	**Items**	**CVR**	**Items**	**CVR**
1	0.64	26	0.64	51	0.82
2	**-0.09***	27	0.64	**52**	**0.09***
3	0.64	28	0.64	**53**	**0.45***
4	0.64	29	0.82	54	0.64
5	0.82	30	0.64	55	0.64
6	0.64	**31**	**0.45***	**56**	**0.09***
7	1.00	32	0.64	57	0.82
8	0.82	**33**	**0.45***	58	1.00
9	0.64	34	1.00	59	0.64
10	**0.45***	35	0.64	**60**	**0.27***
11	**0.45***	36	0.64	**61**	**0.27***
12	0.82	37	0.82	62	0.82
13	0.64	38	0.64	63	0.82
14	0.82	39	0.82	**64**	**0.45***
15	0.64	40	0.64	65	1.00
16	**0.45***	41	0.64	66	0.82
17	0.82	**42**	**0.45***	67	0.64
18	**0.27***	43	0.82	68	0.82
19	0.64	44	1.00	**69**	**0.45***
20	**0.09***	**45**	**0.45***	70	0.82
21	0.82	46	0.82	71	0.64
22	1.00	47	0.64	**72**	**0.27***
23	0.82	48	0.64	73	0.64
24	0.82	49	0.64	**74**	**0.45***
25	0.64	50	0.82		

*19 items below the Content Validity Measure (0.59) were removed.

Revision of Some Items According to Referees Opinions and a Pilot Survey

The 12 items (3, 6, 8, 26, 27, 28, 39, 47, 48, 55, 59, 71), which the experts had requested to be revised among the items remaining after the content validity analysis and the expert evaluations of the candidate items of the ECS, were corrected in line with the consistent opinions of the referees. At the same time, the items were examined by two Turkish teachers and reviewed in terms of spelling rules and punctuation marks. After this editing, the scale item draft form consisted of 55 items, and the items of the scale were re-ordered randomly (1. 2. 3… .55.); at the same time, a five point Likert-type rating ("Strongly Disagree", "Disagree", "Partially Agree", "Agree", "Strongly Agree") was preferred for grading the items. The scale draft form was implemented as a pilot survey for 20 teachers in a secondary school in Çekmeköy district of Istanbul province. The pilot survey was carried out directly by the implementer, the opinions of the participants regarding the items and the draft form were noted during the application and the participants were asked to write their evaluations about the items in the draft form after the application. In line with the feedback obtained after the application, some corrections (generally writing and spelling corrections) were made and the scale form was made more useful. Then, the final scale application form was prepared.

Data Collection and Analysis

In the process of developing the Entrepreneurship Competencies Scale, an online scale form was used to collect data from the relevant sample, and the application of the scale was carried out in two stages. In the first stage, "EFA" was performed to reveal the construct validity and sub-dimensions of the scale, and in the second stage, "CFA" was performed to verify the scale model obtained. In order to analyze the data obtained during the scale development process; The SPSS package program was used to perform EFA, reliability and discrimination analyzes and correlation analyzes, and the Lisrel program was used to perform CFA, which is used to determine whether the scale model is verified or not.

Results

The results of the reliability and validity analysis of the scale and the findings obtained by comparing these results with the criterion values are presented below.

Exploratory Factor Analysis (EFA)

During the EFA process, firstly the data obtained from the sample were transferred to the SPSS 21 system and the data were cleared of outliers. Then, the Skewness-Kurtosis values of the data set were examined to determine whether the data set showed normal distribution (univariate normality assumption). In a normal distribution, "Skewness-Kurtosis" values are zero (Field, 2009). Therefore, the closer these values to zero, the normality of the distribution increase. Accordingly, some authors (George & Mallery, 2010) stated that when the data set's "Skewness-Kurtosis" values between +2 and -2 and some authors (Tabachnick & Fidell, 2015) stated that the "Skewness-Kurtosis" values between +1.5 and -1.5 meet the normality of the data set. The calculated Skewness (-.630) and Kurtosis (-.111) values of the scale were observed to be within the range specified by the authors, so the assumption that the data set showed a normal distribution was confirmed.

The correlation matrix of the relevant data set was examined before proceeding with the factor analysis and it was checked whether there was any item with a correlation value below .30 (Tabachnick & Fidell, 2015). In the examination, no item with a correlation value below .30 was found. Then, the anti-image correlation values of the items were examined and it was checked whether there was any item with a correlation value below .50 (Tabachnick & Fidell, 2015). In the examination, an item with an anti-image correlation value below .50 was not detected and all of them were .90 and above. To reveal whether the sample is sufficient for factor analysis, the Kaiser Mayer Olkin (KMO) value was calculated and found to be .985. According to Hutcheson and Sofroniou (1999), KMO value was stated as a medium between .50 and .70, good between .70 and .80, very good between .80 and .90, and excellent above .90. In this sense, the KMO value obtained is at an excellent level. To determine whether there is a high correlation between variables and whether the data set comes from a multivariate normal distribution, the Bartlett Test of Sphericity was conducted and it was found to be significant at the $p < .001$ level ($x2 = 28274.82$; $df = 1485$). The significance of the Barlett test proves that the data comes from a multivariate normal distribution and shows linearity (Tavşançıl, 2010). All these obtained values show the factorizability of the scale and provide valid parameters for the subdimensions to be revealed.

Table 4. KMO ve Bartlett Test Values of the EC Scale

KMO Sample Adequacy		.985
Barlett Test	Ki-square Value	28274.82
	Degree of Freedom	1485
	P	.000

After the KMO and Barlett tests, EFA was performed to determine the construct validity of the scale and to determine the distribution of scale items to factors or dimensions. Varimax technique was used in the EFA process because it provides convenience in principal component analysis and naming factors (Altunışık et al., 2010). The principal component analysis is used to discover which variables in the data set combine to form a subset (Tabachnick & Fidell, 2015). In determining the factors in the EFA process, the eigenvalue was taken as 1 and the acceptable minimum load value of the factors was determined as .30 (Büyüköztürk, 2006; Ntoumanis, 2001). Tabachnick and Fidell (2015), on the other hand, determined this value as .32. In this reserach, the minimum factor load value was determined as .30.

Table 5. The Number of Factors Obtained After EFA of the EC Scale and the Total Variance Explained by Factors

Factors	Initial Eigenvalues			Total Factor Loads		
	Total	Variance %	Set %	Total	Variance %	Set %
1	36.349	66.089	66.089	36.349	66.089	66.089
2	1.487	2.703	68.792	1.487	2.703	68.792
3	1.239	2.253	71.045	1.239	2.253	71.045
4	1.077	1.959	73.004	1.077	1.959	**73.004**
5	.849	1.544	74.548			
6	.763	1.388	75.935			
7	.730	1.327	77.262			
8	.635	1.154	78.417			
	…….	…….	…….			
55	.79	.143	100			

* Factor Method: Princ. Comp. Analysis
**Rotat. Method: Varimax

After EFA analysis performed as seen in Table 5 above, it is possible to observe that the scale is collected in 4 factors with an eigenvalue greater than 1 and the total variance amount explained by these factors is 73%. After this process, the Varimax technique was used to clarify the distribution of scale items to factors and to reveal the dimensional plane of the items. The Varimax orthogonal rotation technique clarifies the distribution of items or variables to factors by maximizing the high correlation values in the correlations between variables and factors and minimizing the low ones. The Varimax technique is also a method of maximizing the variance of loads on each factor (Tabachnick & Fidell, 2015). After the Varimax technique, observations exhibited that some items had a load of .30 and above from more than one factor, and items with a load difference of less than .100 were excluded from the scale. In this process, the items 5, 6, 17, 19, 21, 22, 23, 24, 26, 37, 39, 40, 43, 46, 52, 53, and 55 were removed one by one from the scale and the analysis was performed repeatedly (17 times) until the dimensions became clear. After the Varimax orthogonal rotation technique, a total of 17 items were removed from the scale and the total amount of variance explained by the scale was 73.32%. At the same time, the Kaiser Mayer Olkin (KMO) value of the scale was found to be .982, and the Barlett Test of Sphericity test at $p < .001$ level ($x2 = 17719.70$; $df = 703$). The factor (subdimension) number of the scale was determined as 4.

Table 6. The Number of Factors of the Scale After Varimax Orthogonal Rotation Technique

Factors	Initial Eigenvalues			Total Factor Loads			Rotated Totals of the Factor Loads		
	Total	Variance %	Set %	Total	Variance %	Set %	Total	Variance %	Set %
1	24.460	64.369	64.369	24.460	64.369	64.369	8.800	23.158	23.158
2	1.296	3.409	67.778	1.296	3.409	67.778	7.073	18.613	41.771
3	1.098	2.891	70.669	1.098	2.891	70.669	7.049	18.549	60.320
4	1.008	2.652	73.320	1.008	2.652	73.320	4.940	13.000	**73.320**
5	.690	1.816	75.136						
6	.678	1.784	76.920						
7	.575	1.514	78.434						
8	.537	1.413	79.847						
9	.472	1.242	81.089						
10	.464	1.220	82.309						

* Factor Method: Princ. Comp. Analysis
**Rotat. Method: Varimax

Table 7. The Clarifying Factors of the Post-Varimax EC Scale and the Load Values of These Factors

Items	Factors			
	Fact. 1	Fact. 2	Fact. 3	Fact. 4
30)He/she has a curiosity about creating new values.	.750			
34)He/she is committed to his/her goals.	.718			
33)He/she is aware of his/her competencies.	.677			
47)He/she realizes his/her ideas.	.669			
31)He/she is willing to learn.	.669			
35)He/she continues a job he/she undertakes.	.624			
38)The desire for high success is reflected in his/her behavior.	.610			
48)He/she develops alternative projects.	.597			
54)When he/she detects opportunities, he/she uses them without hesitation.	.592			
45)He/she manages his/her time effectively.	.586			
32)He/she updates himself/herself.	.583			
36)He/she allocates resources while starting a new job.	.562			
41)He/she has high energy.	.562			
20)He/she takes into account the possibilities before starting a business.	.523			
2)He/she can revise old applications and present them in a new format.		.764		
1)He/she follows up opportunities regarding the development of the institution.		.722		
4)He/she activates the institution towards a new target.		.678		
3)He/she supports the discovery processes of the employees.		.613		
8)He/she is the person who initiates change in the organization.		.600		
13)He/she likes to research.		.599		
14)He/she does not miss opportunities that arise for the improvement of institutional practices.		.588		
10)He/she can bring together different resources belonging to the institution and reveal them in a useful way.		.582		
12)He/she has a dynamic vision.		.578		
15)He/she likes to present innovation.		.565		
16)He/she creates new values out of existing resources.		.538		
9)He/she supports the diversity of ideas.			.729	
7)He/she creates an environment in the institution where people can present their ideas without hesitation.			.717	
44)He/she is open to new ideas.			.697	
49)He/she supports good practices produced by employees.			.696	
29)He/she cooperates with employees in achieving goals.			.685	
50)He/she cares about employee participation in achieving a job.			.650	
27)He/she uses communication processes well.			.574	
28)He/she analyzes the requirements of the environment well.			.571	
11)He/she takes risks.				.729
42)He/she is not afraid of failure.				.662
25)He/she makes independent decisions.				.660
18)He/she takes initiative.				.607
51)He/she does not hesitate to start a new project even if the resources are not provided.				.579

* Factor Method: Princ. Comp. Analysis
**Rotat. Method: Varimax

As seen in Tables 6 and 7 above, it is possible to observe that the items of the scale were collected in 4 factors with an eigen value greater than 1. The scale items were determined to have acceptable load values (lowest .523, highest .764) in the factors they entered. After examining the items in the factors, factors (dimensions) were named by considering the majority of items entering the factors within the framework of the relevant literature. The factor names, item numbers, numbers, and the studies used in naming the factors are shown in Table 8 below;

Table 8. Characteristics of EC Scale

Factor (Subdimension)	Factor (Subdimension) Name	Number of Items	Item Numbers	Studies Used in Naming the Factors (Subdimensions)
1	Personal Competencies (IC)	14	20, 30, 31, 32, 33, 34, 35, 36, 38, 41, 45, 47, 48, 54	Dollinger (2008) Van der Kuip (1998) Bueno, Leite & Pilatti (2004) Dornelas (2008) Najim et.al. (2013) McClelland (1961) Zimmerer & Scarborough (1996) Bhatt (2016) Kuratko & Hodgetts (1998)
2	Organizational Competencies (OC)	11	1, 2, 3, 4, 8, 10, 12, 13, 14, 15, 16	Dollinger (2008) Onstenk (2003) Najim et.al. (2013) Kuratko & Hodgetts (1998)
3	Relational Competencies (RC)	8	7, 9, 27, 28, 29, 44, 49, 50	Minello, Scherer &Alves (2014) Gibb (1998) & Tolentino (1998) Najim et.al. (2013) Bhatt (2016)
4	Commitment Self-Confidence Competencies (CSCC)	5	11, 18, 25, 42, 51	Minello, Scherer &Alves (2014) Van der Kuip (1998) Mintzberg (1990) & Kets de Vries (1993) Dornelas (2008) Bhatt (2016) Najim et.al. (2013) Zimmerer & Scarborough, 1996 McClelland (1961) Kuratko & Hodgetts (1998) İşcan & Kaygın (2011) Ağca (2004) Caird (1991)

As seen in Table 8, the first subdimension of the scale consists of 14 items, the second subdimension has 11 items, the third subdimension consists of 8 items, and the fourth subdimension consists of 5 items. The scale consists of 38 items in total. The variables (items) loading the determined scale factors were examined and the subdimensions were named by determining the common points between the variables (Altunışık et al., 2010). In other words, the basic dimension that combines the variable (item) group loaded on the factors was taken into account in naming the factors (Tabachnick & Fidell, 2015). For this purpose, the first subdimension of the scale was named as *"Personal Competencies"*, the second subdimension as *"Organizational Competencies"*, the third subdimension as *"Relational Competencies"*, and the fourth subdimension as *"Commitment-Self-Confidence Competencies"*.

Reliability Analyses

Split-half and Cronbach's Alpha (CA) methods were used to reveal the reliability levels and reliability coefficients of the scale and its subdimensions obtained after EFA. CA is the most used reliability determination method and calculates under the consistency between scale items. In the splitting test method, the scale items are divided into two halves and the correlation between these two halves is calculated, and then the resulting correlation coefficient is applied to the correction formula to obtain the reliability coefficient of the whole scale (Şeker & Gençdoğan, 2014; Kan, 2009). The values obtained are shown in Table 9 below;

Table 9 Calculated Reliability Coefficients of Post EFA Scale and Its Subdimensions

EC Scale and Its Subdimensions	Cronbach's Alpha Coefficient	Split Half Spearman-Brown Coefficient	Split Half Guttman Coefficient
Personal Competencies (PC)	.96	.95	.95
Organizational Competencies (OC)	.96	.94	.94
Relational Competencies (RC)	.95	.93	.93
Commitment Self-Confidence Competencies (CSCC)	.88	.85	.80
EC Scale Total	.98	.96	.96

As seen in Table 9, the reliability analyses of the scale total and subdimensions performed after EFA reveal that the Cronbach's Alpha Value, which was performed to determine the internal consistency reliability, ranged from the lowest α = .88 and the highest α = .98. In the Split Half method, which is a reliability analysis for halving the scale and its subdimensions and determining the consistency between two halves, Spearman-Brown Coefficient was observed to vary between the lowest S = .85 and the highest S = .96, and the Guttman Coefficient was observed to vary between the lowest G = .80 and the highest G = .96. According to Livingston (2018), a reliability coefficient is an absolute number that can vary between .00 and 1.00. The value of 1.00 indicates the perfect consistency, and the closer it gets to the .00 value, the consistency and reliability disappear. The lowest reliability coefficient suggested in the literature is .70 (Fraenkel & Wallen, 1993; Şeker & Gençdoğan, 2014). The high-reliability coefficient values of the scale obtained prove that the reliability and internal consistency of the scale and its subdimensions are high (Price & Mueller, 1986; Nunnally, 1978 as cited in Germain, 2006).

Discriminant Analysis

After the reliability analyses, the Independent Groups t-test was used to calculate the discrimination of the scale, its subdimensions, and scale items. In this direction, using the scale and subdimension total scores and item scores, the upper 27%, and the lower 27% segments were determined, and whether the differences of arithmetic means between these groups was significant and if it was significant, it was calculated whether it was in favor of the upper group. Discrimination is comparing high and low scorers of an item or scale, and the ability to distinguish between the high and low score in a particular feature. A ratio of 27% is generally considered sufficient to separate upper and lower groups because this value provides a sufficient rate for the analysis of discrimination, while at the same time maximizing the differences in normal distributions (McCowan & McCowan, 1999; Wiersma & Jurs, 1990).

Table 10. Independent Group t-test Conducted to Reveal the Discrimination of the EC Scale and its Subdimensions

Subdimensions	Groups	N	$\bar{x}$	ss	$Sh_{\bar{x}}$	t	t test Df	p
Personal Competencies (PC)	Upper	118	64.03	3.96	.36	35.986	172.15	.000
	Lower	118	34.71	7.91	.73			
Organizational Competencies (OC)	Upper	118	50.14	3.194	.29	35.371	165.92	.000

	Lower	118	25.60	6.824	.63			
Relational Competencies (RC)	Upper	118	36.92	2.035	.19	37.381	155.32	.000
	Lower	118	18.48	4.957	.45			
Commitment Self-Confidence Competencies (CSCC)	Upper	118	21.57	1.727	.16	42.542	209.91	.000
	Lower	118	9.81	2.457	.22			
EC Scale Total	Upper	118	170.37	10.261	.94	38.833	175.24	.000
	Lower	118	90.42	19.874	1.83			

Table 11. Independent Group t-test Conducted to Reveal the Discrimination of the EC Scale Items

Items	Groups	N	$\overline{X}$	t	Df	p
1	Upper	118	4.84	32.260	175	.000
	Lower	118	2.46			
2	Upper	118	4.46	28.901	234	.000
	Lower	118	2.14			
3	Upper	118	4.75	33.781	194	.000
	Lower	118	2.19			
4	Upper	118	4.75	31.628	196	.000
	Lower	118	2.38			
7	Upper	118	4.92	38.863	150	.000
	Lower	118	2.12			
8	Upper	118	4.45	35.915	234	.000
	Lower	118	1.85			
9	Upper	118	4.59	33.794	234	.000
	Lower	118	1.94			
10	Upper	118	4.57	29.896	209	.000
	Lower	118	2.18			
11	Upper	118	4.44	44.896	234	.000
	Lower	118	1.52			
12	Upper	118	4.52	36.057	234	.000
	Lower	118	1.80			
13	Upper	118	4.53	31.152	234	.000
	Lower	118	2.05			
14	Upper	118	4.76	30.045	181	.000
	Lower	118	2.31			
15	Upper	118	4.78	32.850	186	.000
	Lower	118	2.25			
16	Upper	118	4.65	32.035	203	.000
	Lower	118	2.10			
18	Upper	118	4.63	47.412	234	.000
	Lower	118	1.66			
20	Upper	118	4.57	28.687	205	.000
	Lower	118	2.23			
25	Upper	118	4.40	43.665	231	.000
	Lower	118	1.73			
27	Upper	118	4.61	32.685	199	.000
	Lower	118	1.89			
28	Upper	118	4.58	30.953	234	.000
	Lower	118	2.01			
29	Upper	118	4.72	31.851	191	.000

	Lower	118	2.14			
30	Upper	118	4.74	31.243	204	.000
	Lower	118	2.45			
31	Upper	118	4.84	33.362	173	.000
	Lower	118	2.33			
32	Upper	118	4.66	32.576	206	.000
	Lower	118	2.13			
33	Upper	118	4.75	29.537	183	.000
	Lower	118	2.34			
34	Upper	118	4.79	30.302	185	.000
	Lower	118	2.47			
35	Upper	118	4.86	32.217	168	.000
	Lower	118	2.52			
36	Upper	118	4.59	28.093	205	.000
	Lower	118	2.32			
38	Upper	118	4.68	31.945	201	.000
	Lower	118	2.16			
41	Upper	118	4.69	36.558	234	.000
	Lower	118	1.92			
42	Upper	118	4.38	43.548	234	.000
	Lower	118	1.61			
44	Upper	118	4.65	31.328	199	.000
	Lower	118	2.10			
45	Upper	118	4.46	28.187	204	.000
	Lower	118	2.13			
47	Upper	118	4.60	27.307	213	.000
	Lower	118	2.50			
48	Upper	118	4.49	30.589	234	.000
	Lower	118	2.10			
49	Upper	118	4.97	36.862	127	.000
	Lower	118	2.33			
50	Upper	118	4.89	33.750	158	.000
	Lower	118	2.42			
51	Upper	118	4.42	38.049	234	.000
	Lower	118	1.81			
54	Upper	118	4.56	28.389	210	.000
	Lower	118	2.30			

As seen in Tables 10 and 11, a significant difference in favor of the upper group ($p < .001$) was found between the EC scale and subdimension scores and the arithmetic means of the lower 27% and upper 27% of the item scores of the scale, thus, observations exhibited that the scale, its subdimensions and the items of the scale were discriminants. The significant difference between the lower and upper group means shows that the internal consistency of the scale is also high (Büyüköztürk, 2012).

Correlation Calculations

After the discrimination process, item-total (IT) and remaining item (IR) correlations of the items of the SC scale were calculated, and the results revealed the internal consistency of the scale and whether the items measure the same structure.

Table 12. EC Scale IT and IR Correlation Results

	Item-Total Correlation			Item-Remainder Correlation	
Items	N	r	p	r	p
1	436	.804	.000	.793	.000
2	436	.705	.000	.688	.000

3	436	.806	.000	.794	.000
4	436	.834	.000	.825	.000
7	436	.732	.000	.715	.000
8	436	.846	.000	.836	.000
9	436	.789	.000	.776	.000
10	436	.864	.000	.855	.000
11	436	.733	.000	.715	.000
12	436	.884	.000	.875	.000
13	436	.832	.000	.821	.000
14	436	.853	.000	.844	.000
15	436	.843	.000	.833	.000
16	436	.871	.000	.862	.000
18	436	.787	.000	.772	.000
20	436	.743	.000	.729	.000
25	436	.624	.000	.603	.000
27	436	.805	.000	.791	.000
28	436	.832	.000	.821	.000
29	436	.821	.000	.809	.000
30	436	.704	.000	.688	.000
31	436	.845	.000	.836	.000
32	436	.845	.000	.835	.000
33	436	.810	.000	.799	.000
34	436	.796	.000	.784	.000
35	436	.799	.000	.788	.000
36	436	.843	.000	.834	.000
38	436	.788	.000	.775	.000
41	436	.825	.000	.813	.000
42	436	.689	.000	.670	.000
44	436	.826	.000	.815	.000
45	436	.829	.000	.819	.000
47	436	.793	.000	.783	.000
48	436	.851	.000	.842	.000
49	436	.793	.000	.781	.000
50	436	.787	.000	.774	.000
51	436	.745	.000	.730	.000
54	436	.833	.000	.823	.000

As seen in Table 12, the correlation values obtained as a result of item-total correlation (lowest .624; highest .884) and item-remainder correlation (lowest .603; highest .875) were above .30 and a positive significant relationship was determined at the $p < .001$ level. All these results show that the internal consistency of the scale is high and it measures the same structure (Büyüköztürk, 2012; Gürbüz & Şahin, 2018). After this process, Pearson Analysis was performed to reveal the relationships between the scale and subdimensions and between the subdimensions themselves. Analysis results shows the strength and severity of the relationship between two variables, it is represented by "r" and takes values between -1 and +1 (Altunışık et al., 2010). If the coefficient obtained after the correlation calculations between variables is lower than .30, the relationship between variables is described as weak, if it is between .30-.70, the relationship between variables as a medium, and if it is .70 and above, the relationship between variables as strong in the literature (Gürbüz & Şahin, 2018).

Table 13. Pearson Analysis Performed to Reveal the Relationships Between the EC Scale and the Subdimensions and Between the Subdimensions themselves

The Scale and Subdimensions		Organizational Competencies (OC)	Relational Competencies (RC)	Commitment Self-Confidence Competencies (CSCC)	Entrepreneurship Competencies Total
Personal	r	.896	.860	.812	.967
	p	.000	.000	.000	.000

Competencies (PC)				
Organizational Competencies (OC)	r	.857	.804	.959
	p	.000	.000	.000
Relational Competencies (RC)	r		.766	.929
	p		.000	.000
Commitment Self-Confidence Competencies (CSCC)	r			.875
	p			.000

As seen in Table 13, as a result of the Pearson Analysis, a high positive relationship was found between both sub-factors and between sub-factors and the total score of the scale. A positive significant relationship was found between the *"EC Scale"* and *"Personal Competencies"* subdimension with r = .967 at p <.001 level, between the *"EC Scale"* and the *"Organizational Competencies"* subdimension with r = .959 at p <.001 level, between the *"EC Scale"* and the *"Relational Competencies"* subdimension with r = .929 at p <.001 level, and between the *"EC Scale"* and the *"Commitment-Self-Confidence Competencies"* subdimension with r = .875 at p <.001 level. Nevertheless, a positive significant relationship was found between the *"Personal Competencies"* subdimension and the *"Organizational Competencies"* subdimension with r = .896 at p <.001 level, between the *"Personal Competencies"* subdimension and the *"Relational Competencies"* subdimension with r = .860 at p <.001 level, between the *"Personal Competencies"* subdimension and the *"Commitment-Self-Confidence Competencies"* subdimension with r = .812 at p <.001 level, between the *"Organizational Competencies"* subdimension and the *"Relational Competencies"* subdimension with r = .857 at p <.001 level, between the *"Organizational Competencies"* subdimension and the *"Commitment-Self-Confidence Competencies"* subdimension with r = .804 at p <.001 level, and between the *"Relational Competencies"* subdimension and the *"Commitment-Self-Confidence Competencies"* subdimension with r = .766 at p <.001. All these results show that all factors of the EC scale measure the same structure and that all factors have a positive correlation between themselves and with the total score of the scale.

After the above procedures regarding the EC scale, the items of the scale were reordered. The new and old item numbers of the scale are shown below;

Table 14. EC Scale New and Old Item Numbers Before the Second Application and CFA

			Subdimensions			
			PC	OC	RC	CSCC
New Item Number	Old Item Number	Items				
1	30	He/she has a curiosity about creating new values.	.750			
2	34	He/she is committed to his/her goals.	.718			
3	33	He/she is aware of his/her competencies.	.677			
4	47	He/she realizes his/her ideas.	.669			
5	31	He/she is willing to learn.	.669			
6	35	He/she continues a job he/she undertakes.	.624			
7	38	The desire for high success is reflected in his/her behavior.	.610			
8	48	He/she develops alternative projects.	.597			
9	54	When he/she detects opportunities, he/she uses them without hesitation.	.592			
10	45	He/she manages his/her time effectively.	.586			
11	32	He/she updates himself/herself.	.583			
12	36	He/she allocates resources while starting a new job.	.562			
13	41	He/she has high energy.	.562			
14	20	He/she takes into account the possibilities before starting a business.	.523			

15	2	He/she can revise old applications and present them in a new format.	.764		
16	1	He/she follows up opportunities regarding the development of the institution.	.722		
17	4	He/she activates the institution towards a new target.	.678		
18	3	He/she supports the discovery processes of the employees.	.613		
19	8	He/she is the person who initiates change in the organization.	.600		
20	13	He/she likes to research.	.599		
21	14	He/she does not miss opportunities that arise for the improvement of institutional practices.	.588		
22	10	He/she can bring together different resources belonging to the institution and reveal them in a useful way.	.582		
23	12	He/she has a dynamic vision.	.578		
24	15	He/she likes to present innovation.	.565		
25	16	He/she creates new values out of existing resources.	.538		
26	9	He/she supports the diversity of ideas.		.729	
27	7	He/she creates an environment in the institution where people can present their ideas without hesitation.		.717	
28	44	He/she is open to new ideas.		.697	
29	49	He/she supports good practices produced by employees.		.696	
30	29	He/she cooperates with employees in achieving goals.		.685	
31	50	He/she cares about employee participation in achieving a job.		.650	
32	27	He/she uses communication processes well.		.574	
33	28	He/she analyzes the requirements of the environment well.		.571	
34	11	He/she takes risks.			.729
35	42	He/she is not afraid of failure.			.662
36	25	He/she makes independent decisions.			.660
37	18	He/she takes initiative.			.607
38	51	He/she does not hesitate to start a new project even if the resources are not provided.			.579

Confirmatory Factor Analysis (CFA)

After EFA and reliability analyses, CFA was performed to reveal whether the scale model and model-data fit were verified. The data obtained in the practice carried out in a sample of 724 teachers were first transferred to the SPSS 21 system and the Skewness-Kurtosis values of the data set were examined to reveal whether the data set showed normal distribution (univariate normality assumption). The fact that the "Skewness-Kurtosis" values of the data set are in the range of +2 and -2 indicates that they meet the normality assumption. Observations revealed that the calculated Skewness *(-.827)* and Kurtosis *(.703)* values of the scale were within the specified range, so the assumption that the data set showed a normal distribution was confirmed (George & Mallery, 2010; Tabachnick & Fidell, 2015). Then, the application of CFA was performed using the Lisrel program. In CFA, the status of representation of the variables of the scale in the factors they enter is revealed and verified, at the same time, the researcher determines the distribution of the variables to the factors in the creation of the model (Özdamar, 2004; Albright & Park, 2009). However, CFA is a data reduction technique that evaluates the relationships between several variables. Depending on the results in the CFA process, that is, if the model is not verified, it may be necessary to take a new sample and perform an EFA again, or interventions such as item deletion or revision in measurement may take place (Germain, 2006). As a result, the general purpose of EFA and CFA is to ensure the stability of the factor structure (Hinkin, 1995). For this purpose, the relevant data were transferred to the Lisrel program and the model of the scale was determined by the researcher, and items (variables) were assigned to the model. Then, the model was calculated and the fit values of the model were revealed. In Table 15 below, item statistics obtained from the items in the scale as a result of the CFA analysis performed for the EC scale are given.

Table 15. CFA Item Statistics

Factor	Item No	Factor Load Value	R^2	Error	t
Personal Competencies (PC)	1	.85	.73	0.27	24.17**
	2	.83	.69	0.31	32.59**
	3	.81	.66	0.34	31.53**
	4	.81	.65	0.35	31.31**
	5	.86	.74	0.26	34.59**
	6	.84	.70	0.30	33.15**
	7	.85	.71	0.29	33.63**
	8	.89	.78	0.22	36.25**
	9	.84	.71	0.29	33.54**
	10	.84	.70	0.30	33.17**
	11	.90	.81	0.19	37.38**
	12	.82	.69	0.31	32.68**
	13	.86	.75	0.25	34.83**
	14	.80	.64	0.36	30.92**
Organizational Competencies (OC)	15	.87	.75	0.25	34.97**
	16	.86	.73	0.27	34.35**
	17	.89	.78	0.22	36.24**
	18	.88	.77	0.23	35.83**
	19	.87	.75	0.25	34.96**
	20	.89	.79	0.21	36.38**
	21	.88	.77	0.23	32.18**
	22	.89	.78	0.22	36.28**
	23	.91	.83	0.17	38.28**
	24	.91	.82	0.18	37.67**
	25	.91	.82	0.18	37.62**
Relational Competencies (RC)	26	.85	.73	0.27	33.71**
	27	.84	.71	0.29	33.04**
	28	.89	.78	0.22	35.93**
	29	.88	.78	0.22	35.85**
	30	.90	.81	0.19	37.03**
	31	.88	.77	0.23	35.37**
	32	.84	.71	0.29	33.31**
	33	.86	.74	0.26	34.10**
Commitment Self-Confidence Competencies (CSCC)	34	.88	.77	0.23	35.19**
	35	.81	.66	0.34	31.02**
	36	.63	.40	0.60	21.87**
	37	.84	.71	0.29	32.83**
	38	.82	.68	0.32	31.76**

**p<0.01

As seen in Table 15, according to the CFA results of the Entrepreneurship Competencies Scale, the factor load values of the scale items vary between .63 and .91. The factor load values obtained are at an acceptable level. Also, the relationships between scale items and latent variables were determined to be statistically significant at a 99% confidence interval (t> 2.58). The path diagram of CFA is presented below:

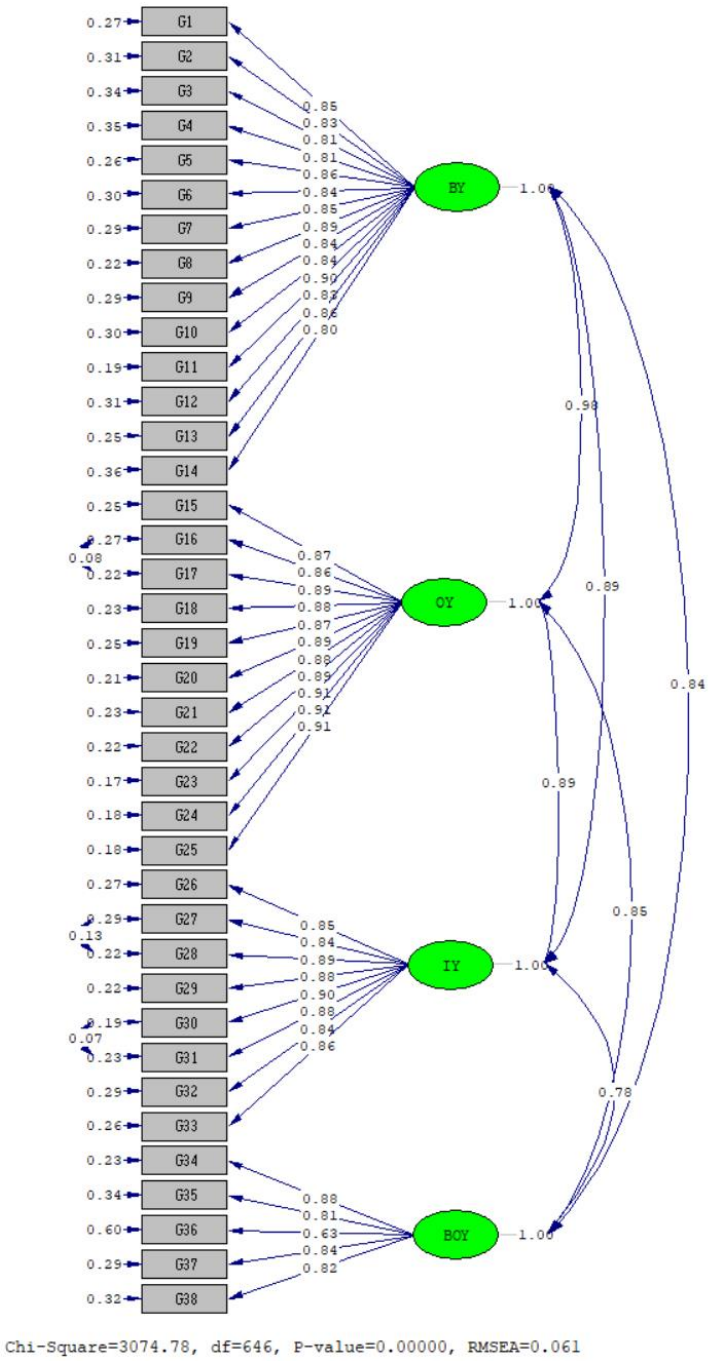

Figure 1. EC Scale CFA Model

As seen in Figure 1, the CFA model of the EC scale has been presented as a four-factor structure. PC represents the "Personal Competencies" subdimension, OC represents the "Organizational Competencies" subdimension, RC represents the "Relational Competencies" subdimension, and CSCC represents the "Commitment-Self-Confidence Competencies" subdimension. When looking at the path diagram obtained after CFA analysis of the EC scale model, at the first stage, the fit criteria did not come out at the desired level, so modifications, which are suggested by the program, were made between items 16-17, 27-28 and 30-31. The goodness of fit values calculated after the CFA application are presented below:

Table 16. EC Scale Goodness of Fit Values

X^2/df	p	RMSEA	GFI	CFI	AGFI	NNFI	NFI	SRMR	RMR
4.759	0.000	.061	.91	.99	.86	.99	.99	.023	.025

As seen in Table 16, the chi-square value calculated as a result of the CFA of the EC scale model was found as x^2 = 3074.78, degree of freedom as df = 646 (p <.001), and chi-square/df value as 4.759. A value of x^2/sd below 5 indicates that the model fit is at an acceptable level (Schermelleh-Engel, Moosbrugger, & Müller, 2003). Looking at the results of fit indexes, the RMSEA value was calculated as .061, CFI value as .99, NFI value as .99, GFI value as .91, and the RMR value as .025. The facts that the RMSEA value is below .08, the GFI value is .90 and above, the RMR value is below .1, the CFI value is .90 and above, and the NFI value is .90 and above reveal that the model is compatible with the real data and all fit indexes have acceptable or perfect values (Rigdon, 1996; Erkorkmaz, Etikan, Demir, Özdamar, & Sanisoğlu, 2013; Hu & Bentler, 1999; Schermelleh-Engel et al., 2003; Bentler & Bonnet, 1980; Byrne, 2011; Yaşlıoğlu, 2017; Çokluk, Şekercioğlu & Büyüköztürk, 2010; Plichta & Kelvin, 2013).

The Scoring of the Scale

The Entrepreneurial Competencies Scale is structured as a five point Likert type, and the "Strongly Disagree" option is 1 point, the "Disagree" option is 2 points, the "Partially Agree" option is 3 points, the "Agree" option is 4 points, and "Strongly Agree" option is 5 points. As the total score of the scale increases, the assumed "Entrepreneurial Competencies" feature also increases. There is no reverse item on the scale. The lowest 14 and highest 70 points can be obtained from the "Personal Competencies" subdimension of the scale, the lowest 11 points, and highest 55 points can be obtained in the "Organizational Competencies" subdimension, the lowest 8 points, and highest 40 points can be obtained in the "Relational Competencies" subdimension, the lowest 5 points, and highest 25 points can be obtained in the "Commitment-Self-Confidence Competencies" subdimension, and the lowest 38 and highest 190 points can be obtained in the "Entrepreneurship Competencies Scale" in general. Regarding the scoring of the Entrepreneurship Competencies scale, the score and decision ranges are as follows:

Table 17. The Scoring of the Entrepreneurship Competencies Scale and Decision Ranges

	Strongly Disagree	**Disagree**	**Partially Agree**	**Agree**	**Strongly Agree**
When the means of the scoring points are calculated	1.00-1.8	1.9-2.69	2.70-3.49	3.50-4.29	4.30-5.00
When the total point means are calculated	38-68.4	68.5-98.8	98.9-129.2	129.3-159.6	159.7-190
Decision Direction	Entrepreneurship Competencies Decrease ⟵			Entrepreneurship Competencies Increase ⟶	

Discussion and Conclusion

School principals need to have competencies that include entrepreneurship qualities in terms of the development and competition of today's educational institutions. For this reason, the development of a measurement tool that covers and measures these competencies in both the selection of pre-service school leaders and the evaluation of the in-service performance of school leaders guided this research. In this study, which was conducted in line with this orientation, a measurement tool consisting of four subdimensions and 38 items was obtained to develop a scale that has items including entrepreneurship competencies of school principals according to teachers' perceptions. The measurement tool obtained consists of "Personal Competencies" with fourteen items, "Organizational Competencies" with eleven items, "Relational Competencies" with eight items, and Commitment-Self-Confidence Competencies with five items.

During the development phase of the EC Scale, the total variance amount explained by the four factor obtained in the EFA analysis, which was carried out to ensure the structural validity of the scale and to determine the factor structures, was 73.20%. Observations revealed that the factor loading values of the variables (items) that load on the factors were between .523 and .750 in the Personal Competencies subdimension, between .538 and .764 in the Organizational Competencies subdimension, between .571 and .729 in the Relational Competencies subdimension; and between .579 and .729 in the Commitment Self-Confidence Competencies subdimension which are acceptable load values.

In the reliability analysis performed after determining the factor structures of the measurement tool, observations exhibited that CA value at the level of the scale and its subdimensions was between the lowest .88 and the highest .98, the Spearman-Brown Coefficient varied between the lowest .85 and the highest .96 range, the Guttman Coefficient ranged from .80 to the highest .96, and the scale had a high of reliability.

In the discrimination analysis performed after the reliability analysis, observations revealed that there was a significant difference in favor of the upper group ($p < .001$) between the scale and its subdimensions, as well as the upper and lower mean scores of the scale items, and the scale's items and subdimensions had a distinctive structure. After the discrimination analysis, item-total (lowest .624; highest .884) and item-remainder correlations (lowest .603; highest .875) were calculated, and among the items, a highly positive ($p < .001$) significant relationship was detected. After this process, Pearson Analysis was performed to reveal the relationships between the scale and the subdimensions and between the subdimensions themselves, and it was observed that the correlation values ranged from the lowest .766 to .967. All these correlation values show that the scale, its items, and subdimensions are consistent within themselves and have a highly significant relationship with each other.

Finally, CFA was performed to verify the scale model and the obtained fit values ($x2 / df=4.759$; RMSEA = .061; CFI = .99; NFI = .99; GFI = .91; AGFI = .86; RMR =. 025; SRMR = .023) confirmed the scale model and its four-factor structure. All these values obtained prove that the EC scale has a valid and reliable structure.

The four-factor scale structure obtained in this study within the subject area and scope of entrepreneurship competencies matches with various studies and evaluations in the literature. Thus, the personal competencies subdimension has been defined by various researchers (Dollinger, 2008; Van der Kuip, 1998; Bueno, Leite & Pilatti, 2004; Dornelas, 2008; Najim et al., 2013; McClelland, 1961; Zimmerer & Scarborough, 1996; Bhatt, 2016; Kuratko & Hodgetts, 1998) and it includes specificities that contain the character and behavioral qualities that find their expression in individuals' characteristics and distinguish them from others. Organizational competencies subdimension is reflected by the views of Dollinger (2008), Onstenk (2003), Najim et al. (2013), and Kuratko and Hodgetts (1998) and it includes the attitudes that direct the leadership and management processes to entrepreneurship, such as the leader guiding the organization within the framework of his/her vision, ensuring organizational commitment to initiatives, introducing initiatives to ensure change and innovation to the organization, and activating the organization. The Relational Competencies subdimension has been emphasized by the evaluations of Minello, Scherer, Alves (2014), Gibb (1998), Tolentino (1998), Najim et al. (2013), and Bhatt (2016) and it includes cooperation regarding implementation of initiatives and relationship management, participation, communication processes, and diversity of ideas. Commitment-Self-Confidence Competencies are also expressed by various researchers (Minello, Scherer, Alves, 2014; Van der Kuip, 1998; Mintzberg, 1990; Kets de Vries, 1993; Dornelas, 2008; Bhatt, 2016; Najim et al., 2013; Zimmerer & Scarborough, 1996; McClelland, 1961; Kuratko & Hodgetts, 1998; İşcan & Kaygın, 2011; Ağca, 2004; Caird, 1991) and includes taking risk and initiative, self-confidence, not being afraid of failure, perseverance, and determination.

As a result, innovation and change processes in organizations and original productions and value creation start with the initiatives of the organization leaders. The fact that school leaders perceive the opportunities by observing the dynamics within their organizational structure and turning them into initiatives puts these schools in the foreground in educational terms. In this context, school leaders need to acquire these competencies and adopt them in an individual structure to carry out the process with entrepreneurial eyes.

Recommendations

Although the developed EC scale was developed in the sample and context of school leaders, it has an item character that can be used in different sectors. For this reason, to see the big picture, it is important to use the scale to determine the entrepreneurship competencies of leaders in different professional fields and sectors, as well as to test and adapt the scale in different cultural and regional sampling structures. At the same time, it will

be beneficial for the development of the education system if decision-makers take these competencies into account in the selection and evaluation of school leaders and reflect these competencies to pre-service and in-service training processes.

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Appendix-1

ENTREPRENEURSHIP COMPETENCIES SCALE **Please mark the relevant option considering the level of your school principal in the situations below.**						
	My School Principal;					
Item No	**Items**	**Strongly Disagree**	**Disagree**	**Partially Agree**	**Agree**	**Strongly Agree**
1	He/she has a curiosity about creating new values.	①	②	③	④	⑤
2	He/she is committed to his/her goals.	①	②	③	④	⑤
3	He/she is aware of his/her competencies.	①	②	③	④	⑤
4	He/she realizes his/her ideas.	①	②	③	④	⑤
5	He/she is willing to learn.	①	②	③	④	⑤
6	He/she continues a job he/she undertakes.	①	②	③	④	⑤
7	The desire for high success is reflected in his/her behavior.	①	②	③	④	⑤
8	He/she develops alternative projects.	①	②	③	④	⑤
9	When he/she detects opportunities, he/she uses them without hesitation.	①	②	③	④	⑤
10	He/she manages his/her time effectively.	①	②	③	④	⑤
11	He/she updates himself/herself.	①	②	③	④	⑤
12	He/she allocates resources while starting a new job.	①	②	③	④	⑤
13	He/she has high energy.	①	②	③	④	⑤
14	He/she takes into account the possibilities before starting a business.	①	②	③	④	⑤
15	He/she can revise old applications and present them in a new format.	①	②	③	④	⑤
16	He/she follows up opportunities regarding the development of the institution.	①	②	③	④	⑤
17	He/she activates the institution towards a new target.	①	②	③	④	⑤
18	He/she supports the discovery processes of the employees.	①	②	③	④	⑤
19	He/she is the person who initiates change in the organization.	①	②	③	④	⑤
20	He/she likes to research.	①	②	③	④	⑤
21	He/she does not miss opportunities that arise for the improvement of institutional practices.	①	②	③	④	⑤
22	He/she can bring together different resources belonging to the institution and reveal them in a useful way.	①	②	③	④	⑤
23	He/she has a dynamic vision.	①	②	③	④	⑤
24	He/she likes to present innovation.	①	②	③	④	⑤
25	He/she creates new values out of existing resources.	①	②	③	④	⑤
26	He/she supports the diversity of ideas.	①	②	③	④	⑤
27	He/she creates an environment in the institution where people can present their ideas without hesitation.	①	②	③	④	⑤
28	He/she is open to new ideas.	①	②	③	④	⑤
29	He/she supports good practices produced by employees.	①	②	③	④	⑤
30	He/she cooperates with employees in achieving goals.	①	②	③	④	⑤
31	He/she cares about employee participation in achieving a job.	①	②	③	④	⑤
32	He/she uses communication processes well.	①	②	③	④	⑤
33	He/she analyzes the requirements of the environment well.	①	②	③	④	⑤

34	He/she takes risks.	①	②	③	④	⑤
35	He/she is not afraid of failure.	①	②	③	④	⑤
36	He/she makes independent decisions.	①	②	③	④	⑤
37	He/she takes initiative.	①	②	③	④	⑤
38	He/she does not hesitate to start a new project even if the resources are not provided.	①	②	③	④	⑤

International Journal of Contemporary Educational Research (IJCER)

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Article History
Received: 29.01.2021
Received in revised form: 25.03.2021
Accepted: 29.03.2021
Available online: 03.09.2021

To cite this article:

Yükselir, C. & Yuvayapan, F. (2021). An evaluation of students studying English language and literature about transitioning to online classes during COVID-19 pandemic. *International Journal of Contemporary Educational Research, 8*(3), 81-91. DOI: https://doi.org/10.33200/ijcer.870732

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 81-91 ISSN: 2148-3868

An Evaluation of Students Studying English Language and Literature about Transitioning to Online Classes during COVID-19 Pandemic

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Abstract

There are ever-increasing studies about online classes and their applications in terms of benefits and deficits in transitioning to online education especially after the outbreak of COVID-19 pandemic in the world. This study investigates the English language learners' evaluations about transitioning to online classes in higher education in a sample of students at English language and literature (ELL) department. In addition to this, following a mixed-method design, it attempts to find out the students' preferences whether this change about online delivery in higher education is well welcomed or not. ELL students' preferences and evaluations were assessed through a five-point Likert survey and a focus group interview. After employing convenience sampling, 96 ELL students responded to the survey and 10 students who answered the survey participated in the focused interview voluntarily. The results showed that both groups of learners had positive evaluations about transitioning to online classes in terms of the content, delivery and structure during pandemic. The participants also thought that their professors utilized online classes effectively leading to a seamless transition to online learning for them. The implications of these findings for online classes in Turkish higher education context are discussed.

Key words: English language and literature (ELL) students, Online classes, Mixed-methods, COVID-19

Introduction

Since the outset of the Coronavirus 2019 (COVID-19) pandemic, all aspects of human life, including economy, health, tourism and education, have been influenced (Hebebci et al., 2020) and some changes have been made in accordance with the recent restrictions and alterations. Some strict rules such as social-distancing, home-office working, home-schooling have been implemented in order to decrease the number of people affected from this pandemic. In many countries, schools and higher education institutions have experienced a disruption to their traditional way of education system due to COVID-19 outbreak, in February 2020. In Turkey, the emerging threat of this pandemic has also brought about the closure of schools and universities in a short span of days in March 2020. In the fall term of 2020 academic year, educational institutions are continuing to run their courses via online-learning tools. Within these rapid changes and implementations, at least 1.5 billion learners which make up 91 percent of the student population were influenced (UNESCO, 2020) and education is the second most affected sector in a very short time (Telli & Altun, 2020). This lockdown process has led to a shift to online learning in all levels of education system in Turkey as implemented in all countries.

With the widespread use of technology and the Internet, online learning has become an inevitable part of the education system worldwide, especially in higher education institutions. Due to its flexibility in time, space and pace, online learning is considered as an alternative to traditional face-to-face learning. However, changing the perceptions of students and teachers towards online delivery is one hurdle that institutions need to handle. Previous studies represent this practice. One major issue in early research of online learning is concerned with perceptions of students in higher education (Armstrong, 2011; Artino, 2010; Astani et al., 2010). Some studies specifically compared the perceptions of experienced and novice online students (Hixon et al., 2016) while others examine the difference between faculty and students' perception of online classes (Bagasra & Mackinem,

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2019). Some attempts have been made to evaluate the quality of digital tools to be used in online courses (Rogers, 2011).

Until COVID-19 pandemic, online delivery has been used as a supplementary mode to face-to-face teaching. However, the rapid and mandatory suspension to face-to-face delivery in education systems has initiated a serious debate about the quality of learning and student and teacher satisfaction of online learning. Pal, Vanijja and Patra (2020) explain that in the wake of current COVID-19 pandemic, conduction to a "fully online" teaching has been made mandatory to reduce the negative effects of school closures worldwide. To maximize the potentials of this "fully online" methodology, it is essential to examine students' experience of multimedia applications utilized in this delivery of teaching. Additionally, the quality of lesson, delivery and experience can be easily and quickly assessed in face-to-face delivery of teaching during class hours. What is almost impossible in an online class is to get immediate feedback from students. Hence, students' and teachers' perceptions should be integrated to online learning methodology during the design of the online curriculum. Understanding their perceptions of online learning mode may enable educational experts to make modifications to suit their needs (Nambiar, 2020).

Consequently, online learning seems to be a future mode of teaching methodology, so teachers need more understanding of how students evaluate online classes and multimedia applications as a learning mode to maximize the effectiveness. In Turkey, all universities have moved to online delivery since March 2020 in the light of the rising concern due to COVID-19 pandemic. However, this digital mandatory transition has posed some challenges that universities have to cope with. Besides, getting used to this mode of delivery may be also problematic for faculty members and students. Telli and Altun (2020) explain that one of the main problems about online learning in Turkey is to prepare online versions of content and presentations. Ertuğ (2020) claims that educational materials uploaded to the online systems during the pandemic were all printed books in higher education in Turkey. Thus, materials focusing on collaborative learning need to be urgently developed for higher education. At this point, students' evaluations of the quality and presentations of the content may offer us crucial information in assessing online courses and materials during the pandemic. In Turkish context, studies have been conducted to examine student's perceptions about online classes in different fields: health management (Serçemeli & Kurnaz, 2020), theology (Genç & Gümrükçüoğlu, 2020), Turkish Language teaching (Karakuş et al., 2020) and sports science (Aktaş et al., 2020). To our knowledge, the perceptions of students studying at the department of English Language and Literature have not been investigated before. Hence, this study is motivated by the need of ELL students' evaluations of transitions to online classes regarding the use of Microsoft Teams online classes and delivery, content and structure of the online classes. As Pal and Vanijja (2020) highlight, the usability of the learning tools is prominent to ensure the online learning to be effective and useful for the students. The participants were the 1st and 2nd class students studying in English language and literature department. Our ultimate aim was to compare their evaluations of online classes to figure out whether there are any differences between 1st and 2nd class students' evaluations of online delivery. For this purpose of the present study, the following research questions were formulated:

1. What are the evaluations of the 1st class and 2nd class English language and literature students' about transitioning to online classes regarding the use of online classes, delivery, content and structure?
2. Is there a statistically significant difference between the 1st class and 2nd class English language and literature students' evaluations regarding the use of online classes, delivery, content and structure?
3. What are the feelings of the 1st class and 2nd class English language and literature students' about transitioning to online classes?

Literature Review

At a time where every life is rested on technology and internet, online learning is recognized as an efficient means of instruction of delivery. It has been defined by many scholars in the literature. For Ally (2004), the term implies that "the learner is at a distance from the tutor or instructor that the learner uses some form of technology to access the learning materials that the learner uses technology to interact with the tutor or instructor and with other learner that some form of support is provided to learners (p. 16). Means, Bakia and Murphy (2014) define online learning as "a learner's interaction with content and/or people via the Internet for the purpose of learning" (p. 6). Similarly, Kirk (2007) adopts a broader definition of the term: "one form of learning and teaching which uses computer-mediated communication via the internet to achieve the learning objectives within an educational organization" (p. 240).

Ally (2004) explains the benefits of online learning to educational institutions. Firstly, it creates a learning environment for learners where there are no time zones, location and distance. In addition, they can reach up-to-date materials and negotiate with experts through the internet. They can also take any online classes while working or in their free times. Bowman (2010) labels three types of online learning: independent study is the form of non-formal classes where course materials are available online and students complete them on their own. In synchronous learning both students and lecturers attend online classes at the same time and lecturers teach in real time. As the most popular form of learning, asynchronous learning provides learners flexible time to complete specific assignments and discussions.

Means et al. (2014) suggest four dimensions of online learning: *context, design features, implementation and outcomes*. *Context* is related to *the field use of use, provider type* (types of school) and *breadth* (type of the program) that online learning application is implemented. As the second dimension, *instructional design* includes features of *modality* (type of online learning), *pacing, synchrony, instructor and student role, the role of online assessment* and *feedback mechanism.* The third dimension is the *implementation* that is associated with *learning location, co-located facilitator* and *student-teacher ratio* (interaction). Finally, it is prominent to take into account the *outcomes* of the process which has four specific features: *cognitive, engagement, productivity measures* and *learning-to-learn outcomes.*

Suddenly, online learning has become compulsory worldwide due to the expansion of COVID-19 pandemic. Many universities announced that online courses would be available in the spring of 2020. Students would participate courses, complete assignments and take their exams online. However, during this mandatory shift, the universities worldwide were concerned about whether their students would be able to learn online. The literature on online higher education during the present pandemic has mostly focused on the perceptions of undergraduate students' perceptions to online delivery of teaching in different contexts worldwide. In a case study, Agung et al. (2020) examined the perceptions of 66 students of English Language Education Study Program at a college in Indonesia to online classes through a survey and labelled three major obstacles in online learning: availability and sustainability of internet connection, accessibility of the teaching media, and the compatibility of tools to access the media. In another similar study conducted in this context, Allo (2020) found that the learners of English study program at a college developed positive attitudes to online classes in the midst of the pandemic. In Chinese context, Demuyakor (2020) found that the implementation of online learning programs was supported by the students in spite of the high cost of participation to them. On the contrary, Unger and Meiran (2020) witnessed negative attitudes of undergraduate students towards this mode.

Through an online survey, Doyumğaç et al. (2020) observed that the factors improving online education were mainly associated with technological and internet infrastructure during the pandemic in Turkey. Based on the data collected from undergraduate students in South Korea and India, Baber (2020) analysed the relationship between students' perceived learning outcomes and satisfaction and observed some factors affecting these two concepts positively: *interaction in the classroom, student motivation, course structure, instructor knowledge, and facilitation.* In another study, Krishnapatria (2020) claimed that promoting flexibility and personalization where learners can choose their learning path and pace result in positive e-learning perceptions.

Murphy et al. (2020) examined undergraduate college students' perceptions, general preferences, and emotional responses to a virtual learning classroom in a college in the northeast United States. Based on the results, students thought that LMS system in online classes was used effectively to adopt the content and communicate changes in the content by their professors but not to declare the changes in the syllabi and schedule. Pal et al. (2020) compared the quality of three popular applications (Zoom, Microsoft Teams, and Cisco Webex) by using an objective based approach and found that Microsoft Teams (*MT, hereafter*) provides the least experience, whereas those from the others vary depending upon the objective models used.

As can be concluded from the studies in the previous literature, the delivery of education has changed all over the world during the pandemic. The compulsory closure of schools and universities has led to excessive use of online learning. No one was prepared for this sudden and dramatic change in the delivery of educational instruction. The unplanned and rapid shift to this mode negatively influenced the participants of the learning and teaching process. Many teachers and students believed that it was not possible to get sufficient knowledge from online learning. In this sense, measuring their evaluations of this delivery should be the first step of adaptation of technology since positive attitudes and evaluations facilitate learning effectively.

Methodology

Research Context

The study was carried out in a state university in southern Turkey. The data were collected from the department of English Language and Literature, in which the medium of instruction is English. The students enrolled in this department are obliged to be proficient in the English language by passing a proficiency test at the beginning of the academic year. If they do not, they have to take preparatory-year education for one year and to pass the final exam to be able to participate in first-year classes. The classes in ELL department ranges from academic writing, research methods, outline of literature, reading literary texts to literary terms and digital literacy.

Participants

The sample group in the current study comprised 96 ELL students from a state university located in the south part of Turkey. As the department commenced to accept students two years ago, the participants were English language and literature students in their first and second year of study due to the lack of other classes in the research context. In order to collect the data, convenience sampling was used to enhance the study's effectiveness since one of the researchers worked in this state university. As McIntyre (2004) states "convenience sampling is the technique of selecting sampling units on the basis of availability rather than representativeness" (p. 105). It is worthy to state that all the students who participated in the study had voluntarily agreed to participate and to give their opinions about transitioning to online classes and online education during COVID-19 pandemic period. The consent forms were taken through Google form document at the beginning of the survey. The demographic variable distributions of the participants in terms of gender, age and class are given in Table 1.

Table 1. Demographic results related to the participants

Variable	Descriptor	N	%
Gender	Female	72	74,99
	Male	24	24,99
Age	18 - 21	88	91,66
	22- 25	5	5,20
	26 - 30	3	3,12
Class standing	1st year	54	56,24
	2nd year	42	43,74

Data Collection and Instruments

This study adopts explanatory sequential design which starts with the collection and analysis of the quantitative data and goes on with collecting qualitative data in the second phase (Creswell & Clark, 2011). A survey and focused group interview were utilized with the aim of gaining an overall picture about students' evaluations aside from the statistical data. A survey developed by Murphy et al. (2020) was administered to measure the views of ELL students about the course delivery, content, structure and preferences regarding to virtual classes. Before applying the scale, permission through an email was received from the corresponding author who developed this tool. To collect data online, Google form (*see Appendix 1*) was prepared and sent to the students via internet. In relation to the instrument, the fact that Murphy et al. (2020) developed and employed this scale and published in an international journal contributes to the issues of validity and reliability. The scale is a sixteen-item measure with responses based on a five-point Likert scale (5) 'strongly agree' to (1) 'strongly disagree', with (3) 'neutral' as the middle option due to the nature of research questions we formed. This instrument comprised three main parts with the consent form and demographic questions at the beginning. Part A includes six-items in relation to the students' evaluations about online classes, Part B is made up of ten-items as for course delivery, content and structure and Part C deals with the feelings about the change to online classes. There were 16 items in Part A and B sections in total and there were 13 feelings about this change to virtual classes in which students can choose more than one feeling. In each of the first two sections, there were items measuring ELL learners' evaluations, course delivery, course and delivery with a five-point Likert scale, except for the last section, feelings. It is noteworthy to state here that there are certain differences in the formation of the sentence structures between 1st and 2nd class ELL learners' questionnaire, the reason for this

lies in the fact that the freshman has the first and new experience to encounter online classes and sophomores had the experience from the previous semester thereby having the chance to evaluate the online classes. Here is the example from Part A:

> 1st class: I prefer my lecturers utilize Microsoft Teams in a manner that help my transition to virtual coursework.
>
> 2nd class: My lecturers utilized Microsoft Teams in a manner that helped my transition to virtual coursework.

Apart from the scale, which measures students' evaluations about transitioning to online classes questionnaire (Murphy et al., 2020), focused interview was also used to obtain triangulation and to compare and contrast the data. Prior to using the instrument, comments, opinions and feedback about the items were taken from an expert doing research in foreign language teaching to touch upon the validity and reliability issues. According to Merriam (2009) this type of interview enables the researchers to provide a deeper understanding and insights of the qualitative data. In this study, the participant students' evaluations towards transitioning to online classes were examined through a focused interview that was conducted with 10 voluntary students who had answered the survey. The interview was conducted by the researchers through Zoom program in compliance with the social distancing regulations during COVID-19. Suffice to add that both researchers engaged in the interview which was held in English. Our ultimate aim to conduct focused interview was to "to enhance the overall quality of the data" (Guest et al., 2012, p. 22), so we asked them to answer four questions regarding the evaluations of online classes, course, content and feelings about the change to virtual classroom environment, as suggested.

Data Analysis Procedure

The data collected from the participants were analysed using SPSS Statistics 22 version. The questionnaire about quantitative data described above was distributed to English language and literature students before the start of the autumn semester of 2020. As stated, participation in the study was voluntary. It took about 25-30 minutes to complete the survey. To present the data from the questionnaire, frequencies and percentages were given for every category. However, in order to gain comprehensive results, the researchers applied summative scales for analysing the data, which means the reduction to three Likert scaling (Strongly Agree, Neutral and Strongly Disagree). Similarly, the first and second year of students' variable was run through independent-samples t-tests to determine if it correlated to a measure change.

In addition, thematic analysis was used to make inferences from the data and find out themes and sub-themes in order to gain deeper insights into the research topic. Since they also recorded the interview that lasted 40 minutes, they had the opportunity to see every detail in the interview, thereby enabling them to make sense of each point. Boyatzis (1998) labels four steps of thematic analysis: (a) sensing themes, (b) doing it reliably, (c) developing codes, (d) interpreting the codes in the context of a theory or a conceptual framework. Following these steps, the two researchers watched the recorded focused interview individually in order to analyse and decide the themes. Then, they discussed the themes gathered from this process and reached an agreement about the main themes emerged from the analysis of the focused interview. Finally, the codes were interpreted in relation to the findings gathered from the questionnaires. To protect anonymity of the participants, we took the decision to use some abbreviations like "*S1, S2, etc*" while referring to their evaluations in the focused group interview.

Results and Discussion

Evaluations of Transitioning to Online Classes

In an attempt to answer the first research question, 1st and 2nd class English language and literature students' evaluations regarding the use of Microsoft Teams online classes system, delivery, content, and structure were investigated. All the items related to these two concerns were placed under the first two sections of the questionnaire. Table 2 displays the descriptive results for the learners' preferences and evaluations regarding the use of Microsoft Teams online classes system. The system used by the participants in their online classes was Microsoft Teams (MT).

Table 2. The Use of MT online classes System in Online Classes

Item	Class	Strongly Agree		Neutral		Strongly Disagree	
		N	%	N	%	N	%
Lecturers' utilization of MT	1st	40	61,1	9	16,7	5	9,3
	2nd	31	73,8	7	16,7	4	9,5
Course syllabi availability on MT	1st	40	74,1	12	22,2	2	3,7
	2nd	33	78,5	5	11,9	4	9,5
Course schedule availability on MT	1st	40	74,1	9	16,7	5	9,3
	2nd	30	71,4	7	16,7	5	9,3
Course grades and assignments availability on MT	1st	36	66,6	11	20,4	7	13
	2nd	33	78,6	7	16,7	2	4,8
Communication in timely manner	1st	41	75,9	11	20,4	2	3,7
	2nd	37	88,1	3	7,1	2	4,8
Use of MT to provide course content	1st	39	72,2	13	24,1	2	3,8
	2nd	31	73,8	7	16,7	4	9,5

Table 2 presents 1st class learners' preferences and 2nd class learners' evaluations descriptively regarding the use of MT. A quick glance to the percentages of "*Agree*", may enable us to suggest that the participants on the whole demonstrated high level of agreement regarding their transition to online classes in terms of MT use. The table shows that the majority of the participants in 1st (75,9 %) and 2nd class (88,1 %) commented that changes in course content and assignments are communicated to them in a timely manner. It is probably that they had a strong desire to be informed when and what to do in online courses.

The findings presented above were in line with Murphy et al. (2020) who found that undergraduate students participated in the study mostly thought that their professors utilized MT effectively leading to a seamless transition to online learning for them. In accordance with our findings, Krishnapatria (2020) observed that more than half of the participants were satisfied with their online learning experiences during the pandemic. Additionally, Armstrong (2011) found that college students were mostly concerned with the use and implementation of online tools as supported with the findings of the present study. Table 3 displays 1st class learners' preferences and 2nd class learners' evaluations descriptively regarding delivery, content, and structure in their online classes.

Table 3. Delivery, Content and Structure in Online Classes

Item	Class	Strongly Agree		Neutral		Strongly Disagree	
		N	%	N	%	N	%
Communication about changes in course content	1st	39	72,2	12	22,2	3	5,6
	2nd	35	83,4	6	14,3	1	2,4
Communication about changes in deadlines	1st	38	70,4	12	22,2	4	7,4
	2nd	37	88,1	4	9,5	1	2,4
Communication via email / WhatsApp Group	1st	50	92,6	3	5,6	1	1,9
	2nd	39	92,8	2	4,8	1	2,4

Communication about changes in graded elements	1st	41	75,9	9	16,7	3	5,6
	2nd	36	85,7	5	11,9	1	2,4
Communication about course proceedings	1st	43	79,6	8	14,8	3	5,6
	2nd	34	81	6	14,3	2	4,8
Flexibility in deadlines	1st	45	83,3	5	9,3	4	7,4
	2nd	33	78,6	5	11,9	4	9,5
Change in the graded assignments	1st	37	68,5	13	24,1	2	3,7
	2nd	31	73,8	8	19	3	7,2
Active student participation virtually	1st	31	57,4	13	24,1	10	18,5
	2nd	35	83,3	5	11,9	2	4,8
Effective use of virtual classroom	1st	40	74	11	20,4	3	5,6
	2nd	33	78,6	8	19	1	2,4
Recorded lectures to review	1st	46	85,2	5	9,3	3	5,6
	2nd	33	78,6	6	14,3	3	7,1

The highest percentages were computed for the item associated with communication via email / WhatsApp Group (1st class, 92,6 % and 2nd class, 92,8 %). It seems that they were satisfied with the constant communication during the term, which is in line with the feelings of the undergraduate students about online educational communication in the studies of Allo (2020) and Agung et al. (2020). In these studies, WhatsApp was perceived as the most effective online learning platform by the participant college students. Consistent with Armstrong (2011), the evaluations concerned with the *communication about changes in course content*, *deadlines*, *graded elements*, *graded assignments* and *course proceedings* were echoed by both 1st and 2nd class students. A possible explanation for this might be that the participants sought for concise directions on everything about their online classes from content and assignments to deadlines. They also had an agreement about *effective use of virtual classroom* and *recorded lectures.* In the process of online learning, 2nd class students indicated that their lecturers facilitated *active student participation during online classes* (83,3 %) while 1st class student did not seem to be as confident as 2nd class students about active participation (57,4 %). This was the biggest difference in the percentages of the items in the questionnaire. It is likely that previous experiences of online learning due to the pandemic might positively affect the 2nd class students' evaluations of active participation to online classes. The independent sample t-test was run to examine whether there was a statistical difference between the groups of students regarding the use of MT. No significant differences in the score of 1st class learners' preferences and 2nd class learners' evaluations regarding these two concerns. On the contrary, they displayed a level of agreement, supported with the results of descriptive statistics and independent sample t-test. Regarding delivery, content, and structure in their online classes, a statistical difference for two items were calculated. The first one is related to being active during virtual classes (p=,046). While 2nd class learners pointed out active participation in virtual classes positively, 1st class students tended to be closer to neutral for this matter. On the other hand, the difference in the scores about the recording of the lectures (p=,020) displays that 1st class learners wanted recorded lectures to view at their leisure, however, 2nd class learners were not enthusiastic as much. Considering that 2nd class learners had already had the experience of one-term online classes, it could be hard or rare to review previous classes for different reasons.

The last concern of the study was the feelings of 1st class and 2nd class English language and literature students about the transition to online classes. It was observed that they had multiple feelings. While 1st class learners mostly felt excited (59,3%), anxious (42,6%), happy (40,7%), and nervous (38,9%), 2nd class learners mostly felt nervous (40,5%), comfortable (35,7%), happy (35,7%), and uncertain (33,3%). The results indicate that 1st class learners could have these feelings (excitement, anxiousness, happiness, and nervousness) because they were met with online courses for the first time as well as this was their first year in the university. However, 2nd class students had one-term experience beforehand, while this could be the reason for their comfort and happiness, the reason why they feel nervous or uncertain should be explored. This finding is contrary to that of Murphy et al. (2020), who found that the participant undergraduate students studying in a college in the USA felt mostly uncertain and anxious about this compulsory transition to online mode.

Focused Interview Results

This section provides the results emerged from the thematic analysis of the focused interview concerning the evaluations of the participants related to the online system and delivery, content and the structure of the online classes. To do this, we asked four questions during the focused interview:

1. How do you feel about in online classes?
2. What do you think about integrating course syllabi and schedule into the Microsoft team?
   a) Do you follow the changes in the course content and assignment deadline easily when the syllabus is available on the system?
   b) What are the advantages and disadvantages of using flexible deadlines?
3. Do you think you can participate in the online classes actively?
4. What are the lecturers' drawbacks in online classes?

Analysis of the focused interview produced three major themes regarding students' feelings about online classes: *motivation, ownership and anxiety.* As Hixon et al. (2016) suggest, students' preparedness to be an online learner affect their online learning experiences positively. The level of comfort in using the internet and technology increase not only their ability to be an online learner but also their satisfaction in the online mode of learning. However, there are also previous studies about students' experiences and distress in web-based distance education (Hara, 2000; Hara & Kling, 2001; Hilliard et al., 2020), which is in linear with one part of students' remarks stating that they had sometimes technical issues and internet problems in the course of online classes. The participants made the following remarks related to above mentioned themes as:

"We gain time because we have no accommodation and transportation problems. We can easily rewatch a class and solve our problems when we lack knowledge" (S1)

"Online learning is better than traditional learning. Thanks to it, we learned how to manage our time, to prepare our own schedule. We started to get motivated and learn our responsibilities" (S2)

"We are becoming more responsible, but I don't feel I am learning better" (S3)

When we asked about the content and delivery issues in online learning, we emerged the following themes: *the use of one program, little feedback from lecturers and friends, taking individual responsibilities.* In relation to the themes, some of the participants' excerpts are as follows:

"Only one program should be used otherwise it is hard to follow the course syllabi" (S4)

"In traditional learning, we can ask our teachers and friends about the things to do" (S5)

"The flexible deadlines make me to take my own responsibility about the assignment. When I have flexible deadlines, I trust the time and feel relaxed" (S2)

In terms of active participation in online classes, they seemed to have different opinions: *eagerness to online participation, being neutral, a preference of traditional classes.* These themes may be related to their learning styles. Simpson and Du (2004) state that when students learn via listening, observation and participation, the isolation during online classes may lead to satisfaction and success. It is possible that availability of the course schedule and syllabi on the MT system may help them to construct their own path of learning and feel more eager to engage in online classes. Vonderwell and Zachariah (2005) label the factors affecting students' online participation: "criteria for evaluating and assessing online discussions, the written nature of online discussions course design and instructor interventions and learner background knowledge" (p. 213).

"I am more active in online classes" (S3)

"I prefer traditional classes because I can participate more actively" (S6)

About the drawbacks of the lectures in online classes, they thought that some of their lectures adapted the changes in online mode of teaching, but some started to follow a more teacher-centred approach. Recall that more than half of the students in both groups evaluated that lecturers utilized MT in a manner that helped their transitions to virtual coursework.

When compared to traditional mode of learning, online learning may require addressing motivation by undergraduate students. In the present study, the vast majority of the participants clearly had strong positive attitudes toward quickly adjusting to online learning mode form the use of online system to the delivery of the classes. One interesting result of this study is increased self-autonomous learning style felt by undergraduate students engaged in the study.

Conclusion

This study explored to provide more insights about transitioning to online classes in higher education setting in line with the English language and literature students' evaluations. The findings of the study about the use of Microsoft Teams online classes reveal that the majority of the participants had a high level of positive agreement. 1st (75,9 %) and 2nd class (88,1 %) students stated that changes in course contents and assignments were conducive to the use in a timely manner. It is probably that they had a strong desire to be informed when and what to do in online courses. In relation to delivery, content and structure, it can be stated that communication about changes in course content, deadlines, graded elements, graded assignments and course proceedings were met with an agreement by both 1st and 2nd class students. In the process of online learning, 2nd class students indicated that their lecturers facilitated active student participation during online classes (83,3, %) while 1st class student did not seem to be as confident as 2nd class students about active participation (57,4 %). Regarding the focused interview results, the striking theme regarding students' feelings about online classes was building ownership for their own learning. We believe that using both quantitative and qualitative data in this study broaden the understandings of the transition to online classes during pandemic.

This current study has two major limitations. First, the sample group of the study participants was limited to 96 participants (1st and 2nd class) and the context of the study was set in ELL department at a state university. The other limitation is related to the duration of data collection period in which the study was carried out. The study did not cover the whole academic year, as stated before, the data were collected at the beginning of the spring term of 2020-2021 academic year. Given the smaller sampler size, it is recommended that further studies be conducted with a larger sample of students in higher education to determine perceptions and academic needs of undergraduate students as well as instructors. A second area of research is needed to further explore the evaluation of online classes by using a formative approach which may include the evaluation of the courses regarding design, content, materials and assessment techniques.

Considering the findings of the study, there are several implications for practice and suggestions for future directions. Firstly, there is a need for acknowledging and addressing student emotions and needs in online learning mode achieving self-efficacy in online learning. Secondly, integrating autonomy related activities in course contents could improve learning and increase learning autonomy to a higher level (Balçıkanlı, 2010; Gabryś-Barker, 2017). Based on the participants' remarks and statistical analysis, the functions and applications of an online platform to access information do not make learning process slower. Thus, there is also a need to make better use of this online technology with the aim of making a strong contribution to student learning at higher education. Future studies could explore transitioning to online class in higher education with more senior students (e.g. 3rd and 4th classes or post-graduates) and with a large sample group from different English departments and universities. Moreover, more comprehensive research is also needed to see the overall picture regarding the online classes during COVID-19 pandemic in the Turkish context.

Ethical Committee Approval

Ethical approval was successfully obtained from the Committee of Scientific Research Projects Unit at the higher education institution where the study was conducted. (Osmaniye Korkut Ata University, reference number E.31120; 27/10/2020).

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Appendix 1

https://docs.google.com/forms/d/e/1FAIpQLSfPnuSJM_JhOzQMkoyhGLrmowIgKAJCZBeytG-0WdpXTET7WQ/viewform?usp=sf_link

https://docs.google.com/forms/d/e/1FAIpQLScS1zXbsHMMMIKgZrbACh_OYqNBBQZCHa5Cw1BSspqQUe4uxA/viewform?usp=sf_link

International Journal of Contemporary Educational Research (IJCER)

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The Relationship between Social Sciences High School and Science High School Students' Multiple Intelligence Levels and Learning Styles

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Article History
Received: 09.02.2021
Received in revised form: 18.04.2021
Accepted: 24.04.2021
Available online: 03.09.2021

To cite this article:

Keskin, B., Özay Köse E. & Güloğlu, F. (2021). The relationship between social sciences high school and science high school students' multiple intelligence levels and learning styles. *International Journal of Contemporary Educational Research*, *8*(1), 92-102. DOI: https://doi.org/10.33200/ijcer.877570

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 92-102 ISSN: 2148-3868

The Relationship between Social Sciences High School and Science High School Students' Multiple Intelligence Levels and Learning Styles

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Abstract

This study which used survey model aims to examine the relationship between the multiple intelligence and learning styles of the Social Sciences High School and Science High School students. Multiple Intelligence Inventory and Learning Styles Inventory were used as data collection tools, which was conducted on 761 students from Social Sciences High School and Science High School. Mann Whitney–U test and point-biserial correlation analysis were used for data analysis. According to the findings, in the comparison of Social Sciences and Science High School types, it was found that mathematical and naturalist intelligence scores were more dominant in Science High School students. It was found that there is a statistically significant difference between the types of schools in which students attended the study in sensing/intuitive learning style. When the relationship between students' learning styles and their scores on multiple intelligence was examined, there were positive relationships, albeit low, in all four learning style dimensions. In line with these data, it is thought that the dimensions of learning style and multiple intelligence, in which individual differences manifest the most, will be considered, and it is thought that students will bring awareness of their own individual differences and individual success.

Key words: Multiple intelligence, learning style, Science High School students, Social Science High School students

Introduction

What makes individuals different from each other in society; are the unique qualities of individuals. Individual differences include characteristics that vary from individual to individual. These differences observed in individuals are manifested by the combination of the behaviors obtained due to the diversity caused by the differences in genetic structure, thinking styles, abilities and similar characteristics. These differences may sometimes be the dressing style, sometimes an instrument he plays, things he likes to do, learning styles, or sometimes indispensable habits specific to them (Tomlinson, 2001). However, individuals' methods of understanding and processing information are also different from each other. Therefore, every individual is different. Many theories examining individual differences deal with these differences that make the individual unique (Chamorro-Premuzic, 2013).

One of the leading theories that emphasize the importance of individual differences is that students have different learning styles and intelligence areas. Multiple intelligence theory is one of the student-centered theories that suggest that individual difference is essential. To be successful in education and training, priority should be given to the student's presence in the center by keeping individual differences at the forefront. This theory originated in 1983 when Howard Gardner came up with the idea that everyone has different intelligence, each of which works uniquely. According to Gardner, a person can develop his intelligence and teach it to other individuals. Everyone has different intelligence fields and can increase each intelligence field to a certain level (Gardner, 1983). Gardner suggested that intelligence fields were studied in seven areas: Bodily/Kinesthetic, Interpersonal, Intrapersonal, Logical/Mathematical, Musical/Rhythmic, Verbal/Linguistic, and Visual/Spatial and in his later work, the fields of intelligence were studied in eight areas, adding the field of naturalist intelligence (Saban, 2005).

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Another theory that addresses individual differences is differences in learning style. The learning style concept emerged as a result of examining individual differences in learning (Kaplan & Kies, 1995). The concept of learning style defined in different ways, in its most general sense, is the learning preferences of the individual who learns (Erden & Altun, 2006). Learning styles, together with the individual's learning conditions and personal preferences in the process, are an essential factor in student success. In other words, learning styles are the way individuals make sense of information. Each learning style is independent of each other, and one is neither too good nor too bad from the other (Mutlu, 2006). The concept of learning styles was first proposed by Dunn in 1960. Dunn interpreted learning styles as learning the information learned by using unique methods and remembering them in this way when necessary (Boydak, 2001). In 1984, Kolb interpreted the learning style as the steps that the learner follows in receiving and processing information (Kolb & Kolb, 2005). On the other hand, Felder and Silverman interpreted the learning style as the learner's preferences in receiving and processing information (Felder and Silverman, 1988). According to Gregorc's model of learning styles, it is expressed that individuals consist of distinctive behaviors that provide information about their mental skills (Gregorc, 1982).

Intelligence and learning style are very different concepts. Intelligence is our method of processing information in different areas, while learning style is our choice of learning information (Krechevsky & Seidel, 1998). While some individual learns by communicating with other individuals (interpersonal intelligence), another individual can do it on their own (intrapersonal intelligence). While some individuals learn by living and experiencing (bodily/kinesthetic intelligence), another individual may unintentionally do it randomly. Some individuals make sense of the surrounding sounds (musical/rhythmic intelligence), while others can learn from the images they create in their minds (visual/spatial intelligence). Some combine similar objects in their minds through induction (logical/mathematical intelligence), while others perform learning through deduction by extracting shapes from pictures. Some individuals perform learning by writing stories and telling them (verbal/linguistic intelligence) while others perform learning by the ability to interpret the Environment, Nature (Naturalist intelligence) (Ismail, Raja Hussain & Jamaluddin, 2010). These different ways individuals obtain, store, and retrieve information are called the individual's learning style (Felder & Henriques, 1995).

Prashnig (2005) saw multiple intelligences as a way of communicating individual learning styles and expressed it as a necessity to identify different learning styles of students in order to help students develop different intelligence factors as much as possible and compared this relationship to an input-output relationship (Input: Learning Styles> < process> <Output: multiple intelligence areas). From this point of view, there is an explanation from specific learning styles to general multiple intelligences. For this reason, he suggested that the relationship between learning styles and multiple intelligence domains would be important in determining students' particular areas and interpreting them for their development.

Education aims to train individuals who can use the information obtained by using their characteristics to solve the problems they encounter in their daily lives. Individuals' methods of understanding and processing information are different from each other. For this reason, in today's education system, in order to prepare individuals for the future in line with the targeted purpose, education is given by considering the individual differences of the individual. For example, it is like traveling on the same road with differences, with a large or small, long or short, high or low vehicle in a busy traffic with many different types of vehicles. Everyone can continue their way by directing the vehicle in accordance with the traffic rules. Considering the personal differences of students, which constitute the main theme of learning process, is the most fundamental element that will ensure the process to be completed in a healthier and ultimately successful way. In each learning environment, there are students with different abilities, different intelligence areas, and different learning styles. The main purpose in the learning environment is to create a common learning environment despite individual differences. Learning in the desired style is achieved by considering the individual differences of the individual, organizing learning environments according to the learning style and dominant intelligence areas they have, and including their learning style (Güven & Kürüm, 2006).

Several studies have been conducted in the literature that the Theory of Multiple Intelligences and learning styles are examined together. Snyder (1999) analyzed the relationship between high school students' multiple intelligence and learning styles and revealed a low relationship. Tekiner (2005) examined the relationship between Turkish university students' multiple intelligence and learning styles, and the correlation results found a statistically significant relationship between interpersonal intelligence. Seifoori & Zarei (2011) examined the relationship between Iranian university students' multiple intelligence and learning styles and found significant differences. Baleghizadeh & Shayeghi (2014) analyzed the relationship between Iranian students' multiple intelligence types and learning styles in different age groups and found a statistically significant difference. Panahandeh, Khoshkhoonejad, Mansourzadeh & Heidari (2015) examined the relationship between university students' multiple intelligence and learning styles and determined significant differences between learning styles

and intelligence types. Aygül & Koç (2016) found a statistically significant difference between vocational high school students' multiple intelligence and their teaching styles. Şener & Çokçalışkan (2018) determined that most of middle school students' multiple intelligence and learning styles have a moderate positive correlation. Alrabah, Wu & Alotaibi (2018) examined the relationship between Kuwaiti college students' multiple intelligences and learning styles and indicated that while the participants' dominant learning styles were global, extroverted, hands-on, and visual, their dominant multiple intelligences were interpersonal, visual, and kinesthetic.

Studies that are searched both in terms of the type of school that students of the Social Sciences and Science High School choose, which are successful in the transition to secondary education exam, and in terms of variables such as dominant multiple intelligence domains and learning styles are rarely included in the literature. It is thought that the research is essential in terms of contributing to the organization of students according to the type of school, multiple intelligence areas and learning styles. To draw attention to this gap in the literature, the relationship between the multiple intelligence levels and learning styles of the Science High School and Social Sciences High School students was examined in this study. Also, Gardner (1993) mentions that each intelligence has its educational theory, while Denig (2004) suggests that the synthesis of multiple intelligences and learning styles will help people understand. This recommendation parallels Nelson's (1998) understanding that people who are intelligent in a field learn best with methods related to that intelligence. Based on this, by identifying the intelligence areas and learning styles of the students and discovering the relationship between them, appropriate tools to improve academic teaching and ensure optimum learning according to students' needs understanding can be identified more easily. It can also serve as an important auxiliary tool to introduce students' types of intelligence and learning styles in the education system, motivating them to realize their potential in achieving their desired learning goals. In this way, the importance of this study will increase as it guides teachers to students and future studies.

This aim of study is to determine the Relationship between Social Sciences High School and Science High School Students' Multiple Intelligence Levels and Learning Styles.

Subaims are as follows:

1- to determine the distribution of Social Sciences High School and Science High School Students' Multiple Intelligence domains
2- to determine the distribution of Social Sciences High School and Science High School Students' learning styles
3- to determine the relation level between Learning Styles and Multiple Intelligence areas of Social Sciences and Science High School student

Method

The relational survey model, one of the descriptive research models, was used in the study, which aims to reveal the relationship between the students' learning styles and the multiple intelligence areas in Social Sciences High School and Science High School by determining the students' learning styles and multiple intelligence areas. Relational survey model aims to determine the existence of co-change between two or more variables. In the relational survey model, whether the variables change together or not; If there is a change, it is tried to be determined how it happened (Karasar, 2011).

The study's sample is 9th, 10th, 11th and 12th grade students studying in Trabzon Science High School and Trabzon Social Sciences High School (Table 1).

Table 1 Distribution of Students by School

School Type	Grade				Total
	9	10	11	12	
Social Sciences High School	78	72	88	50	288
Science High Schools	82	90	100	201	473
Total	160	162	188	251	761

The necessary data was collected by applying "multiple intelligence areas inventory" and "learning styles inventory" to the participating students.

To find answers to the study's questions, the Multiple Intelligences inventory developed for third-, seventh-, and eleventh-grade students by Harms (1998) and adapted into Turkish by Oral (2001) was used to determine the students' multiple intelligences. In the study of Oral (2001), the Cronbach alpha coefficient was found to be 0.900. In this study, the Cronbach alpha coefficient was found 0.886. There are eight intelligence areas and ten expressions for each of these intelligence areas in the multiple intelligence inventory used. There are 80 expressions in total in the inventory. According to the answers given, the evaluation was made in 5 different categories. When evaluating, according to the preferences of the person, 1 " Strongly Disagree", 2 " Disagree", 3 " Neither Agree Nor Disagree", 4 "Agree" and 5 " Strongly Agree" were evaluated by scoring.

The Multiple Intelligence Inventory's score calculation is as follows; There are ten expressions in each sub-dimension. Since the expressions were scored between 1 and 5, the minimum score for ten statements was 10 (10 items x 1 point = 10 points), and the maximum score (10 items x 5 points = 50 points) was 50. For this reason, the scores varied between 10 and 50 points, and since it is a 5-point Likert type, the difference between the minimum score and the maximum score that can be obtained has been 50-10 = 40 points. The scoring interval (40/5 = 8) is set to 8. An average value between 10-18 in the calculation range is very low; between 19-26 is low, between 27-34 as medium, between 35-42 as high, and between 43-50 as very high.

Another data collection tool used in this study was the "Learning Styles Inventory" developed by Felder and Silverman in 1988 and adapted to Turkish by Fer (2003) and used to secondary school students and high school students in many studies (Danso and Mushayiwka, 2017; Anuar, Abdullah and Hod; 2020). The scale used consists of 44 expressions and includes a and b options. The scale is arranged in four dimensions and each of the four dimensions (Active/Reflective; Sensing/Intuitive;Visual/Verbal; Sequential/Global) is measured with 11 items. Each expression a and b options that make up the scale represent a sub-dimension of a different learning style. For example, a participant who marks the "a" option in all 11 questions that measure the Sensing/Intuitive score will get -11 points in this dimension, and the participant who marks the "b" option in all of them will get +11 points. For example, if the participant's score is negative, it shows that he/she is sensing in that dimension, and his/her positive score is intuitive. In the study conducted by Fer (2003), the Cronbach alpha coefficient of 0.580 was found. In this study, the Cronbach alpha coefficient was found 0.862.

Statistical analysis of the data obtained from Social Sciences and Science High School students were made using the SPSS 20.0 program. The distributions of measurements obtained from Social Sciences and Science High School students do not show normal distribution. Therefore, nonparametric statistics was used (Table.2)

Table 2 Normality test results of the inventories

		Kolmogrov-Smirnov			**Shapiro-Wilk**		
		Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Science High School	Multiple Intelligences inventory	.069	473	.000	.987	473	.000
	Learning Styles Inventory	.196	473	.000	.909	473	.000
Social Sciences High School	Multiple Intelligences inventory	.066	288	.004	.989	288	.028
	Learning Styles Inventory	.186	288	.000	.913	288	.000

Mann Whitney–U test and point-biserial correlation analysis were used for data. Point-biserial correlation coefficient (rb) If one of the variables whose degree of relationship is to be examined, two or more categories of attributes and the other continuous numerical data type, Eta square statistics are used. Eta square statistic is a correlation coefficient related to the change in averages due to the significance test of the difference between the mean (two or more). If the qualitative variable has two categories (such as male-female, successful-unsuccessful), the Eta square statistic is called the point-biserial correlation coefficients (Terzi, 2018).

Results and Discussion

The findings and discussion are sorted by research aims:
Findings and discussions of the first research aim:
Mann-Whitney-U test results on whether Social Science and Science High School students differ by multiple intelligences are shown in Table 3.

Table 3 Mann-Whitney-U test results on Social Science and Science High School students' multiple intelligences

Multiple Intelligence	School Type	N	Score	Level	Mean Rank	Sum Of Ranks	Mann Whitney U	Z	p
Bodily/ Kinesthetic	1	288	34.889	Medium	371.8	107078.5	65462.5	-0.903	0.367
	2	473	35.235	High	386.6	182862.5			
Interpersonal	1	288	32.653	Medium	377.11	108607	66991	-0.382	0.703
	2	473	32.970	Medium	383.37	181334			
Intrapersonal	1	288	34.372	Medium	377.42	108697	67081	-0.351	0.725
	2	473	34.531	Medium	383.18	181244			
Logical/ Mathematical	1	288	34.337	Medium	342.19	98550.5	56934.5	-3.807	0.000*
	2	473	35.814	High	404.63	191390.5			
Musical/ Rhythmic	1	288	36.583	High	396.46	114179.5	63660.5	-1.516	0.130
	2	473	35.886	High	371.59	175761.5			
Verbal/ Linguistic	1	288	33.833	Medium	400.79	115428	62412	-1.942	0.052
	2	473	33.121	Medium	368.95	174513			
Visual/ Spatial	1	288	36.333	High	380.55	109599	67983	-0.044	0.965
	2	473	36.421	High	381.27	180342			
Naturalist	1	288	32.990	Medium	340.23	97985.5	56369.5	-3.999	0.000*
	2	473	34.522	Medium	405.83	191955.5			

* 1: Social Sciences High School 2: Science High School

According to this distribution, students' multiple intelligences vary between 32,653 and 36,583. Considering the average of multiple intelligences of Social Sciences and Science High School students, it is observed that their interpersonal, intrapersonal, verbal/linguistic and naturalist intelligence levels are at a medium level. It is observed that the levels of musical/rhythmic intelligence and visual/spatial intelligence fields are high. In bodily/kinesthetic and logical/mathematical intelligence, it was determined from the findings that Social Sciences High School students were at the middle level and Science High School students were at a high level. According to the Multiple Intelligence Inventory score calculation we used in the study; the lowest intelligence field was determined as the Social Sciences High School students' interpersonal intelligence field with 32,653. At the same time, the highest was the musical/rhythmic intelligence field of the Social Sciences High School students with 36,583.

When Table 3 was examined, it was determined that there was no statistically significant difference between the bodily/kinesthetic, interpersonal, Intrapersonal, musical/rhythmic, verbal/linguistic, and visual/spatial intelligence domain scores of the multiple intelligence domains in terms of school type ($p > 0.05$). The scores of

logical/mathematical intelligence and naturalist intelligence were found to be statistically significant between the multiple intelligence fields of Social Sciences and Science High School students ($p < 0.05$). In comparing social sciences and science high school types according to multiple intelligence domains, it was found that logical/mathematical intelligence and naturalist intelligence scores were more dominant in Science High School students.

When the results of the Mann-Whitney-U Test on whether Social Sciences and Science High School students differ according to their multiple intelligence fields and school type, it was determined that the average scores of the multiple intelligence fields were generally at a moderate level, and the musical and visual/spatial intelligence fields from the multiple intelligence fields were highly developed regardless to school type. In mathematical and bodily/kinesthetic intelligence fields, it has been determined that it is at a medium level in Social Sciences High School students and a high level in Science High School students.

Considering the statistical results regarding whether the levels of intelligence domains of Social Sciences and Science High School students differ according to the type of school when the bodily/kinesthetic, interpersonal, intrapersonal, musical/rhythmic, verbal/linguistic, visual/spatial intelligence domain scores among the intelligence domains were compared in terms of school type, there was no statistically significant difference between them. ($p > 0.05$), when comparing the scores of mathematical and naturalist intelligence in terms of school types, it was determined that the mathematical and naturalist intelligence scores of the Science High School students were higher than the Social Sciences High School students. In line with these results, the fact that the field courses of the Science High School students in the educational institution where they study are also oriented to the fields of science and mathematics in the academic sense has caused the mathematical intelligence fields and naturalist intelligence to develop more than the Social Sciences High School students.

In studies which multiple intelligence areas of students in different high school types were determined, it was concluded that the mathematical intelligence areas of Science High School students were higher than those of other high school types (Korkmaz & Yeşil, 2011). When looking at the studies in which multiple intelligence levels were determined without making any comparison between high schools, it was seen that the dominant intelligence levels were mathematical and musical/rhythmic intelligence (Güllü & Tekin, 2009). The findings obtained at the end of these studies are similar to the result of our study that the students studying at Social Sciences and Science High Schools, which are two different high school types, have a high level of musical/rhythmic intelligence in both high school types, and the field of mathematical intelligence is at a high level in Science High School. In another study, the field of musical/rhythmic intelligence differs from our research results as it is the least preferred field of intelligence among both groups included in the study (Koura & Al-Hebaishi, 2014).

Findings and discussions of the second research aim:

The frequency rates of the Social Sciences and Science High School students' learning styles are shown in Table 4. Considering the Social Sciences High School students' average learning styles in Table 4, the Social Sciences High School students' average learning style is 62% reflective learning style, 61% sensing learning style, 79% visual learning style and 62% global learning style. Considering the average learning styles of Science High School students, 63% reflective learning style, 55% sensing learning style, visual/verbal learning styles 75% visual learning style, 57% global learning style. When the findings obtained from Table 4 were examined, it was determined that the students highest with the visual learning style of 79% and the lowest with the verbal learning style of 21% were students studying at the Social Sciences High School.

Table 4 Mann-Whitney-U test results on Social Science and Science High School students' learning style

Learning Styles	**School Type**	**N**	**f**	**Mean Rank**	**Sum of Ranks**	**Mann Whitney U**	**Z**	**p**
Active/ Reflective	1	111	%38	367.38	105806	64190	-1.347	0.178
		177	%62					
	2	176	%37	389.29	184135			

Sensing/ Intuitive	1	297	%63	403.15	116106	61734	-2.185	0.029*
		176	%61					
		112	%39					
	2	260	%55	367.52	173835			
		213	%45					
Visual/ Verbal	1	228	%79	395.30	113846	63993.5	-1.411	0.158
		60	%21					
	2	244	%75	372.29	176094.5			
		118	%25					
Sequential/ Global	1	110	%38	383.87	110554	67286	-,284	0.776
		178	%62					
	2	202	%43	379.25	179387			
		271	%57					

* 1: Social Sciences High School. 2: Science High School

When Table 4 is examined, according to the results of the Mann-Whitney-U test conducted to determine whether the learning style averages of the Social Sciences High School and Science High School students participating in the study create a statistically significant difference according to the school type variable, there was no statistically significant difference between the averages of students with active/reflective, visual/verbal, and sequential/global learning styles (p> 0.05). It was found that there is a statistically significant difference between the types of schools in which the Social Sciences High School and Science High School students attended the study in sensing/intuitive learning style, which is one of the sub-dimensions of their learning styles. (p <0.05). According to the difference between the averages, it was determined that the sensing/intuitive learning style in the Social Sciences High School was more dominant than the Science High School students.

Considering the distribution of learning styles of Social Sciences and Science High School students according to the difference between schools, no statistically significant difference was found between the averages of the students with active/reflective, visual/verbal, and sequential/global learning style dimensions of Social Sciences and Science High School students' learning styles (p> 0,05). It was found that the average of the sensing/intuitive learning style dimension of the Social Sciences and Science High School students was a statistically significant difference according to the difference between schools (p <0.05). Considering the difference between the average learning style among high schools, it was concluded that sensing learning style is dominant in both Social Sciences and Science High Schools, but intuitive learning style is more dominant in Science High School than Social Sciences High School.

Individuals with sensing learning style, one of the sensing/intuitive learning style dimensions, practice memorizing, and processing information in detail. Individuals with an intuitive learning style are good at using mathematical formulas but do not like memorization and ordinary calculations (Yeşilyurt, 2019). Therefore, according to the data we obtained as a result of the research, the predominance of the sensing learning style in both high schools and the predominance of the intuitive learning style among the Science High School students compared to the Social Sciences High School students, the content of the courses taken by the students in the type of school they attended and the individual differences of the students of these school types entered by exam It is supported by the use of preferences.

When the studies related to our study in the literature are examined, the result of our research is parallel to the conclusion that the majority of the students in the science department have a sensing learning style, which was revealed in the studies of Şeker Sır, Karataş & Çeliköz (2015), which was examined the relationship between

the departments that student's study and their learning styles. Keskin Samancı & Özer Keskin's (2007) study shows that most of the social studies department students have an intuitive learning style differs from our study's result.

Findings and discussions of the third research aim:

The relation between Learning Styles and Multiple Intelligence areas of Social Sciences and Science High School students is shown in Table 5.

Table 5 Correlation Values Between Social Sciences and Science High School Students' Learning Styles and Scores of Multiple Intelligence Areas

Multiple Intelligence	School Type	Learning Styles			
		Active/ Reflective	Sensing/ Intuitive	Visual/ Verbal	Sequential/ Global
Bodily/Kinesthetic	1	0.172**	0.227**	0.006	0.026
	2	0.093*	0.025	0.036	0.061
Interpersonal	1	0.243**	0.171**	0.001	0.050
	2	0.189**	0.064	0.015	0.000
Intrapersonal	1	0.006	0.154**	0.054	0.023
	2	0.053	0.044	0.066	0.015
Verbal/Linguistic	1	0.083	0.140**	0.167**	0.002
	2	0.050	0.136**	0.068	0.004
Logical/Mathematical	1	0.045	0.181**	0.048	0.111
	2	0.017	0.059	0.002	0.038
Musical/Rhythmic	1	0.170**	0.040	0.093	0.052
	2	0.021	0.023	0.001	0.078
Naturalist	1	0.132*	0.110	0.137*	0.046
	2	0.059	0.064	0.004	0.018
Visual/Spatial	1	0.059	0.148*	0.182**	0.057
	2	0.051	0.100*	0.105*	0.016

* 1: Social Sciences High School. 2: Science High School

* $p < 0.05$, ** $p < 0.01$

As can be seen in Table 5, although it is not very strong, it has been determined that there are positive correlations between students' learning styles and multiple intelligences. Science High School students; between active/reflective learning style and bodily/kinesthetic and interpersonal intelligence; between sensing/intuitive learning style and verbal/linguistic, logical/mathematical and visual/spatial intelligence; Significant positive relationships were found between visual/verbal learning style and visual/spatial intelligence. However, a positive relationship but not significant was found between sequential/global learning style and intelligence types. These findings support results of similar studies in the literature. Can (2007), research on high school students, mathematical intelligence was found between the verbal/linguistic intelligence domain and the auditory learning style, the bodily/kinesthetic intelligence domain and the bodily/kinesthetic learning style, the intrinsic intelligence domain and the visual learning style, the musical/rhythmic intelligence domain, and the auditory learning style. It has been observed that there is a significant and significant relationship between the field of learning and bodily/kinesthetic learning style, between the visual/spatial intelligence domain and the visual learning style, the interpersonal intelligence domain, and the bodily/kinesthetic and auditory learning styles. Baleghizadeh and Shayeghi (2014) in their study on students of various ages; linguistic intelligence and tactile as well as auditory learning style preferences; mathematical intelligence and individual learning style; bodily/kinesthetic intelligence as well as kinesthetic group learning styles; In addition to intrapersonal intelligence and individual learning style and interpersonal intelligence and group learning style preferences, there are positive relationships between mathematical intelligence and group learning, and they could not find a significant relationship between visual and musical/rhythmic intelligence and all learning style preferences. Tekiner (2005), in his studies, Turkish university students' interpersonal intelligence and group learning style; linguistic intelligence and individual learning style; mathematical intelligence and individual learning style; emotional intelligence and individual learning style; They found positive relationships between interpersonal intelligence and kinesthetic learning styles.

In Social Sciences High School students, between active/reflective learning style and bodily/kinesthetic intelligence, interpersonal intelligence, musical/rhythmic intelligence, and naturalist intelligence; sensing/intuitive learning style province between bodily/kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, verbal/linguistic intelligence, logical/mathematical intelligence, and visual/spatial intelligence; Significant positive relationships were found between visual/verbal learning style and verbal/linguistic intelligence, naturalist intelligence, and visual/spatial intelligence. However, a positive but not significant relationship was found between sequential/global learning style and intelligence types. This finding was congruent with the previous studies. Demir (2010), in his research on ninth-grade students, revealed a positive linear relationship between the visual/visual, Auditory / Verbal-Musical, and Bodily / Bodily pairs at medium and low levels. Other domains of multiple intelligences can explain learning styles at a much lower rate. So, there is no high-level explanation that completely overlaps. Aygül and Koç (2016) observed a low-level positive relationship between learning styles and multiple intelligence scores. According to the research findings, the highest correlation was found between visual/spatial intelligence scale scores and sensing/intuitive learning style (r = 0.292). The lowest correlation was found between intrapersonal intelligence scale scores and visual/verbal learning style (r = 0.196). Seifoori and Zarei (2011), tactile learning style and mathematical intelligence in Iranian university students in their study; kinesthetic learning style and mathematical intelligence; tactile learning style and spatial intelligence; Significant positive relationships have emerged between tactile learning style and bodily/kinesthetic intelligence and kinesthetic learning style and bodily/kinesthetic intelligence.

When the relationship between Social Sciences and Science High School students' learning styles and their scores on multiple intelligence domains was examined, there were significant but positive relationships in all three learning style dimensions. According to the results, it was determined that although there was a positive relationship between the sequential/global learning style dimension of the Science and Social Sciences High School students and any of the intelligence domains, there was no significant relationship. The similarity between all intelligence domains and all learning styles reveals that although individuals' strong intelligence areas are different, their preferred learning styles are similar. These findings support Gardner's (1993) thoughts. According to Gardner, the theory of multiple intelligences and learning styles are similar. However, Gardner states that these similarities are between pairs that resemble each other and that there is a low level of similarity. Considering the studies in the literature in which Multiple Intelligences Theory and learning styles were investigated together, similar results were obtained with our research results. In studies examining the relationship between high school students' multiple intelligences and learning styles, there is a positive relationship between learning style and multiple intelligence domains (Baleghizadeh & Shayeghi, 2014; Snyder, 1999; Alrabah, Wu & Alotaibi, 2018). In studies examining the relationship between intelligence types and learning styles of university students, it was found that there are significant differences between the intelligence domain and learning style (Tekiner, 2005; Seifoori & Zarei, 2011; Panahandeh, Khoshkhoonejad, Mansourzadeh, & Heidari, 2015; Aygül & Koç, 2016; Şener and Çokçalıkan 2018).

This research and the results of similar studies in the literature show that multiple intelligences significantly affect students' learning styles and students tend to prefer learning styles that are compatible with their intelligence preferences. Teachers can use these findings to identify students 'learning styles compatible with appropriate intelligence types and apply appropriate tools to improve academic teaching and ensure optimum learning according to students' needs. It can also serve as an important auxiliary tool to introduce students' types of intelligence and learning styles in the education system, motivating them to realize their potential in achieving their desired learning goals. Therefore, it is necessary for the teachers to know their students' intelligence types and preferred learning styles for pedagogical applications.

Conclusion

As a result, this study is one of the rare studies involving 9th, 10th, 11th, and 12th grade students studying at the Science High School and Social Sciences High School preferred by the students who are successful in the transition to secondary education and comparing the Social Sciences and Science High Schools in terms of school type. As a result of our study, it was determined that students' intelligence areas and learning styles in different school types show statistically significant differences. In line with these data, it is thought that students' awareness of their differences and their education in schools enriched in terms of program and course functioning will bring individual success along with the dimensions of learning style and intelligence areas where individual differences are most evident.

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International Journal of Contemporary Educational Research (IJCER)

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An Analysis of the Studies on "The Values in Children's Literature Products" in Turkey

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Article History
Received: 16.02.2021
Received in revised form: 25.04.2021
Accepted: 11.06.2021
Available online: 03.09.2021

To cite this article:

Kurtdede Fidan, N. & Ulu, H. (2021). An analysis of the studies on "the values in children's literature products" in Turkey. *International Journal of Contemporary Educational Research, 8*(3), 103-118. DOI: https://doi.org/10.33200/ijcer.881495

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 103-118 ISSN: 2148-3868

An Analysis of the Studies on "The Values in Children's Literature Products" in Turkey

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Abstract

It is seen that the number of studies dealing with the values in children's literary products has been increased. Although there are many reviews on the studies concerning with value education, these reviews do not provide some significant details about these studies. This study has provided a content analysis of the studies on the values in children's literature. In order to achieve this aim a total of 136 studies carried out in the period between 2007-2020 were analyzed. Of these studies 44 were articles and 92 were theses. The data were first collected through the "form of publication classification on the values in children's literature works". It has been found that the values in children's literature works are mostly analyzed in master's thesis. Within these studies the most frequently analyzed literary genre has also been found to be stories. In the master's thesis there are analyses on a single work or on multiple works. It has been also found that the literary works analyzed are mostly by Turkish authors. The values covered in children's literature works have been analyzed taking into consideration the Turkish courses educational programs and core values list. It has been found that the most frequent values covered in children's literature works affection truthfulness, honesty, helpfulness.

Key words: Children's literature works, Values and Qualitative research

Introduction

It is important and necessary for individuals to have values both for their personal development and for the formation of democratic societies. In the formation of democratic and developed societies, it is important and necessary for individuals to gain knowledge and skills in basic fields such as basic mathematics, language and science, as well as gaining values such as empathy, love, respect, tolerance and solidarity. Values reflect individuals' attitudes, judgments, decisions, choices, behaviour, relationships and vision. These constructs influence their thoughts, feelings and actions and guide their tendency to do the right things (Venkataiah & Sandhya, 2008). Additionally, values are defined in various ways such as truthfulness, honesty, love, happiness and beauty. Values are considered good because they are important things related to an individuals' life (Sutrop, 2015). Values refer to a collection of principles that take their roots from the past and tradition and extend to today and tomorrow nourished by these roots. The values that constitute the basic personal characteristics of individuals are the basis of the source that empowers individuals to cope with problems and solve them (MONE, 2018).

How and by what means to teach values to children have always been discussed. It can be said that children gain value from many educational or media sources such as children's books, magazines and cartoons. In regard to literary works the children's books are an important source for children to gain values. The work in children's literature such as fairy tales, stories and legends are among the important resources in conveying many social, moral, personal and religious values to children (Court & Rosental, 2007). The target audience of children's literature is children, and children's literary work is composed of verbal, written and visual products which address their emotional, imaginative states and thoughts. Children may similarities in this work with their environment. Additionally, children may have an opportunity to make connections and comparisons between what is written or narrated and what they experience (Karatay, 2015). Eryılmaz and Çengelci Köse (2018) state that children meet with values through literary works, embody and internalize these values by seeing the values in heroes or events narrated, and decide on which values they adopt through their own mental filter.

There are some studies dealing with the content of children's literary works in terms of values and the contributions of these works in gaining values by children. Some studies analyzed the children's books in terms

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of values (Court &Rosental, 2007; Erdoğan, 2017; Fidan, 2019; Kaçmaz, 2018; Karagöz, 2017; Kılıç & Aktan, 2015; Tümen, 2018). The others dealt with children's magazines in terms of the values covered (Alabaş & Kamer, 2016; Alabay et. al., 2018; Güler, 2019; Okumuş, 2018, Yeter, 2019). There are other studies dealing with the analysis of values in cartoons or animation movies (Akıncı & Güven, 2014; Bölük, 2018; Gómez & García, 2020; Kenna & Waters, 2017; Khalida, Meeraha & Halim, 2010; Özaydın 2020; Yaman, et. al., 2015; Żebrowski, 2017; Zong, Qi & Zong 2020), in poems (Kurtoğlu 2017; Küçükkaya 2014; Zavotçu 2012) and in biographical works (Er & Şahin, 2012; Kaymakcı & Er, 2009; Yiğittir & Er, 2013).

Classifying studies, identifying trends and making evaluations based on the research findings provide significant benefits for researchers (Selçuk, et. al., 2014). There are a total of ten research studies related to the revision of the value of education in Turkey (Adıgüzel & Ergünay, 2012; Baş & Beyhan, 2012; Beldağ 2016; Elbir &Bağcı 2013; Gözler et. al., 2020; Güçlü 2015; Gündüz, Başpınar & Büyükkarcı, 2017; Kapkın, Çalışkan & Sağlam, 2018; Kurtdede Fidan & Öner, 2018; Metin & Yılmazer, 2019). These studies analyzed the work on value education published between 2012 and 2020. Some of this research includes only research conducted graduate studies to examine the value of training in Turkey (Adıgüzel & Ergünay, 2012; Baş & Beyhan, 2012; Elbir & Bağcı 2013; Gündüz et. al., 2017; Kapkın, et. al., 2018; Kurtdede Fidan & Öner, 2018). The others mostly focused on other research types. There is only one study in which the tendency of the studies on values and value education in Turkey was analyzed. The sample of this study is the conference papers presented at the International Social Studies Education Symposium (USBES) during the period between 2012-2017 (Metin & Yılmazer, 2019). These reviews seek to identify general trends in values education in Turkey, and they include several proposals for new future research. Since there is a lot of research on value education, these studies try to reveal general results for value education. In this current study, has been aimed to analyse and review the studies conducted in the field of values in children's literature products and to determine their value classifications, results, suggestions and the major values that are focused on in the works. In children's literature products, which are considered as one of the basic resources in the field of value education, which values have been focused on, which values have not been focused on. While determining this situation is important in using children's literature products as a source in gaining some values, it will provide an idea that it is weak in gaining some values. This situation will create the need for educators to use different resources in this field. In addition, it is expected that there will be a preliminary study on which values should be focused on in the future children's literature products. Therefore, the aim this study has been to determine the major tendency of the studies that examine children's literature products in terms of value education. Determining the changes and developments in the field of value education in regard to the children's literature products within a certain period of time is important in terms of providing information to teachers and researchers. In line with the aim of the study, the following research questions were developed and answered in the study:

1. How are the studies analysing the values in children's literature distributed in terms of the following points?
   - Research type,
   - Literary genre,
   - Research design,
   - Data collection,
   - Analysis of values,
   - Data analysis,
   - Validity and reliability analyses
2. What are the most frequent values covered in the studies analysing the values in children's literature?
3. What are the major results reported in the studies analysing the values in children's literature?
4. What are the major suggestions proposed in the studies analysing the values in children's literature?

Methodology

Research model

This study dealing with the review of the studies on the values covered in children's literature in Turkey based on certain criteria and with revealing the major tendency of these studies is a descriptive research in which qualitative techniques are employed. "Qualitative research can be defined as a research in which qualitative data collection methods such as observation, interview and document analysis are used, and a qualitative process is followed to reveal perceptions and events in a realistic and holistic manner in their natural environment" (Yıldırım & Şimşek, 2011, p. 39). In the study content analysis was employed. Because content analysis makes it possible to collect similar data within the framework of certain concepts and themes and to interpret them in a form that the reader can understand (Creswell, 2012). In this study, qualitative research data, findings and

results which are the subject of examining children's literature products in terms of value education were re-synthesized and interpreted with a critical perspective.

Sampling

The sampling of the study included both theses accessed through higher education council's theses center and articles which are accessed through Google Scholar which analyse the children's literature in terms of value education. The studies to be reviewed were chosen through the purposive sampling technique. "Purposeful sampling allows in-depth investigation of sources that are thought to offer rich information about the topics of the study" (Büyüköztürk et. al. 2009, p. 89). In the review only those studies which are concerned with Turkish children's literary works in terms of value education that were carried out between 2007 and 2020. In order to make a productive review of the related literature key words should be employed. Therefore, in the review the following key words are used to identify the proper studies: "children's books", "in terms of value education" and "based on value education". As a result a total of 202 studies were found, but of them 136 studies were included in the sample. The following points were taken into consideration to choose the studies to review:

- The studies should be about children's literature. Therefore, those dealing with some books that are not part of children's literature even though target secondary education level (cartoons, proverbs, and so on) were excluded.
- Those studies which were carried out in Turkey and published in Turkish were selected for the sample.
- Those articles which were some versions of the theses that had been already included in the sample were excluded from the sample of the study.
- The following studies were also excluded from the sample: those which deal with children's literature in terms of violence, human rights, manual skills, and negative habits, and those which analyse the book in terms of external features (size, layout, text and imprint information) or internal features (language and style, topics and themes, characters and pictures) or in terms of educational elements. Additionally, when any study does not include the necessary information about books such as the title, author or does not provide any information about the points that the current review focuses on, it was not included in the sample of the study.

Data collection tool

The data of the study were collected using the form of publication classification on the values in children's literature works which was developed by the authors. The form is consisted of thirteen categories. It was developed based on the review of similar studies. Three external experts analyzed the form in terms of its consistency with the aim and scope of the review to establish its content validity. The draft form was modified based on the feedback from the experts. Then it was used to analyse ten studies which were also included in the sample. The data from the pilot study were analyzed by the authors separately. These analyses were later discussed to identify the missing and redundant parts of the form. As a result, the form was expanded with necessary addition (i.e., the author, the number of studies analyzed, age group of the target audience, and classification of genres) and redundant parts were omitted. Based on these modifications, the form was finalized. The ethical approval was granted before the study (Afyon Kocatepe University, Ethical commission date of the ethical approval=17.08.2020 and number of the approval document= 2020/138).

Data collection procedure

As stated earlier first the related literature was analyzed to find the articles and theses to be reviewed. Following the selection of the studies based on the criteria given above these studies were examined through the document analysis. "Document analysis covers the analysis of written materials containing information about the facts and cases that are aimed to be investigated." (Yıldırım & Şimşek, 2011). The review of the studies lasted for nearly six months. The review of the databases was started on 21.02.2020. The data analyzed was completed on 15.08.2020. Until 11.09.2020 the study was written. In both selection of the studies to be reviewed and the data collection the following steps were followed: 1. Identification of study field, 2. identification of key words, 3. review of the studies, 4. based on the criteria established the evaluation of the study included in the sample and 5. The finalization of the sample. Notes taken for each study were added to Tables developed on computer. The analyses produced several categories that were consistent with the criteria.

Data analysis

The data that had been collected through document review and encoded through the research review form were analyzed using the content analysis. "The main process in the content analysis is to gather similar data within the framework of certain concepts and themes and to interpret them in a way that the reader can understand."

(Yıldırım & Şimşek, 2011). All of the studies included in the sample were recorded in the form. All studies were transmitted into a Word file consisting of fifty pages in total. The studies were coded and read one by one, and analyzed by considering the aims and research problems of the study. As stated earlier the data collected were examined using the content analyses. Content analysis is generally performed using the following five steps: (1) coding of the data, (2) identifying the themes, (3) organization of codes and themes, (4) establishing validity and reliability, and revealing the frequency and (5) discussing and interpreting the findings (Denzin & Lincoln, 2005).

Validity and reliability

Necessary notes were taken about all the studies read, and the data were repeatedly examined by the authors on different occasions to avoid data loss. The process of coding the data and transferring it to themes was carried out by two researchers to ensure consistency. The appropriateness of the analysis was evaluated, and necessary changes were made as a result of the evaluation. Additionally, it is also important for the validity of the study that the studies reviewed are accessible to all researchers. The information included in the relevant theses was used while filling the review form, and the symbol "-" was used in cases where the required information was not available. Following the completion of the data analysis, the analyses carried out by the two authors were compared. It was determined that there was general consistency in the analyses. The data for which there was no consensus were rexamined and corrected. Figure 1 depicts the research design:

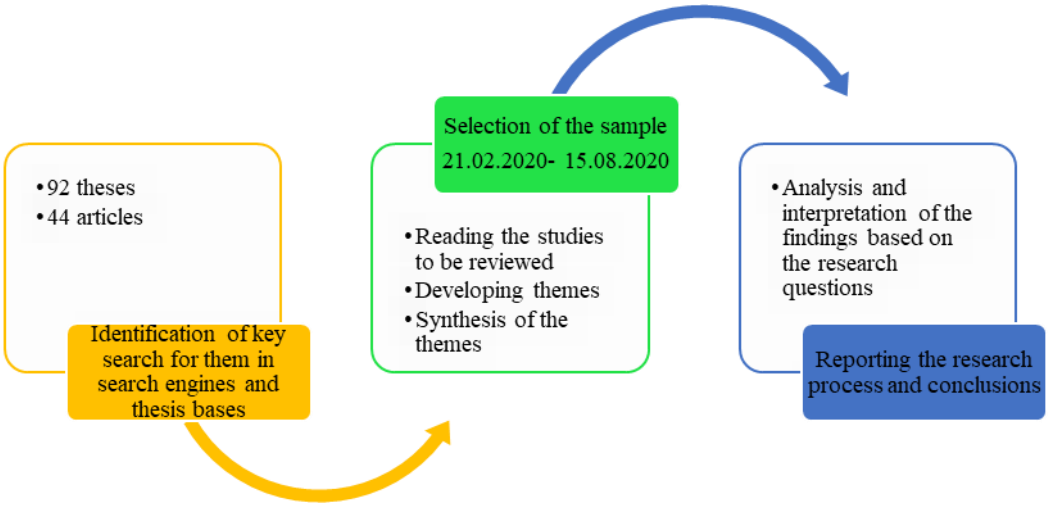

Figure 1. Research process

Findings

The distribution of the reviewed studies based on research type is given in Table 1 based on research type.

Table 1. Distribution of the reviewed studies based on the research type

Research type	Frequency(f)	Percentage (%)
Articles	44	32.3
Master's theses	89	65.4
PhD theses	3	2.20
Total	136	100

As can be seen in Table 1 there are 136 researches on the analysis of values in the children's literature works. Of them 32.3% are scientific articles (f=44), 65.4% are master's theses (f=89) and 2.20% are PhD theses (f=3). Therefore it is seen that the most frequent type of research is master thesis during the period of publication covered in the study. Additionally three PhD theses were carried out in recent period. The distribution of articles and theses reviewed based on publication/completion year is given in Table 2.

Table 2. Distribution of reviewed articles and theses based on publication/completion year

Publication/completion years	Articles	Theses	Total	
	f	f	f	%
2007	0	2	2	1.47
2009	0	1	1	.73
2011	0	2	2	1.47
2012	2	4	6	4.41
2013	0	4 (one PhD thesis)	4	2.94
2014	1	8	9	6.61
2015	4	7	11	8.08
2016	5	7	12	8.82
2017	5	7	12	8.82
2018	14	12	26	19.11
2019	7	35 (two PhD theses)	42	30.88
2020	6	3	9	6.61
Total	44	92	136	100

Table 2 presents the distribution of the studies reviewed based on publication/completion years. Within the study period the first study on the analysis of values in the children's literature works is a master's thesis carried out in 2007. In the period between 2007 and 2020 there are 92 theses of three of which are PhD theses. Particularly in 2019 the highest number of theses was produced (f = 35). In regard to the articles on the analysis of values in the children's literature works, it is seen that the first article was published in 2012. The number of articles on the topic has been increased since then. The highest number of articles on the analysis of values in the children's literature works is seen in 2018. The distribution of articles and theses reviewed in the study based on the genre is given in Table 3.

Table 3. Distribution of articles and theses based on genre

Genre	Articles	Theses	Total	
	f	f	f	%
Story/tale	10	27	37	27.20
Novels	9	14	24	17.64
Fairy tale	6	12	18	13.23
Children's magazines	3	7	10	7.35
Children's books	0	5	5	3.67
100 core works	2	4	6	4.41
Illustrated children's books	3	4	7	5.14
Novel-story	0	5	5	3.67
Poem	2	1	3	2.20
Drama	2	0	2	1.47
Tale-novel	1	1	2	1.47
Anecdote	1	0	1	.73
Biography	1	0	1	.73
Jokes	1	0	1	.73
Songs	1	0	1	.73
Fable	1	0	1	.73
Multiple genres	1	12	13	9.55
Total	44	92	136	100

As can be seen in Table 3 the most frequently analyzed genre in the master's theses is story/tale genre which was examined in twenty-seven theses. The same genre is also the most frequently analyzed genre in the scientific articles (f=10). In both groups of research novels (f=24) and fairy tales (f=18) are also common study topics. In theses and articles thirty-seven stories, twenty-four novels and eighteen fairy tales are analyzed as genres of children's literature. Some master's theses in the sample dealt with the analysis of more than one literary work (f=12). Different volumes of a children's magazine were analyzed in both theses (f= 7) and scientific articles (f=3) in terms of values. Table 3 also indicates that children's books are analyzed separately. There are some master's theses which analyzed children's books that were the best-selling ones based on the lists of bookstores and websites (f=5). It is also found that the books analyzed target pre-school children aged between 3-6, and these books were examined concerning the values they covered both in scientific articles (f=3)

and in theses (f=4). Table 4 presents the distribution of the sample based on the authors and literary works analyzed.

Table 4. Distribution of the sample based on the authors and literary works

Author and literary work	Articles	Theses	Total	
	f	f	f	%
One author one work	9	4	13	9.55
One author, more than one work	20	50	70	51.47
Multiple authors and multiple works	5	13	18	13.23
Turkish authors	29	70	99	72.79
International authors	7	5	12	8.82
Turkish and international authors	1	2	3	2.20
One children's magazine	3	5	8	5.88
Multiple children's magazines	0	2	2	1.47

Table 4 indicates the distribution of the studies which examine the children's literature in terms of value education based on the following points: the number of authors and works analyzed, the number of Turkish and international authors and the number of children's magazines analyzed. It is found that in the studies mostly a single author and his/her works are analyzed in terms of values. There are nine articles and four theses which analyzed the works by one author. Additionally, there are also studies in which the works by multiple authors are analyzed concerning the values. The number of studies dealing with th literary works by Turkish authors is found to be much more (articles f= 29 and theses f= 70) (The authors were counted once more in the theses that examined the works of the same author). Those literary works written by international authors are more frequently analyzed in the articles (f= 6) in contrast to theses (f=1). It is found that mostly one children's magazine is analyzed in the sample whereas there are two theses which analyzed the values in different volumes of different children's magazines. Table 5 shows the distribution of the sample based on the research model employed.

Table 5. Distribution of the sample based on the research model

Research model	Articles	Theses	Total	
	f	f	f	%
Qualitative research / document review-analysis	23	37	60	44.11
Survey-based qualitative research	10	35	45	33.08
Descriptive model / descriptive study	4	8	12	8.82
No mention	5	6	11	8.08
Survey model	1	6	7	5.14
Analytical research	1	0	1	.73
Total	44	92	136	100

As seen in Table 5 document analysis was employed in twenty-three articles and thirty-seven theses. The survey-based qualitative research model is also used in the studies reviewed (f=45). It is followed by descriptive models (f=12), survey models (f=7), and the analytical research model (f=1). In some studies there is no mention of a research model (f=11). Table 6 shows the distribution of the studies reviewed based on their sampling techniques.

Table 6. Distribution of the studies reviewed based on their sampling techniques

Sampling technique		Articles	Theses	Total	
		f	f	f	%
No mention of sampling technique including the reasons for choosing the sample and the selection procedure		29	69	98	72.05
Improbable sampling technique / Purposive sampling technique	Criterion sampling	3	8	11	8.08
	Purposive sampling	4	1	5	3.67
	Maximum variety sampling	1	0	1	.73
	Homogenous sampling	1	0	1	.73
	Typical sampling	0	1	1	.73
	Convenience sampling	0	1	1	.73
Probability-based sampling technique	Random sampling	4	6	10	7.35
	Stratified sampling	1	0	1	.73
Sampling of all works by the author		1	6	7	5.14
Total		44	92	136	100

As can be seen in Table 6 the sample is categorized into three based on the sampling techniques used: Improbable sampling technique, Purposive sampling technique and Probability-based sampling technique. However, in twenty-nine articles and sixty-nine theses there is no mention of sampling techniques. The most frequently sub types of the improbable and purposive sampling techniques used in the studies reviewed are found to be criterion sampling (f=11) and purposive sampling (f=5). It is found that the following subtypes were used at equal rate: Homogenous sampling, typical sampling and convenience sampling. Of the probability-based sampling technique the most frequent one is found to be random sampling technique (f=10). In one study the stratified sampling technique was employed (f=1). In some studies all works of an author were covered. Table 7 presents the distribution of the sample depending on the value classification.

Table 7. Distribution of the sample based on value classification

Value classification	Articles	Theses	Total	
	f	f	f	%
Values covered in the Turkish language education program and core values	5	22	27	19.85
Value classification based on the literature review	11	14	25	18.38
Established value classifications	8	15	22	16.17
Values covered in the social studies education program	6	7	13	9.55
Values covered in the education programs for different courses	3	9	12	8.82
Religious values	2	7	9	6.61
National values	1	5	6	4.41
Core values	1	5	6	4.41
Values identified by the authors	4	1	5	3.67
Values covered in the MONE's regulation on value education/ values covered in the education programs for different courses	1	4	5	3.67
Universal values	0	3	3	2.20
Single value analysis	4	0	4	2.94
Total	44	92	136	100

As can be seen in Table 7 the studies reviewed include different value classifications. Of them five articles and twenty-two theses employed those values covered in the Turkish language education program as well as the core values. ın the twenty-five studies reviewed there is no reference to the value classification employed, but the values were identified through the examination of the related studies. The value classifications developed by different authors were used in twenty-two studies analyzed. Those values covered in the social studies education program were employed in thirteen studies included in the sample. There twelve studies which used the values covered in the education programs for different courses. On the other hand, religious values were taken as a basis in nine studies. The value analysis basis of six studies reviewed is national values. The core values were used as the basis for analysis in six other studies in the sample. It is also found that three studies focused on universal values. A single value was analyzed in four of the studies contained in the sample. Table 8 indicates a distribution of the sample based on the data analysis techniques used.

Table 8. Distribution of the analyzed studies in terms of data analysis techniques employed

Data analysis technique	Articles	Theses	Total	
	f	f	f	%
No mention of a specific data analysis technique, but identifying the expressions appropriate to the value / labeling or classifying the values based on the main idea of the texts	10	33	43	31.61
Descriptive analysis	12	18	30	22.05
Content analysis	9	20	29	21.32
No mention of data analysis	8	14	22	16.17
Descriptive and content analysis	5	7	12	8.82
Total	44	92	136	100

Table 8 shows that the studies covered in the sample employed descriptive analysis (f=30), content analysis (f=29) and a combination of descriptive and content analysis (f=12) to examine the data collected. In forty-three studies there are no specific data analysis reported, but the use of expressions consistent with the values, categorization of the values depending on textual features and depending on the main ideas. There are twenty-

two studies in which there is no specific reference to the data analysis employed. Table 9 shows the distribution of the studies sampled in terms of the validity and reliability analyses.

Table 9. Distribution of the studies sampled in terms of the validity and reliability analyses

Validity and reliability analyses (Credibility, transferability, consistency and verifiability)	Articles	Theses	Total	
	f	f	f	%
Direct quotations	44	65	109	80.14
Expert reviews (Consistency of the values identified)	16	18	34	25
No reference to validity and reliability analyses	0	17	17	12.5
Long-term interaction / Reexamination of the data	7	9	16	11.76
Detailed explanation and description of the process	3	10	13	9.55
Expert views (in regard to value classification)	2	9	11	8.08
Consistency rate	4	1	5	3.67
Specifying the researcher role	0	4	4	2.94
Expert views (in regard to the selection the works)	1	2	3	2.20
Expert views (in regard to research process)	0	1	1	.73

Table 9 shows that direct quotations were employed in 109 studies in the sample to establish validity and reliability. In several studies expert views were used to establish validity and reliability. More specifically, expert views were sought in regard to the consistency of values (f=34), the classification of value forms (f=11), consistency rate (f=5), the inclusion of works in the sample (f=3) and the research process (f=1). There are studies which employed other ways of establishing the validity and reliability such as long-term interaction or reexamination of the data (f=16), the detailed explanations and descriptions of the process (f=13) and specification of the roles of the researchers (f=4). However, in some studies included in the sample there is no specific reference to the procedures about validity and reliability (f=17). Table 10 present the distribution of the major values described in the studies analyzed.

Table 10. *Distribution of the major values described in the studies analyzed*

Values	Articles	Theses	Total	
	f	f	f	%
Affection	33	100	133	97.79
Honesty	26	98	124	91.17
Helpfulness	27	80	107	78.67
Respect	18	86	104	76.47
Responsibility	19	75	94	69.11
Preserving and enhancing cultural values / heritage	17	74	91	66.91
Diligence	23	67	90	66.17
Fairness	18	64	82	60.29
Friendship	17	60	77	56.61
Solidarity	15	58	73	53.67
Braveness	12	61	73	53.67
Patriotism	14	57	71	52.20
Patience	13	53	66	48.52
Hospitality	12	50	62	45.58
Paying attention to family unity	8	51	59	43.38
Tolerance	13	46	59	43.38
Compassion	13	43	56	41.17
Freedom	5	49	53	38.97
Being scientific	7	45	52	38.51
Peace	11	40	51	37.5
Sensitivity	9	40	49	36.02
Kindness	6	42	48	35.29
Cleanliness	8	40	48	35.29
Contentment / thankfulness	5	40	45	33.08
Aesthetic	5	37	42	30.88
Saving	5	34	39	28.67
Helpfulness	11	24	35	25.73
Sharing	10	25	35	25.73
Sacrifice / being altruistic / not being selfish	4	31	35	25.73
Fidelity	4	30	34	25

Modesty	8	24	32	23.52
Being healthy	7	24	31	22.79
Generosity	4	26	30	22.05
Trustfulness	4	23	27	19.85
Self-esteem	7	19	26	19.11
Empathy	2	20	22	16.17
Equitable	4	14	18	13.23
Self-control	2	17	18	13.23
Independence	4	13	17	12.5
Happy	3	12	15	11.02
Conscientiousness	2	3	5	3.67
Mercifulness	1	2	3	2.20
Compliance	1	1	2	1.47

Table 10 shows that in the studies the most frequently cited values are affection (f=133), honesty (f=124), helpfulness (f=107), respect (f=104), responsibility (f=94), preserving and enhancing cultural values / heritage (f=91), diligence (f=90) and fairness (f=82). The coverage of these values in scientific articles and theses sampled is nearly the same. For instance, the most frequently cited value in both groups of publication is affection. The less frequently reported values in the sample include conscientiousness, mercifulness and obedience. Table 11 shows the distribution of the sample in regard to the conclusions reported.

Table 11. *Distribution of the sample in regard to the conclusions reported*

Conclusions reported	Articles	Theses	Total	
	f	f	f	%
Regarding the literary works as successful in value transmission	41	73	114	83.82
Indicating that some values are much more emphasized than the others	8	25	33	24.26
Reporting that some parts of the works are problematic (negative actions, the use of some words that are not appropriate for the developmental characteristics of children, less use of visuals)	2	9	11	8.08

Table 11 shows that forty-one scientific articles and seventy-three theses consider the works analyzed as appropriate for value education. Therefore, these works are recommended for children's reading activities. In some studies it is reported that there is an imbalance in the distribution of values in the literary works. For instance, in eight articles and twenty-five theses it is stated that some values are frequently included in the literary works while the others are mentioned less frequently. More specifically, the values of peace, aesthetics, hospitality and respect are reported to be less emphasized in the literary works. In two articles and nine theses it is argued that the literary works analyzed have some problematic points in terms of various dimensions. Table 12 presents the distribution of the studies reviewed based on the suggestions covered.

Table 12. Distribution of the studies reviewed based on the suggestions covered

	Suggestions	Articles	Theses	Total	
		f	f	f	%
MONE	The texts in the literary works may be used in value education	3	27	30	22.05
	There should be teaching and learning activities to reinforce value education in the education programs of Turkish language courses	0	9	9	6.61
	There should be websites or online databases that contain the lists of literary works which emphasize the desired values	3	5	8	5.88
	Those literary works which emphasize the desired values should be added to core works list or sample works list	1	5	6	4.41
Authors And Publishers	Literary works should contain values implicitly instead of giving them as advices	13	16	29	21.32
	Based on proper literary works different genres (drama, cartoons, animations, voice animations, songs, sketchs, and so on) should be produced	1	13	14	10.29
	Those values that are found to be less contained in the works such as hospitality, peace and aesthetic should be more emphasized.	1	6	7	5.14
	The literary works which target children should contain topics which are enriched through value classifications.	0	5	5	3.67

	National, spiritual and universal values should be covered in the literary works.	2	2	4	2.94
	The children's literary works should be developed taking into consideration the certain age groups, and this information should be included.	1	2	3	2.20
	The children's literary works should not produce cultural conflict	1	1	2	1.47
Parents and School Administrators	Teachers should keep works they examined in terms of values in the classroom or school library and use these works for value education by organizing relevant games, dramas and teaching and learning activities	33	31	64	47.05
	Parents should be informed about the useful works and should consult to teachers in choosing these Works	2	21	23	16.91
	In the selection of the literary works the personality and developmental traits of children should be taken into consideration	8	4	12	8.82
	Supervised and published by children's books related units (such as illustrator, pedagogue, painter, education expert) and commission	0	8	8	5.88
	Local governments can distribute monthly the short story books and activity booklets containing values to children	1	0	1	.73
Researchers	Analysis of the works of the same and different authors or poets based on the different value categories in the recent or past periods	3	29	32	23.52
	Different models (qualitative and quantitative) should be used in the examinations on how to acquire basic values education through children's literature	3	9	12	8.82
	The functionality of the literary works in value acquisition should be improved	1	2	3	2.20
	No suggestion	14	5	19	13.97

As can be seen in Table 12 the studies contained suggestions towards different stakeholders, including the MONE, authors, publishers, teachers, field specialists, parents, school administrators, and researchers. Among the suggestions towards the MONE the most commonly stated one is that texts in the proper works should be included in the textbooks in regard to value transfer (f=30). The most frequent suggestion towards the authors, publishers and producers is that values in literary works should be given implicitly rather that given as clear advices (f=29). Most of the suggestions in the studies reviewed are towards teachers. It is suggested that teachers should keep works they examined in terms of values in the classroom or school library and use these works for value education by organizing relevant games, dramas and teaching and learning activities (f=64). Among the suggestions developed for the researchers, the most frequently reported one is to examine the works of the same and different authors or poets based on the different value categories in the recent or past periods.

Discussion

In the study 136 studies were reviewed through the content analysis which included a detailed examination of the studies on values in children's literature products published between 2007 and 2020. It has been concluded that most of these researches are theses conducted at master's level. It is seen that researchers mostly carry out such reviews in theses. Among theses four PhD theses were carried out in recent years. The review of literary works, which are important sources for value education, will significantly guide stakeholders such as children, teachers and parents who benefit from these resources in the selection of the literary works to be read.

There are studies which analyse the children's literature products in terms of children, their education, the principle of relativity, culture and language (Akçay & Baş, 2015; Ceran, 2015; Cesur & Baş 2015; Eğridere, 2019; Karakurt-İpek, 2019; Kuru, 2018; Mert, Albayrak & Serin 2013; Varışoğlu & Tuzcuoğlu-Aksin, 2019; Karaçam, 2011). The number of studies dealing with the analysis of values in such works has been increasing. During the period in which the sample was published the first study was a master's theses on the value analysis of children's literature works that was completed in 2007. In 2019 the number of such theses is found to be higher. Additionally, some PhD theses were also completed on the value analysis of children's literature works. In the period 2018-2019 the number of theses on the value analysis of children's literature works is very high. In

the study period the first articles on the value analysis of children's literature works were published in 2012 and in 2018 the number of such articles is the highest. Research in this field is increasing day by day. These findings show that the search for values in literary works is an area of intensive research. Values have always been emphasized in the education program since 2005. Separate values were emphasized for each lesson in primary and secondary school education programs, and then core values were determined. Both the emphasis on values in the recent education programs and the prominence of the resources used for values have led researchers to focus on this field.

Considering genre analyzed in the sample, it is found that the most frequently analyzed one is story. Additionally, the number of studies dealing with the analysis of values in novels and fairy tales is also found to be high. These are literary genres that are read more by children and are important in acquiring values. A large part of children's literature consists of stories and fairy tales of which the main purpose is to convey basic universal values and raise awareness among children in many areas. Oral and written tales constitute the intangible cultural heritage for the transmission of moral values from one generation to another. As emphasized in the UNESCO Convention on the Protection of Intangible Cultural Heritage in 2003, folk tales play a dynamic role in bringing people together, thus facilitating the exchange of information between different cultures and increasing respect for others in a tolerant and peaceful manner (Pulimeno, Piscitelli & Colazzo, 2020).

In some theses analyzed instead of analysing a single literary work. It may be either the analysis of the multiple works by a single author or the analysis of the multiple works by different authors. It is common that the values are analyzed in novels, stories and fairy tales. Additionally, the values are found to be analyzed in memoirs, poems, biographies, dramas, anecdotes, songs and fables. Described as any creative literary work written and designed specifically for children's use, children's literature products include short tales and stories, picture books, comic books, novels and rhymes (Pulimeno, et. al., 2020). It has been determined that researchers especially examine different works written by an author in terms of values. Additionally, it was determined that the researchers conducted studies to examine the literary works written by more than one author. While the works of Turkish authors were examined in terms of values, there are also articles examining the works of some international authors. Some of the international authors whose works were analyzed are as follows: Erich Kastner, Andrew Clements, Julio Cortazar, Sonya Hartnett, Christine Nöstlinger, Odile Kayser, Tove Jansson, Teneke Anna Gavalda, Malarie Blackman, Houshang Moradi Kermani and Bernardo Atxaga. Examining the works of authors or poets from different countries is informative about which values other countries emphasized more by other countries.

It is found that the studies reviewed are mostly designed in document analysis, one of the qualitative research models. Additionally, it is concluded that the qualitative approach was written as a research model in the studies using the survey model. In some studies, it is found that there is no explanation in regard to the research model. The authors employed many different terms in explaining the model of their study. Some of these terms include descriptive model, descriptive study, descriptive field study, descriptive qualitative and descriptive content analysis model. The others are as follows: survey, survey of sources and survey of documents. Therefore, it can be argued that the authors do not have a full understanding of the research models. It may also be added that such a terminology confusion can be the result of the translations. Given that the major aim of the studies was only to determine the values in the literary works, other qualitative models such as action research and ethnographic design were not used. The most frequently employed sampling technique used in the studies reviewed is found to be purposive sampling. The others include homogenous sampling, typical sampling and convenience sampling. However, most of the studies analyzed did not mention the databases and how the literary works were selected. The following studies include uncertain techniques of sampling. This situation prevents to have an idea about the reasons for choosing the sample. Instead the reason for choosing the literary works was given as follows: the author is well known, the work is commonly read, the work suitable for the age group it addresses, and easy accessibility. Since the sampling method is not specified, there is uncertainty in this regard.

It is found that the studies analyzed mostly dealt with the values considering those values included in the education program of Turkish language courses and core values. Some studies contained no classification of values, but reported that the values had been identified through the literature reviews. In some studies the value categories developed Schwartz, Smith, Schwartz, Rokeach, Prencipe, Helwig, Tezcan, Özlem, Güngör, Spranger and Güngör were employed. The others used the values classifications developed by Mengüçoğlu, Büyükdüvenci, Ülken and Tarhan. Common values reported by Doğanay and UNESCO's list of values were also used as a basis of the analyses. Additionally, there are studies in which the works were examined based on the values contained in the education programs for the social studies courses. There are also other studies in which the literary works were analyzed depending on the values covered in the education programs of different

courses. There are some studies which included the analysis of the studies based on a single value (affection for animals, respect and sensitivity). Having different value classifications provided diversity and richness in terms of values. It also made the studies original and distinct because some studies analyzed the works by the same author. For instance, Kaçmaz (2018) and Kaya (2007) analyzed Cahit Zarifoğlu's following works: Serçe kuş (sparrow bird) tale, Yürekdede and padişah story, Katıraslan story, Küçük şehzade (Little prince) story and Ağaçkakanlar (woodpeckers) story. In the study by Kaçmaz (2018) the values included in the works are analyzed in terms of being individual and universal values. In Kaya's study (2007) the values are analyzed considering the religious, ethical and social values. The use of different value classifications in the reviews has added originality to the studies where the same works of the same author are examined.

It is found that the descriptive analysis and content analysis are mostly used in the data analysis of the studies reviewed. Although there are studies using both methods, it is found that the data analysis part of some studies is described as the expressions of identifying the expressions appropriate to the values, filing, classifying the values based on the texts and classifying them depending on the main idea. This result seem to stem from the lack of information and elaboration on the analysis methods used in qualitative research. Regarding the validity and reliability of the studies reviewed it is stated that expert opinions were sought on different subjects such as on the consistency of the most determined values. It is stated that expert opinion was obtained on subjects such as classification of the value form, percentage of compliance, selection of work, and the research process. It is found that the researchers supported the findings with direct quotations while presenting the findings in their studies. In some studies, no explanation has been made concerning the validity and reliability. Since the studies analyzed were mostly conducted in qualitative research model, values were determined in line with the findings of the researcher. Therefore, the validity and reliability of the analyses are very important for such studies. While direct quotation on values in general of the works provides important evidence, the fact that expert opinion on verifiability is included in limited studies suggests that there are some problems in terms of reliability. In some studies, the re-examination of the data at different times eliminated negative points.

In the studies examined, it is found that the most discussed values in children's literature products are love, truthfulness, honesty, helpfulness, respect, responsibility, protecting and developing cultural values/protecting cultural heritage, diligence and fairness. Especially in articles and theses, the inclusion of these values is close to each other. Since the works examined by the researchers are analyzed in terms of different value classifications, a lot of values have emerged. Values such as being conscientious, compassionate and obedience are among the least discussed values. In literary works, values should be given in a qualified way and contribute to the education of children. Children's literature products give students an opportunity to directly discuss character perspectives, understand characters, and develop their thinking about social context and relationships (Halstead & Taylor, 2000). O'Sullivan (2004) states that the deeper and richer literature is, the stronger the characters, and the easier it is to naturally include character education in the study of literature.

The studies reviewed concluded that the literary texts analyzed are mostly appropriate for value education. Some researchers have stated that there is an imbalance in the distribution of values in the works. It has been determined that values such as peace, aesthetics, solidarity, honesty, and hospitality are less discussed in literary works, and it is reported that these values should also be included. The intensity level of the values examined varies. For instance, Sutari (2014) states that social attitude competencies (honesty, discipline, responsibility, politeness, care, and self-confidence in interacting with families, friends, and teachers) should be taught.

The studies reviewed contain many different suggestions for the ministry of national education, authors, publishers, teachers, experts, parents, school administrators and scholars. Among the suggestions towards the MONE the most commonly stated one is that texts the proper works should be included in the textbooks in regard to value transfer. When children's literature products are included in the activities covered by the educational programs and textbooks, they can help to support students' development in areas such as social relations, personality, ethics and language (Pulimeno, et. al., 2020). One of the suggestions addressing the MONE is to develop a system that contains literary works which are appropriate for moral education. Kilpatrick (1993) considers the stories and past events as a way of conveying moral attitudes to children, giving them a common reference point and good examples.

Most of the suggestions in the studies reviewed are towards teachers. It is suggested that teachers should keep works they examined in terms of values in the classroom or school library and use these works for value education by organizing relevant games, dramas and teaching and learning activities. Multicomponent narrative-based approaches (storytelling, role-playing, games, and post-reading activities) can meet children's emotional needs, provide them a sensory input, increase their attention span, and shape their aesthetic attitudes (Pulimeno, et. al., 2020). Edgington (2002) states that the value education can be achieved through reflection or classroom

discussions by reading the book by students individually or with their teachers. Another suggestion offered in the studies reviewed for teachers is that they should examine the works taking into account the developmental levels of the children. In this vein O'Sullivan (2004) stated that teachers should analyse the characters in the books critically. It is stated that teachers, parents and school administrators should be models for students in regard to the transfer of values. Grusec and Kuczynski (1997) state that parenting strategies affect value transfer. O'Sullivan (2004) argued that if a book is chosen well, the characters in the book will probably exhibit many different characteristics that may be limited by children.

It is suggested in the studies reviewed that the values covered in the works should be given implicitly rather than as advices and should be given in their natural environment using positive examples. Edgington (2002) stated that when using literature to teach moral reasoning, teachers should give students an opportunity to explore the perspectives of the characters in the story, to explain the reasons for their actions and reactions to new situations. Baratz and Hazeira (2012) argue that if there is a place for effective links between literature and society, then such links are mostly through children's literature. Therefore, children's literature products written in a quality way contain certain components that help students to examine values. Among the suggestions developed for the researchers, the most frequently reported one is to examine the works of the same and different authors or poets based on the different value categories in the recent or past periods. Choo (2015) argued that while the texts in the private sphere are selected by readers depending on their personal interests or tendencies, the texts in the public sphere are examined, discussed and criticized by different actors from various fields such as school, state to political groups on behalf of students. Both the emphasis on literary criticism practices and its historical ties to values education make it a necessary and indispensable subject in our world today.

Conclusion and Recommendation

It is seen that the number of studies dealing with the values in children's literary products has been increased. Although there are many reviews on the studies concerning with value education, these reviews do not provide some significant details about these studies. This study has provided a content analysis of the studies on the values in children's literature. In order to achieve this aim a total of 136 studies carried out in the period between 2007-2020 were analyzed. Of these studies 44 were articles and 92 were theses. It has been found that the values in children's literature works are mostly analyzed in master's thesis. Within these studies the most frequently analyzed literary genre has also been found to be stories. In the master's thesis there are analyses on a single work or on multiple works. It has been also found that the literary works analyzed are mostly by Turkish authors. The values covered in children's literature works have been analyzed taking into consideration the Turkish courses educational programs and core values list. It has been found that the most frequent values covered in children's literature works affection truthfulness, honesty, helpfulness.

Based on the findings of the study the following suggestions have been developed:

- The following genres may be analyzed in terms of value education: Memoirs, biographies, anecdotes, songs and fables.
- In the studies reviewed children's literature products were examined in terms of values education. Future studies can be designed in different research patterns by adding different dimensions and the views of the students can be analyzed.
- In the selection of the works to be reviewed in studies sampling methods as well as the reasons for the selection of certain works should be given in detail rather than stated that the sample was chosen through the random sampling method.
- Given that in numerous studies reviewed do not have a indication of sampling technique employed, trainings can be offered concerning the computer-assisted analysis methods (such as Nvivo, MAXQDA).
- Children's literature products available in the digital environment can be examined in terms of values education. And these products can be selected in line with the opinions of stakeholders.
- It may be suggested that the sections of results and suggestions in studies can be designed in conjunction with each other because in some studies, suggestions are independent from the results section.
- Given that the current review is limited to the studies in Turkish and to those related the databases in Turkey, it may be suggested to examine the other studies in this field by reviewing the studies in different languages and different databases.

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International Journal of Contemporary Educational Research (IJCER)

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Associations between Teachers' Interpersonal Behavior and Students' Socio-Emotional Learning Skills in Social Sciences Classrooms in Turkey

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Article History
Received: 24.05.2021
Received in revised form: 02.06.2021
Accepted: 06.06.2021
Available online: 03.09.2021

To cite this article:

Şimşek, İ. & Mutlu, G. (2021). Associations between teachers' interpersonal behaviour and students' socio-emotional learning skills in social sciences classrooms in Turkey. *International Journal of Contemporary Educational Research, 8* (3), 119-132. DOI: https://doi.org/10.33200/ijcer.942396

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 119-132 ISSN: 2148-3868

Associations between Teachers' Interpersonal Behavior and Students' Socio-Emotional Learning Skills in Social Sciences Classrooms in Turkey

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Abstract

Associations between students' socio-emotional learning skills and students' perceptions about their social sciences teachers' interpersonal behavior were investigated in this study. A primary level version of the *Questionnaire on Teacher Interaction* (QTI) was adapted into Turkish in order to gather the data concerning teacher interpersonal behaviors in the Turkish elementary classrooms. This process together with the collection of data concerning students' socio-emotional learning skills was performed in several state elementary schools with 386 students from Grade 5 and Grade 6. Descriptive statistics, Canonical Correlation Analysis and Confirmatory Factor Analysis (with Mplus) were utilized for the purposes of data analyses. The results revealed that the Turkish version of the QTI for primary schools demonstrated a reasonable fit with the data with some minor deviations. The results also indicated that students' perceptions about their teachers' leadership, helpful, uncertain and understanding behaviors were positively but admonishing, dissatisfied and strict behaviors were negatively related to students' socio-emotional learning skills.

Key words: Interpersonal teacher behavior, Teacher interaction, Socio-emotional learning, Mplus analyses, Canonical correlation analyses, Circumplex models

Introduction

Research on learning environments is now an established area of research and expertise and it appears that this research venue is originally derived from the studies and research practices of Lewin (1936) and Murray (1938) concerning human environment and behaviors and interactions of human beings in their surroundings. Given this first and leading line of research, it is observed that these first group of researchers attempted to understand the influence of several characteristics of any human environment upon the individuals' behaviors and perceptions. A particular effort was spent to understand how human beings perceive their surrounding environment and how their perceptions affect their performance and behaviors. Following this first line of researchers, further attempts were performed by Moos (1974) and Walberg and Anderson (1968) who in fact tried to apply this first line of research agenda into more educational contexts. That is, one simple implication is that there was a transfer from a broad perspective of "environment" to a more specific outlook of "classroom learning environment". With this second line of researchers, there were several attempts to develop research instruments and theoretical models to denote the several characteristics existent within classroom learning environments (Walberg, 1968; Wubbels, Creton, & Haymayers, 1985; Wubbels & Levy, 1993). Investigations into human environments and their relevant dimensions were performed in terms of physical characteristics, social characteristics and also some psycho-social ones observed and perceived in learning environments. Within these characteristics, such sub-topics or terminologies as teacher interaction (Wubbels, et al., 1985; Wubbles & Levy, 1991; 1993), classroom assessment characteristics (Waldrip, Fisher, & Dorman, 2008) and general classroom characteristics further including, for instance, cooperation, competition, materials environment and task orientation in particular classroom settings (Fisher & Fraser, 1981; Fraser, Anderson, & Walberg, 1982; Fraser & Fisher, 1982; 1983) emerged and each of these dimensions formed the basic venues of research or corresponded to the main variables of investigation for following researchers (Fraser, 2002). In this regard, a considerable number of studies have been conducted on each of these dimensions and *teacher interaction* or its synonym *teacher interpersonal behaviors* appeared to attract researchers from all over the world. These studies were in fact guided by the proponent work by Wubbels et al. (1985). That is, Wubbels and his associates' (1985) proponent attempt to develop a Model for Teacher Interpersonal Model by adapting

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Leary's (1957) model on social interaction in psychotherapy into education provided the theoretical framework for the following researchers. Wubbels et al. (1985) adapted Leary's (1957) model for interpersonal behavior to form eight different teacher interaction profiles (i.e. understanding, helping/friendly, strict, dissatisfied, admonishing, uncertain, leadership and student freedom) to be perceived by the students to conceptualize their teachers' interpersonal behaviors in the classrooms. Future researchers widely used this framework, the Model for Interpersonal Teacher Behavior and the related data collection instrument, Questionnaire on Teacher Interaction (QTI) developed again by Wubbels et al. (1985) to examine teacher behavior as an important sub-dimension of classroom learning environments.

The Model for Interpersonal Teacher Behavior primarily map teacher interpersonal behavior on two main dimensions, *proximity* and *influence*. Teacher proximity has two opposing sub-dimensions or poles as *cooperation (C)* and *opposition (O)* while teacher influence again was dealt with two opposing sides as *dominance (D)* and *submission (S)* as depicted in Figure 1. These two main dimensions are further divided into eight different sections based upon some variations of the opposing poles to show eight different types of teacher behaviors. That is, these two main dimensions form a coordinate cyclical system further divided into eight equal sectors to map teacher behavior. Accordingly, this circumplex form or cyclical system show the complexity and interaction of several factors underlying human interpersonal relationships. Overall, the criterion that different types of interpersonal behavior ordered in a circular form along with two main interpersonal behaviors (proximity and influence), which is common to both Leary's Model and its following version, Model for Interpersonal Teacher Behavior is in fact theoretically related to Circumplex Models in psychology (see den Brok, Fisher, Brekelmans, Rickards, Wubbels, Levy, & Waldrip, 2003 and Saydam & Telli, 2010 for a detailed discussion of the Circumplex Models).

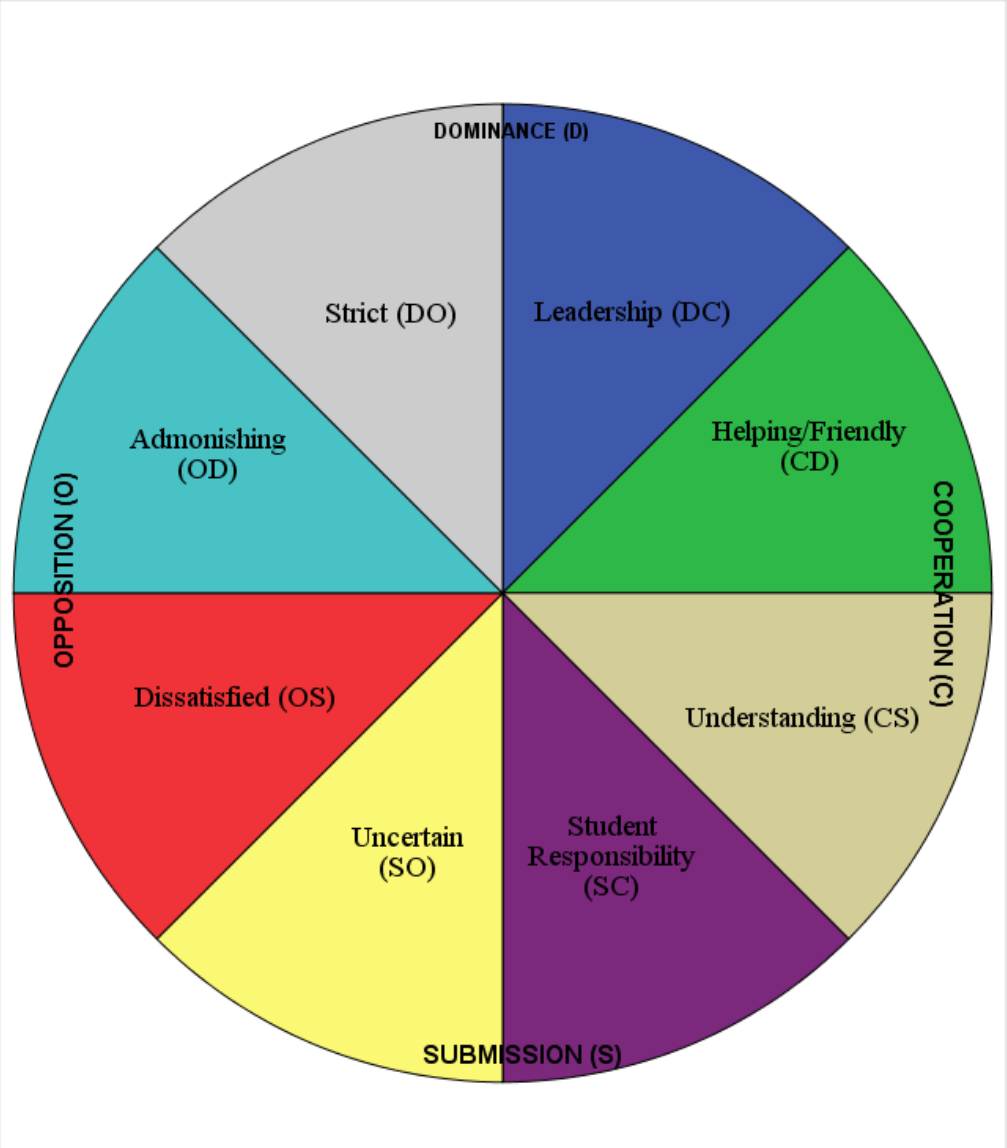

Figure 1. Model for Interpersonal Teacher Behavior (Wubbels & Levy, 1993)

Each of the eight equal sectors are labelled with the initials of opposing poles such as CS or SC in which the preliminary initial refers to the dominant dimension (proximity or influence). Thus, The Model for Interpersonal Teacher Behavior developed by Wubbels et al. (1985) includes eight types of interpersonal teacher behavior, a) leadership (DC), b) helping/friendly (CD), c) understanding (CS), d) student responsibility/freedom (SC), e) uncertain (SO), f) dissatisfied (OS), g) admonishing (OD) and lastly h) strict (DO). As was also mentioned above, The Model for Interpersonal Teacher Behavior in fact was developed in combination with a data collection tool named as Questionnaire on Teacher Interaction (QTI) aiming to elicit students' perceptions about their teachers' interpersonal behavior (see Fisher, Henderson, & Fraser, 1995; Wubbels et al., 1985 and Wubbels & Levy, 1991 for three QTIs with different number of items). This data collection instrument became a very popular research instrument and was widely used in the following investigations into teacher interaction.

For its extensive use in several countries, the researchers adapted QTI to elicit teacher interaction perceptions and these adaptation studies formed a common line of research practice for researchers around the world. For instance, adaptation studies took place in Canada (Lapointe, Pilote & Legault, 1999), Brunei (Scott & Fisher, 2004), Cyprus (Kokkinos, Charalambous, & Davazoglou, 2009), Korea (Kim, Fisher, & Fraser, 2000), Singapore (Goh & Fraser, 1998), Indonesia (Fraser & Aldridge, & Soerjaningsih, 2010) and recently in Kosovo (Berisha Kida & Karaj, 2020). Turkish adaptation of the 64-item (American) version was also performed by a Turkish researcher (Telli, 2006) to be used with secondary level students. However, as either the short version with 48 items or long version with 64 items were aimed at secondary level students, most adaptations were conducted with the students at this particular level excluding a few (Goh & Fraser, 1998; Kokkinos, et al., 2009; Scott & Fisher, 2004). When the results from these studies including the adaptations were examined, it is seen that they provided sufficient evidence for the associations between student perceptions of teacher interpersonal behaviors and affective and cognitive outcomes of the students in different classrooms at schools (den Brok, 2001; den Brok et al., 2003; Fraser et al., 2010; Kyriakides, 2006; Maulana, Opdenakker, den Brok, & Bosker, 2011; Rakıcı, 2004, Telli, 2006; Telli, den Brok, & Çakıroğlu, 2007; Wei, den Brok, & Zhou, 2009). Based upon these studies, it appears that teacher interaction has been extensively studied in science and science-related disciplines at the secondary schooling level mostly by means of correlational research designs while there is less surge of interest into the classrooms in different discipline areas other than science and into other levels of schooling. Thus, there is a need to investigate classrooms other than science ones in different levels of schooling to provide a broader and better picture of the teacher interaction characteristics and their influence on student outcomes. Moreover, given the most studied affective outcomes in relation to their links to teacher interpersonal behaviors, investigations into motivation, attitude towards the lessons, self-regulation and self-efficacy appear to dominate the literature while there is no study to date including socio-emotional learning skills as one of these affective outcomes.

Socio-emotional learning to be defined as the combination of such competencies or components as emotional intelligence (Basu & Mermillod, 2011; McCombs, 2004), social learning and cognition (Frey, Nolen, Van Schoiack Edstrom & Hirschstein, 2005), life-skills and well-being (Greenberg, Domitrovich, Weissberg, & Durlak, 2017) and stress management (Kusché & Greenberg, 2001) briefly refers to individuals' understanding and managing of their emotions and social relationships, which is in fact a direct correlate of their socio-emotional progress or academic achievement (Elias et al., 1997; Kabakçı & Korkut Owen, 2010; McCormick, Cappella, O'Connor, & McClowry, 2015). In addition, The Collaborative for Academic, Social, and Emotional Learning (CASEL) in fact made a good summary of the main sub-components of social emotional learning and shortened these competencies as "The CASEL 5" which includes social awareness, self-awareness, self-management, relationship skills and lastly responsible decision making (CASEL, n.d.). Accordingly, research into this construct and its relationship to teacher interpersonal behaviors is needed to promote literature not only as to teacher interaction but also as to socio-emotional learning. To these ends, the current study aimed to investigate teacher interaction in an elementary social sciences classroom by adapting a QTI version for younger (primary level) students (Goh & Fraser, 1998). The researchers also aimed to understand if student perceptions of their social sciences teachers' interaction behavior were associated with their socio-emotional learning skills. The following research questions guided this current study:

1. How do elementary school students in state schools in Turkey perceive their social science teachers' interpersonal behaviors?

2. To what extent are students' perceptions about their social sciences teachers' interpersonal behavior related to their socio-emotional learning skills?

Method

Participants

Participants were 386 elementary school students from Grade 5 (n = 224) and Grade 6 (n = 162) enrolled in several state schools in a city in the western part of Turkey. Out of 386 students, 232 (%60) participants were females and the remaining 154 (%40) were males. Given their ages, 208 (%54) were aged 11, 135 (%35) aged 12 and the remaining 43 (%11) were 10 years old.

Data Collection Tools

Turkish Version of the Questionnaire on Teacher Interaction for Elementary Levels

A primary school version of the QTI previously adapted and designed by Goh and Fraser (1998) with its 48 items was used in this study. Goh and Fraser (1998) in fact had adapted this primary QTI from the two previous versions in the literature, QTI long form with 64 items (Wubbels & Levy, 1991) and QTI short form with 48 items (Wubbels, 1993) developed for secondary school students. Thus, Goh and Fraser (1998) attempted to adapt these tools to use at the primary school level in Singapore and this tool became the first version in the literature appropriate for primary or elementary school students aged around 11 years old. In contrast to five-point responses required for secondary school versions, this elementary version required answers on a three-point scale (Seldom – Sometimes - Generally) by making it more suitable for younger students at the primary schooling levels. In their study in Singapore, Goh and Fraser (1998) reported Alpha reliability scores ranging from .50 to .78 at the class-level analyses and from .73 and .96 at the student-level analyses.

Turkish adaptation study started with the seeking of permissions from the developers (B. Fraser, personal communication, 31 January, 2020) and then translation of all 48 items into Turkish by a language expert. The translated Turkish form was back translated into English by another language expert. For the items the meanings of which seem unclear and problematic in the original English version, developed by Goh & Fraser (1998) in Singapore, a foreign expert experienced with the instrument development and adaptation studies of elementary and secondary school versions in the Netherlands and in other countries including Turkey was contacted and asked for his expert opinions (P. den Brok, personal communication, 30 December, 2019 & 31 January, 2020). The versions from the backtranslation process were compared by two experts and based on their expert opinions, back-translations suggested no major changes. Hence, the instrument took its almost-final form to be used in the pilot study. Four students took part in the pilot study and they were asked to respond to the items by evaluating their comprehensibility. As a result of this piloting process, some similar connotations elicited in a couple of items (concerning dissatisfied and admonishing scales) were improved to make these items different from each other. Accordingly, the Turkish version of the QTI-primary took its final form and was named "Turkish Questionnaire on Teacher Interaction for Elementary Schools" (TQTI-E). The 48-item TQTI-E has eight sub-scales with six items in each to refer to eight different types of teacher behavior. These eight sub-scales were labelled as they were in the original instrument as a) leadership, b) helping/friendly, c) understanding, d) student Responsibility/freedom, e) uncertain, f) dissatisfied, g) admonishing and lastly h) strict. The adaptation and validation results for the TQTI-E was presented in detail in the Results section of this work.

Socio-Emotional Learning Skills Scale

In order to elicit data concerning students' socio-emotional learning skills, Socio-Emotional Learning Skills Scale (SELSS) developed for elementary school students by Kabakçı and Korkut Owen (2010) was used in this study. Kabakçı and Korkut Owen (2010) reported a Cronbach reliability score of .88 on the whole scale (40 items) while reliability values ranged between .61 and .83 on its four sub-scales, a) problem solving skills (11 items), b) coping with stress skills (10 items), c) communication skills (9 items) and d) self-esteem enhancing skills (10 items). Test-retest coefficients were also reported to be .85 on the whole scale and between .69 and .82 on the four subscales. The instrument required responses on a four-point Likert scale.

Data Analysis

For the purpose of research question one (RQ1), that is, to investigate students' perceptions of their social sciences teachers' interpersonal behaviors, descriptive statistics for each TQTI-elementary scale, including

means and standard deviations were derived. In order to examine the relationship between eight types of teacher interpersonal behaviors and four types of socio-emotional learning skills for the purposes of second research question (RQ2), canonical correlation analysis (CCA) was utilized. For the validation of the teacher interaction instrument (adapted as TQTI-elementary in this study) and to establish its construct validity, data were subjected to Confirmatory Factor Analysis by means of Mplus Version 7.4. Prior to CCA and CFA, some assumptions such as multivariate normality, absence of outliers, multicollinearity and sufficient sample size were evaluated for the suitability of the data for these analyses. No violations of these assumptions were ensured.

Results

Validation of the TQTI -Elementary Version

Prior to multilevel confirmatory analysis, items were first assigned to their sector (scale) scores on the individual level data. The reason for this was theoretically related to the circumplex structure of the study instrument. That is, as the items all are required to load into the two main dimensions (i.e. proximity and influence) and to correlate with each other and the remaining adjacent scales on the circumplex (Blackburn & Renwick, 1996; den Brok et al, 2003; Gurtman, 1992; Gurtman & Pincus, 2000; Wiggins, Philips, & Trapnell, 1989), testing the model at the scale level rather than at the item level appeared meaningful and theoretically more appropriate. A multilevel confirmatory factor analysis was then performed on the scale scores in order to confirm the factor structure in TQTI-E with its two independent dimensions and eight free scale positions (with prescribed factor loadings) along with these two dimensions. The formula used in the current multilevel confirmatory analysis with Mplus was taken from the goniometric circle function behind Circumplex Models (see den Brok, et al., 2003 for a detailed discussion of the Circumplex Model and goniometric function) and it is depicted as in the following:

Influence = (.92*DC) + (.38*CD) - (.38*CS) - (.92*SC) - (.92*SO) - (.38*OS) + (.38*OD) + (.92*DO)

Proximity = (.38*DC) + (.92*CD) + (.92*CS) + (.38*SC) – (.38*SO) – (.92*OS) - (.92*OD) – (.38*DO)

Once the assumptions regarding normality and sample size were ensured (see the relevant results concerning assumptions within the analyses for RQ2 below), confirmatory factor analysis was conducted by means of Mplus Version 7.4 (Muthén & Muthén, 1998–2017) on the study data (n = 386). Such fit indicators as Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker Lewis Index (TLI) and Standardized Root Mean Square Residual (SRMR) were used for the interpretation of the model. With the examination of fit indexes in the initial confirmatory analysis (on the student level data), several fit indices seemed appropriate (i.e. CFI = .895 and SRMR = .058) while the others required improvement (RMSEA = .166 and TLI = .787). Modification indices (MIs) gained as a part of the analyses in Mplus Version 7.4 (Muthén & Muthén, 1998–2017) already suggested allowing some of the subdimensions to covary with the others. Thus, to have a better fitting and more parsimonious model, the researchers conducted several modifications by using the theoretical understanding related to assumptions concerning The Model for Interpersonal Teacher Behavior in combination with the MIs recommended. For the theoretical model behind the study instrument (i.e. The Model for Interpersonal Teacher Behavior) require crossloadings of the all sectors though in a decreasing fashion as one moves from one particular scale in the circle towards opposing scales (i.e. high and positive correlations between neighboring scales and decrease of correlations when moving on the interaction circle) as one of its main assumptions, linking scales seemed in line with the theoretical background of teacher interaction instrument.

Once the modifications were completed in the light of theoretical justifications with the literature on teacher interaction (by allowing several subscales to covary with several other subscales within the circle), the model with two independent factors along with eight free scales run with modifications yielded a CFI of .980, TLI of .939, RMSEA of .089 and SRMR of .033. As the values for CFI and TLI were above .90 and the value for SRMR below .08, the fit indices apparently improved and indicated a good model fit (Kline, 2005). In addition, the RMSEA value was very close to the threshold of .08 of good fit (Kline, 2005). It was also in the range of .05 to .10 thus exhibiting mediocre (fair) fit (MacCallum, Browne, & Sugawara, 1996). Accordingly, the model fit statistics showed that the model with the modifications was a better fit for the data compared to the initial model performed. The standardized coefficients loaded into one particular independent dimension more strongly than

the other remaining dimensions thus contributing to the circumplex nature of the model as was expected and required (Figure 2).

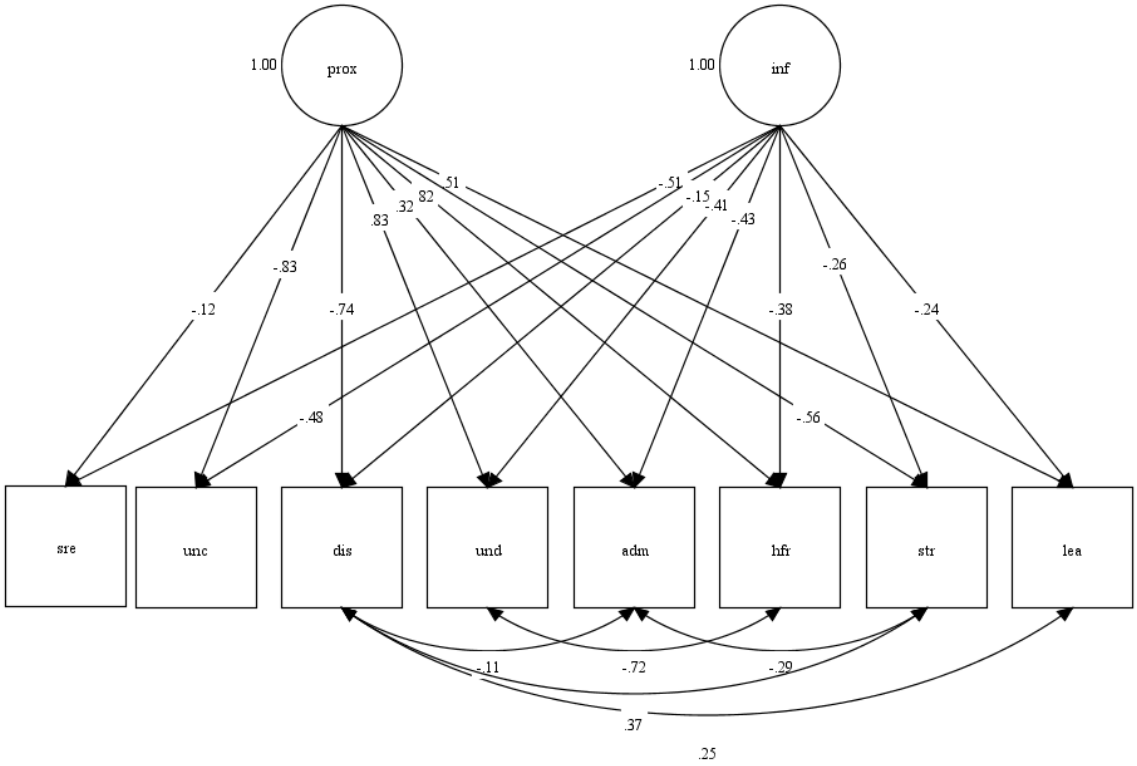

Figure 2. Structural Model for the TQTI-E

Several scales also exhibited poor (<.2) second factor loadings (e.g. Student Responsibility subscale) though their first factor loadings were satisfactory. Some of the scales appeared to deviate from their original positions on the circular model by containing more proximity than the hypothesized by the researchers and the original model requirements. Leader, uncertain and strict scales appeared to exhibit higher loadings on the proximity dimension than theoretically expected (Table 1). However, these minor deviations had no negative influence on the goodness-of-fit indicators and interpretation of the data in a different culture than its original one. Hence, CFA conducted on the 48-item Turkish QTI for elementary students confirmed the researchers' proposal that the instrument used in this study had a circumplex structure with two dimensions together with eight sub-subscales.

Table 1. *Factor loadings of the sub-scales of the TQTI-E (estimated with Mplus, N = 386*)

	Factor Loading	
Subscales	1	2
DC Leadership	- .24	**.51**
DO Strict	- .26	**- .56**
SC Student Responsibility	**- .51**	- .12
SO Uncertain	- .48	**- .83**
CS Understanding	- .41	**.83**
CD Helpful/friendly	-.38	**.82**
OS Dissatisfied	- .15	**- .74**
OD Admonishing	.32	**- .43**

Note. Boldface indicates highest factor loadings. Factor 1 = Influence; Factor 2 = Proximity.

Students' Perceptions of Their Social Sciences Teachers' Interpersonal Behaviors

Participants generally perceived their social sciences teachers as mostly showing understanding, helpful and leader behaviors. As shown in Figure 3, students reported that their social sciences teachers showed understanding behaviors the most in their relationships within classrooms (*M*= 2.64, *SD* = .41) followed by helpful/friendly (*M* = 2.53, *SD* = .35) and leader behaviors (*M* = 2.46, *SD*= .28). Students also perceived their teachers as sometimes allowing student responsibility and freedom, which is less frequently, compared to the perceptions about the three most frequent interpersonal behaviors above. The least frequent teacher interpersonal behavior perceived by the students was dissatisfied behaviors (*M* = 1.23, *SS* = .35) respectively followed by admonishing (*M*= 1.40, *SD* = .46), uncertain (*M* = 1.57, *SD* = .27) and strict behaviors (*M* = 1.62, *SD* = .38). In this essence, positive perceptions regarding social sciences teachers' interpersonal behaviors outperformed the negative ones.

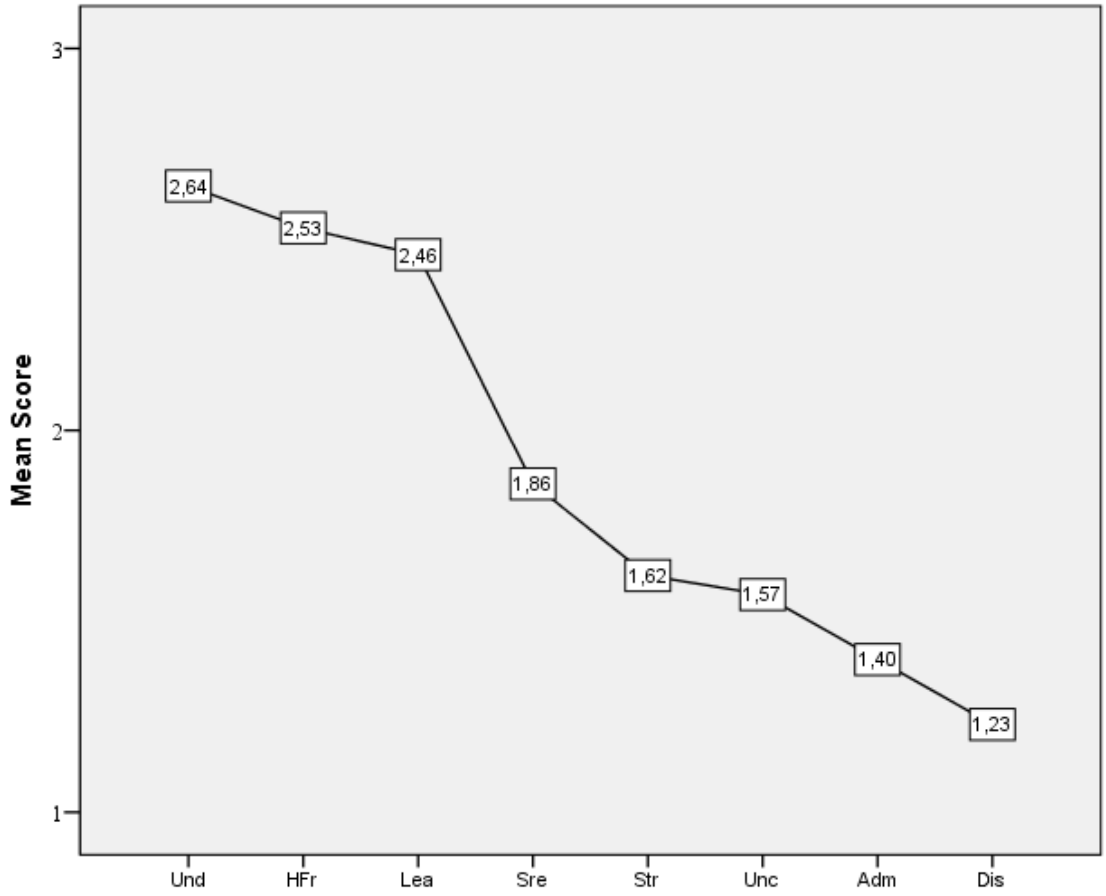

Figure 3. Mean QTI Scores based on Students' Perceptions (N= 382)
Note. Und (*SD* = .41); HFr (*SD* =.35); Lea (*SD* =.28); SRe (*SD* = .39); Str (*SD* =.38); Unc (*SD* = .27); Adm (*SD* = .46); Dis (*SD* = .35).

Associations between Students' Socio-Emotional Learning Skills and Their Perceptions of Their Social Science Teachers' Interpersonal Behaviors

Canonical correlation analysis was conducted by using the eight teacher interpersonal behaviors as independent variables (Set 1 variables) and four socio-emotional learning skills as dependent variables (Set 2 variables) to examine relationships between these two sets of variables. CCA is considered a multivariate technique which minimizes the risk of committing Type 1 error (Stevens, 1998) as it allows researchers to test multiple dependent variables simultaneously. Prior to CCA, the assumption of multivariate normality was tested by plotting the Mahalanobis distances and the examination of the plots and histograms and there were no violations for this assumption. Bivariate correlations of all the independent variables were examined and there were no correlations above .70. With these statistically appropriate correlations (Hair, Black, Babin & Anderson, 2010; Tabachnick & Fidell, 2013), the data ensured no violations for multicollinearity. Given the ratio of at least 20

cases for the number of variables included in the analysis (Stevens, 1996), the sample of the study (n = 386) was found to be adequate to conduct CCA. CCA was conducted by running a canonical correlation macro in SPSS Version 17, that is, by writing a command syntax for the SPSS.

The statistical analyses first yielded four possible canonical correlations as there were four levels in the variate with the smaller number of sub-dimensions, that is, in the socio-emotional learning skills variable set. Only the first canonical correlation (Rc= .49) accounted for a significant amount of the overlapping variance (with a squared canonical correlation (Rc^2) of .237) between the sets of variables, *Wilks's* λ = .66, $\chi 2$ (32) =155.50, p<.001. When the Rc2 effects and statistical significance of the functions were collaboratively evaluated, only the first function (canonical correlation) was considered meaningful and noteworthy to interpret in the context of this study in that variation explained by this function was above the 10% standard (i.e. Rc= > 0.30 thus corresponding to Rc^2 of about 10 % variance) recommended by Pedhazur (1982) to interpret a function in CCA. The remaining three functions that explained less than 10% of the overlapping variance between the two variable sets (6.7%, 4.5% and 2.3%, respectively) were considered weak so as not to warrant interpretations. The canonical correlation path model for the function interpreted in this study was visualized and presented in Figure 4.

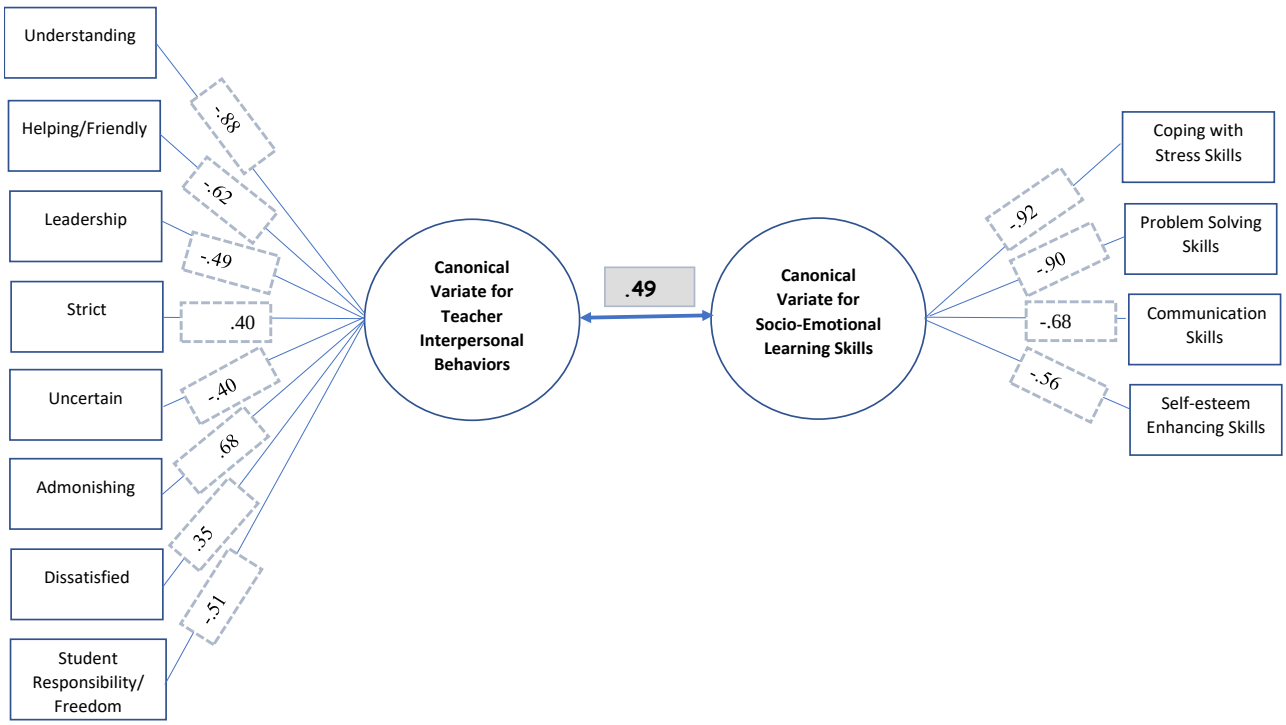

Figure 4**.** The Canonical Correlation Path Model for Perceived Teacher Interpersonal Behavior and Socio-Emotional Learning Skills Sub-Scales **(***Note*. .XX = canonical correlation (Rc); XX = canonical loadings)

Major CCA statistics for the two sets of variables on the first canonical variate including standardized canonical variate coefficients, correlations between the variables and canonical variates, within-set variance accounted for by the canonical variates and redundancies are shown in Table 2 below. With a cut-off correlation of .30 (Hair et al., 2010), all eight variables in the teacher interpersonal behaviors set were correlated with the first canonical variate. Given the dependent variables set of socio-emotional skills, again all four socio-emotional variables were found to be correlated with the first canonical variate. Canonical variate of teacher interpersonal behaviors accounted for 32 % of the variance in its own set while its canonical variate pair of socio-emotional learning skills explained 61 % of the variance in its own set. Redundancy analysis results further revealed that teacher interpersonal behaviors set was able to predict 15 % of the variance in the socio-emotional skills (set 2) while socio-emotional skills set was able to predict only 7.6 % of the variance in the set of teacher interpersonal behaviors. Results also indicated that when teachers were perceived to show less understanding (-.88), helping/friendly (-.62), leadership (-.49), student freedom (-.51) and uncertain (-.40) but stricter (.40), more

dissatisfied (.35) and admonishing (.68) behaviors in the classrooms, they were likely to show less problem solving (-.90), coping with stress (-.92), communication (-.68) and self-esteem enhancing (-.56) skills. Thus, understanding, helping/friendly, uncertain, leadership behaviors in combination with praising student freedom are positively but strict, dissatisfied, admonishing teacher behaviors are negatively related to students' socio-emotional skills (Table 2).

Table 2. *Correlations, Standardized Canonical Coefficients, Canonical Correlations, Percentages of Variance and Redundancies between Teacher Interpersonal Behaviors and Students' Socio-Emotional Skills*

	First canonical variate	
	Correlation	Coefficient
Teacher Interpersonal Behaviors		
Understanding	-.88	-.68
Helpful/friendly	-.62	.21
Student Freedom	-.51	-.03
Leadership	-.49	-.19
Uncertain	-.40	-.32
Admonishing	.68	.56
Strict	.40	-.05
Dissatisfied	.35	-.18
Proportion of Variance	.32	
Redundancy	.08	
Socio-Emotional Learning Skills		
Coping with Stress Skills	-.92	-.55
Problem Solving Skills	-.90	-.41
Communication Skills	-.68	-.08
Self-esteem Enhancing Skills	-.56	-.13
Proportion of Variance	.61	
Redundancy	.15	
Canonical Correlation	.49	

Discussion & Directions for Further Research

The results from the Confirmatory factor analysis with Mplus by means of specifying a two-dimensional factor model with zero correlations between these two factors and prescribed factor loadings in line with the goniometric circle function revealed reasonable fit with the data. As is understood with the factor structure of the TQTI-E, eight subscales could be considered blends of two main factors and thus crossloadings of the subscales can be considered as an expected and natural consequence of the theory concerning Circumplex Models. Therefore, it appeared that the factor structure of TQTI-E seemed reasonable by confirming the presence of two main dimensions. Its scales appeared reliable with their appropriate internal consistency values. However, the researchers of this study believe that this instrument needs further improvement especially with regard to Uncertain and Strict scales for future research. These three subscales showed deviations from the theoretically expected influence dimension by including more proximity instead. A previous study into the adaptation of the QTI in a Chinese context by Wei et al. (2009) also revealed similar minor validity problems concerning Student Responsibility and Uncertain scales. Such deviations in fact are consistent with previous research in that proximity dimension has been frequently found to be more dominant than the influence dimension (den Brok, 2001; den Brok, Brekelmans, & Wubbels, 2006; Kyriakides, 2005; Telli, 2006). In this regard, it is important to remember that the original instrument (QTI) was developed mainly for western cultures. Therefore, further improvement perhaps should be devoted to the revising of the items in this adapted version to make them more aligned with the norms and frames or references of the Turkish participants. These differences should be further considered when conducting cross-cultural studies with students from different countries and cultures.

The above-mentioned deviations could be related to the complex theoretical structure investigated with the instrument and cultural sensitivity or connotations provided with the items, which were also reported or emphasized in some previous research (den Brok, 2001; den Brok, et al., 2006; Kokkinos et al., 2009; Telli et al., 2007). Moreover, translation and back-translation along with expert opinions were utilized as the main activities for instrument adaptation in this study, which in fact could be a limitation of this study. Though the researchers had a pilot study with a couple of students in which the understandings of the students of the items in the instrument were tested and clarified, no systematic interviews or more rounds for pilot testing were conducted. Therefore, more qualitative research on the study instrument and student perceptions about their teachers' interpersonal behaviors is needed. The longer version of the instrument was previously adapted by Telli (2006, see also Telli, et al., 2007) for Turkish high school students by means of several rounds of piloting and conduct of interviews with students and teachers, which led to the addition of new items, omission of original items or rewording of some of the items to manage a better conceptual understanding and optimization of the instrument. Future studies aimed at older students at more advanced schooling levels are advised to use this long version due to its better cultural and conceptual optimization. Accordingly, as research on teacher interaction is still in its infancy in the Turkish culture especially with young learners though some valuable attempts with proponent studies with older Turkish students (Telli, 2006; Telli, Çakıroğlu, den Brok, 2006, 2007), further work in which the adapted instrument in this study will be tested is needed.

It is important to note here that confirmatory factor analyses were performed at the individual (i.e. student) level. However, some previous research indicated that circumplex structure of the Teacher Interpersonal Behavior Model fit the class level data better than the student level data (den Brok, 2001; Telli, 2006, den Brok et al., 2006). For Fraser (1998), investigations into student level, class level and even school level data together are valuable and thus he recommends that the analyses should be tested and compared in a multi-level manner to gain a better and more reliable picture of the student perceptions of teacher interpersonal behaviors.

This study tested a model which linked different types of teacher interpersonal behavior with different types of skills pertaining to socio-emotional leaning and this model was meaningful and statistically significant with scores on all four socio-emotional skills subscales being able to be explained to some degree by the predictor variables of eight different teacher interpersonal behaviors. This result is consistent with the research that previously reported the presence of associations between student perceptions of teacher interpersonal behaviors and several attitudinal and affective student outcomes (e.g. den Brok, Fisher, & Scott, 2005; Goh & Fraser 1998; Koul & Fisher 2005; Kyriakides, 2006; Maulana et al., 2011; Rakıcı, 2004; Şimşeker, 2005; Telli et al., 2006; Wubbels, Brekelmans, & Hooymayers, 1991). In addition, positive associations have been demonstrated between understanding, student responsibility, helping/friendly, uncertain and leadership interpersonal behaviors and socio-emotional learning skills. In contrast, admonishing, strict and dissatisfied teacher interpersonal behaviors were found to be negatively associated with these skills. These associations and directions of relationships are consistent with the general tenure of research into teacher interaction (den Brok, et al., 2006; Fraser et al., 2010; Wubbels, 1993). However, the result that uncertain teacher behaviors were positively related to students' socio-emotional learning skills was in contrast with the most literature on teacher interpersonal behaviors. One implication here could be made about the nature of the connotations made by the socio-emotional sub-dimensions for which it showed positive associations. A teacher demonstrating a less dominant, strict and controlling figure is more likely to promote such socio-emotional skills as stress management and self-enhancement thus perhaps proving the positive associations found in this study. However, more qualitative research designs could be utilized to shed more light on these relatively unclear or unknown perspectives regarding students' conceptualizations of teacher interaction behaviors. The cultural meaning-making as to teacher interpersonal behaviors and whether the favorable and unfavorable conceptualizations of teacher interpersonal behavior differ in terms of the cultural context can be a particular area of interest for future research.

Given the pedagogical implications of the findings, one can easily see that when teachers promote student responsibility and freedom of their students and show more leadership, friendly and understanding behaviors in their relationships with their students, it is more likely for the students to feel better in terms of emotional well-being and social skills. In more specific, when students are taught by teachers showing the above favorable interactional profiles, they are likely to better cope with stress, comfort themselves and enhance their self-esteem more, better solve their problems with others and communicate more effectively in their social environments. These socio-emotional skills can in fact directly promote their academic achievement and gains at school as is already supported by the available evidence in the literature (Elias et al, 1997; Kabakçı & Korkut Owen, 2010; Jones, Brown, & Aber, 2011; McCormick, Cappella, O'Connor, & McClowry, 2015). In contrast, when they are taught by the teachers showing admonishing, strict and dissatisfied profiles in the classes, their socio-emotional skills reported above are all affected negatively, which in turn may lead to a negative effect on

their success at school. Therefore, teacher candidates should be made aware of their interpersonal profiles and how they are perceived by their students so that they can improve their negatively perceived characteristics to enhance student outcomes. In addition, research has shown that teachers have a tendency to see themselves more positively than their students (den Brok, 2001; Rickards & Fisher, 2000; Wubbels, 1993). In order to promote students' success and wellbeing, that is, the cognitive and affective outcomes of schooling in a more general sense, teachers should be supported and trained to improve their interpersonal skills. One recommendation from this current study could be about the use of QTI in teacher training. That is, teachers and teacher candidates should be supported by being trained to use such instruments like QTI to better see their strengths and weaknesses in their interactions with their students. This instrument is known to be used by some teacher training institutions in the Netherlands and Australia during the teaching practice of teacher candidates (Telli, 2006). Hence, the Turkish version of the QTI can be an appropriate instrument for future use both in pre-service and in-service training programs.

Previous researchers mentioned the different perceptions as to teacher interpersonal behaviors between people coming from eastern and western societies (Lee, Fraser, & Fisher, 2003; Wong, 1995; Wong & Fraser, 1994). More dominant, strict and leadership behaviors are favored and perceived by the students from eastern cultures while those from western societies like teachers who promote student responsibilities and freedom and who are more understanding and helpful. Given the Turkish case reported in this study, the most frequent teacher interpersonal behaviors included leadership, helping and understanding behaviors. Thus, one can easily assume that these preferences symbolized a synthesizing outlook by combining eastern and western preferences. However, further research is needed to check for the consistency of this trend found in this study.

CCA enabled the researchers to test associations between multiple dependent and independent variables in a composite manner rather than using separate bivariate correlations between these two big sets of variables thus increasing the risk of Type 1 error. In addition to this statistical advantage to minimize the possibility of committing Type 1 error (Sherry & Henson, 2005; Stevens, 1996), the use of such an analysis technique seemed theoretically appropriate and logical as CCA was a recommended data analysis method when there was no or little previous piece of evidence to date in the literature concerning associations about the sets of variables examined (Dattalo, 2014; Tabachnick & Fidell, 2013). In this essence, following our preliminary attempt with CCA, future researchers are recommended to take this sort of analysis further by testing the study variables here by means of more complex general linear models to get firmer evidence about the associations among multiple variables.

Acknowledgements or Notes

This study is a part of first author's Master's thesis conducted under the supervision of the second author.

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International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

Making Thoughts Visible through Formative Feedback in a Mathematical Problem-Solving Process

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Article History
Received: 22.12.2020
Received in revised form: 15.05.2021
Accepted: 11.06.2021
Available online: 03.09.2021

To cite this article:

Toker, Z. (2021). Making thoughts visible through formative feedback in a mathematical problem-solving process. *International Journal of Contemporary Educational Research, 8*(3), 131-149. DOI: https://doi.org/10.33200/ijcer.845288

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 131-149 ISSN: 2148-3868

Making Thoughts Visible through Formative Feedback in a Mathematical Problem-Solving Process

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Abstract

This study aims to elicit the role of formative feedback in the development of students in a mathematical problem-solving process. For this purpose, the study's primary process is to investigate the development of elementary school students (aged 10 to 11) through feedback given during a problem-solving process. While visually engaged in the sub-processes expressing a problem situation and describing their thinking structures in writing, three different dimensions are addressed: communicating visually what they understood from the problem; expressing their thoughts about solution; and creating explanations regarding their solution process. The six-week embedded mixed method study reveals that students' explanations of their thinking processes developed towards the expectations. They were able to depict the problem and the relationships involved in the problem more clearly in their drawings to understand the problem. They made fewer mistakes in mathematical operations.

Key words: Explanation, Formative feedback, Mathematics, Problem solving, Visualization

Introduction

Problem-solving is an essential competence both for mathematics and for life. In both national and international mathematics curricula, problem-solving is addressed as one of the fundamental objectives (e.g., Ministry of National Education, 2017; National Council of Teachers of Mathematics, 2000). Altun (2001) describes a problem as a situation in which an individual wants to do something, but cannot immediately figure out the problem-solving to go about it. In problem-solving, students are intellectually active (Bayazit & Aksoy, 2009) Lester (1994) defines problem-solving as the most problematic area of learning, but at the same time, the most crucial goal of doing mathematics.

Mathematical problems, and especially word problems, are tools that help students enhance their thinking skills, and tools that help them gain the skills needed to solve problems they encounter, particularly in everyday life (Pimta, Tayruakham, & Nuangchalerm, 2009). Among all types, one of the most challenging types of problems for mathematics learners is word problems (Verschaffel, Schukajlow, Star, & Dooren, 2020). Students seeing a problem as a mass, made up of words and numbers, and thinking that they can solve it by performing four main operations with the numbers given to them. Therefore, understanding problems is difficult for them. This is not the only example as to why students have difficulties related to problem-solving. However, it is a fact that students are far from the desired level of success in problem-solving (Soylu & Soylu, 2006). From this aspect, although problem-solving seems like an old topic, the methodologies to be applied in the process details are not so simple (Reimers & Chung, 2016). Therefore, studies regarding, 'How students' problem-solving processes should be supported' remain popular.

The Problem-Solving Process

Research has addressed the elements of primary school students' problem-solving processes. Problem-solving practices should be based on students' active participation, and various problems should be provided for students (Yazgan & Bintaş, 2005). As another issue, enabling students to re-express what they have understood from the problem through visual elements, mathematical symbols and explanations, is useful since asking students to explain their thoughts supports their thinking and increases the accuracy of solution processes (Rittle-Johnson,

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2006). In addition, the incorporation of feedback into problem-solving seems essential in developing problem-solving skills. There are studies regarding the provision of feedback to students in the problem-solving process. These studies have shown that, during the problem-solving process, providing feedback is beneficial for student learning (Hattie & Gan, 2011; Luwel, Foustana, Papadatos, & Verschaffel, 2011; Mory 2004; Shute, 2008).

The problem-solving process is much more than merely asking students to solve problems. This process also requires teacher guidance. In the process of problem-solving, the feedback provided by the teacher can increase the efficiency of the learning process, as it will help students to both verify their knowledge and change it if necessary (Fyfe & Brown, 2020, Mory, 2004). Within this context, feedback is central to problem-solving (Cáceres, Nussbaum, González & Gardulski, 2019) and the development of this process. Although feedback is accepted as an essential factor in advancing learning, its effectiveness depends on specific situations (Cáceres, Nussbaum, González, & Gardulski, 2019). On the other hand, a lack of studies on how feedback affects primary school students' learning is highlighted in the literature (Cáceres et al., 2019; Schaeffer, Margulieux, Chen, & Catrambone, 2016; Van der Kleij, Feskens, & Eggen, 2015). Therefore, more research studies are required clarifying how and when feedback should be given during the problem-solving process in mathematics classes (Huxham, 2007), and particularly to identify the role of feedback in problem-solving at primary school level as well. Moving from the issues above, this study focuses on giving feedback during problem-solving processes in primary mathematics classes, and aims to investigate primary school students' development through formative feedback given during the problem-solving process. Students are engaged in the sub-processes of expressing a problem situation visually and describing their thinking structures in writing. The research question is as follows: *What is the role of formative feedback on development of students' performances in the problem-solving process?*

Conceptual Framework

Giving feedback as a supporting element can improve students' problem-solving processes. For both formal and informal learning environments, feedback is a common practice (Fyfe & Brown, 2020). Students need to check whether they are on the right track and receive feedback on their progress while going through the challenging process of problem-solving. Therefore, feedback is the essence of formative assessment (Núñez-Peña, Bono, & Suárez-Pellicioni, 2015).

The literature defines the basic characteristics of effective feedback. According to this, feedback should: be task-specific (Fyfe & Brown, 2020, Hattie & Yates, 2014); be detailed (Narciss et al., 2014; Van der Kleij, Feskens & Eggen, 2015); be process-based (Narciss et al., 2014); be given at the correct time (Brookhart, 2008; Fyfe & Rittle-Johnson, 2017); require active participation (Havnes, Smith, Dysthe & Ludvigsen, 2012); and facilitate reflection in students (Nicol and Macfarlane-Dick, 2006). Feedback should be task specific because, in this way, it provides students with information regarding their performance in a particular task (Hattie & Timperley, 2007). Moreover, it is useful to consider students' performance in feedback. (Hu, Li, Zhang, Roberts & Vitiello, 2021). This would help to bridge the gap between current and desired performance (Attali & Van der Kleij, 2017). In relation to performance, students' prior knowledge should be considered (Fyfe & Rittle-Johnson, 2016). As a last important issue, detailed feedback increases the contribution to learning (Van der Kleij, Feskens & Eggen, 2015) since elaborated type is the most effective one (Narciss et al., 2014)

Although feedback is found useful in developing students' performance, the effects of feedback are complex and related to many variables (Van der Kleij et al., 2015). In relation to different variables, such as the timing, type, and ability of the student (Butler, Godbole & Marsh, 2013), feedback can affect student performance and development differently. This situation is valid for studies investigating the effectiveness of feedback in the context of problem-solving (Cáceres, et.al., 2019). The effectiveness of feedback may differ even for different problems on the same topic (Chase & Klahr, 2017). Therefore, different mechanisms should be established for feedback that provide detailed information to students and which is directed towards their individual needs (Van Meeuwen, 2013).

In the classroom, feedback may take many forms, such as a teachers' annotations, prompting questions, statements for verification, and direct results (Chin, 2006). Within this context, it is possible to classify feedback types as presenting results, presenting correct answers and giving detailed feedback (Shute, 2008). Therefore, feedback can be described as the 'consequence of the performance' (Hattie and Timperley 2007, p.81). As a main actor of this study, formative feedback is defined as 'information communicated to the learner that is intended to modify his or her thinking or behavior for the purpose of improving learning' (Shute, 2008, p.154).

Within this context, the feedback is expected to tell the student what to fix and provide comments or suggestions supporting how to do this (Black & Williams, 1998).

Giving feedback makes a difference compared to not giving feedback (Basu, Biswas, & Kinnebrew, 2017), and feedback is beneficial in specific ways (Alfieri, Brooks, Aldrich & Tenenbaum, 2011). Therefore, it is not enough to guide students in the learning process, but it is also necessary to give feedback in certain ways (Cáceres et. al., 2019). Teachers' expectations of students' success affect their performance (Rubie-Davies 2017). Specifying these expectations in a planned, systematic and direct way in the learning environment can contribute to students' understanding and acting accordingly (Fyfe & Brown, 2020). This situation also applies to problem-solving. For the effectiveness of feedback in the problem-solving process, teachers should clearly present expectations to the students on this issue (Fyfe & Brown, 2020). When teacher feedback is general, it may not be meaningful for students, while feedback given on their current performance may contribute to their understanding of the difference between anticipation and their own actions, and to taking steps towards reducing this difference (Li, Cao & Mok, 2016). Therefore, one way to achieve giving good feedback is to share rubrics containing expectations with students (Andrade, Du, & Wang, 2008; Toker, 2020). In addition, it is difficult to implement an individual feedback process as it requires writing notes for each student in large classes (Frank, Simper & Kaupp, 2018; Núñez-Peña et. al., 2015). Therefore, rubric containing typical feedback expectations may be used, as in the case of this study.

Good problem-solving is associated with the creation a mental representation (Marshall, 1995). Students expressing verbal problems visually, in writing or verbally is related to their understanding of problem structures (Anderson & Krathwohl, 2001). It is important to provide an environment for visualizing the problem, because such representations are of great importance in understanding the problem and developing solutions (Krawec, 2014), and it can even be said to be critical in problem-solving (Ho & Lowrie, 2014). While visual expressions and drawings help students make abstract concepts more concrete (Douville & Algozzine, 2004) and meaningful (Fuson & Willis, 1989), they also help them develop their conceptual understanding (Pape, 2003). Students can figure out which operations are needed to solve a problem with the help of visuals (Van de Walle, Karp, & Bay-Williams, 2013). When students draw appropriate representations to understand the problem, the possibility of solving the problem correctly increases (Boonen, Van Wesel, Jolles, & Van der Schoot, 2014). From this point of view, the visual representation of the problem is not a sufficient step in solving it, but it may be a necessary step in getting started (Ho & Lowrie, 2014). Therefore, visualization plays a role in facilitating problem-solving (Van Garderen, Scheuermann & Jackson, 2013).

Asking students to explain their ways of thinking while solving a problem provides benefit both for teachers and for students. Students explaining their ways of thinking to make their thoughts visible, in other words explaining their thoughts in writing, will help them during the problem-solving process (Steele, 2005). Students explaining their thinking involved in the problem-solving process elicits their reasoning processes. Furthermore, this contributes to the development of their communication and relating skills (Countryman, 1992). In this manner, formative feedback allows students to articulate a general view of their work, reflect on the processes they have followed, clarify their opinions and ideas (NTCM, 2000), and verbally explain their thoughts. For the students, having the necessary knowledge to use feedback effectively to improve their skills (Stone, 2000) is essential. For teachers, it allows them to recognize the sources of students' misconceptions, make new plans for instruction based on these misconceptions (Colton, 2010), and gain detailed information about their students' learning and conceptual understanding. In light of the basic issues discussed above, this study focuses on the elements of formative feedback, visualization, written explanation and the use of rubrics in making thought visible in the problem-solving process. A conceptual framework, summarizing the elements used in this study to make thoughts visible during the problem-solving process, is shown in Figure 1.

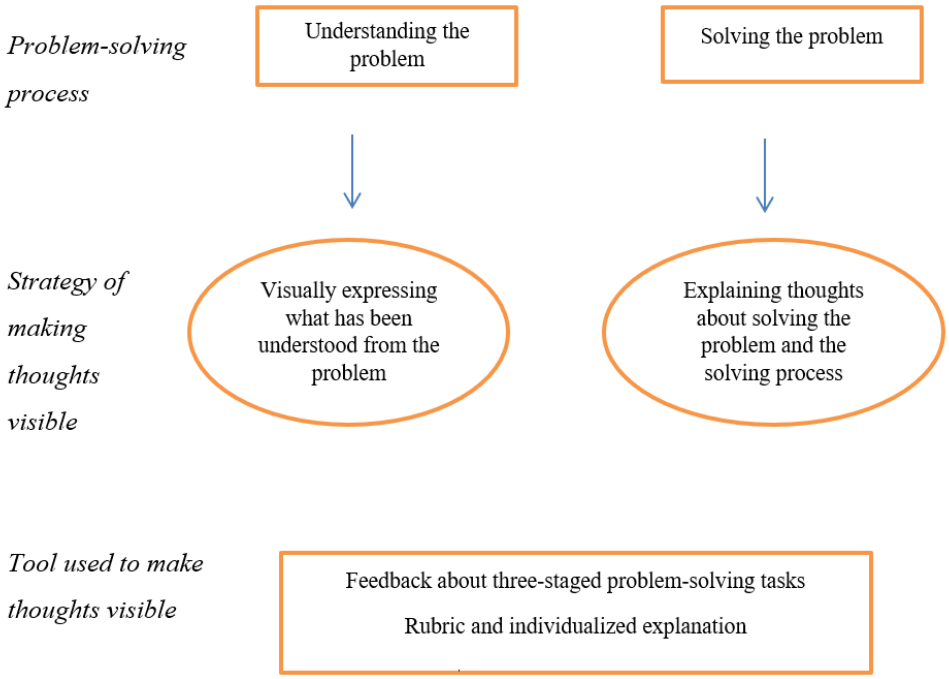


Figure 1. Framework for Making Thoughts Visible During the Problem-solving Process

Method

Research Design

This study covers the application, evaluation, and formative feedback processes over a six-week period investigating the role of formative feedback based on a rubric on the development of primary school students' performances. Their performance in visually expressing what they have understood from the problem and expressing their ways of thinking in written form during the problem-solving are considered. The entire study employs a classroom teaching experiment methodology (Cobb, 2000). However, in this embedded mixed method research report, the focus is on an investigation of the effect of formative feedback on students' writing and visualization. For this focus, one group pretest-posttest design is implemented and, in addition to pre/post test data, samples of students' written work are provided.

Prior to the study, a pretest was administered to determine the students' current level of problem-solving, with a focus on written and visual explanations. The classroom teacher administered the pre-test in the presence of the researcher during one class hour. After completion of the study, a posttest was used to gauge their development. Between these two applications, a total of four feedback cycles were conducted. The research process is summarized in Table 1.

Table 1.General Outlook of the Research Process

Process	Determination of readiness (Pretest)	1st Feedback Cycle	2nd Feedback Cycle	3rd Feedback Cycle	4th Feedback Cycle	Evaluation of development (Posttest)
Purpose	Determination of the students' current competence in the steps of problem-solving	Students solve problems and the teacher gives written feedback				Determination of the students' development in problem-solving

Participants

The research was conducted with a fourth-grade class that consisted of nineteen students at a primary school in Turkey. Of the participating students, eight were girls, and eleven were boys. As one of these students had to study many classes in different settings within the context of special education, the student was unable to participate in all parts of the study. Consent was gathered from all of the students and parents. Moreover, an approval form was taken from the administration.

The school where the research was conducted offers education at many schooling levels (primary school, middle school, high school), is affiliated with the Ministry of National Education, and administers an International Baccalaureate Primary Years Program (IB PYP). The students were mostly the children of the university's academic and administrative personnel that the private school is affiliated with. Although the general mathematics course achievements were defined as an average class throughout the school, it is possible to define the distribution of students in the class as heterogeneous. Table 2 shows the normality of the distribution.

Table 2. Normality distribution

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test	,178	18	,139	,958	18	,558
Post-test	,150	18	,200[*]	,925	18	,157

When the average score data of the pretest data is examined, it is found to be Sig. = .139> α = 0.05, so we can say with 95% confidence that the data shows a normal distribution. Similarly, since Sig. = .200> α = 0.05 for the posttest average score data, we can safely say that the data fits normal distribution with 95% confidence.

Data Collection Tools

The study employed the following data collection tools: the pretest developed to measure the students' level of readiness; the post-test having the same content as the pretest; the problem forms used in the problem-solving activities conducted over four weeks; and the rubric used in the feedback process.

Pretest and Posttest

At the beginning of the study, to determine the students' problem-solving capabilities, a pretest consisting of five problems was administered. The problems in the pretest were selected from the textbook used in the students' mathematics lessons. In the selection of the problems, the following criteria were used:

- They must be suitable for students to express their understanding of the problem visually in more than one way.
- They must allow different solving methods.
- Their solutions must involve more than one stage.
- They must include elements of daily life.
- They must require students to conduct operations with natural numbers.

In addition to this, the opinion of the classroom teacher, who had observed the students' problem-solving processes over a long period, was considered. The teacher was asked to evaluate the problems in terms of: (1) their suitability for the students' level; (2) sentence structure and complexity; and (3) the presence of terms with which the students were not familiar. The suitability of the problems for the students' level was also investigated by another academician working in the field of mathematics teaching, and they were all found to be suitable. The problems used in the pretest and posttest are presented in Appendix 1. The students were asked to find solutions to the given problems, and no further explanation was made. The problems used in the pretest were also used in the posttest after completion of the study. In both administrative processes, the students were asked to solve the questions themselves, but not to complete them by only writing an answer. No intervention was made by the teacher or the researcher in the process of solving the questions during pretests and posttests. Evaluation of the pretest and posttest results was conducted using a five-step graded scoring key. The answers given by the students to their problems were evaluated twice by the researcher at different times. In addition, 15% of the answers were subjected to independent evaluation by a researcher specializing in mathematics education. The steps in the graded scoring key, and information concerning the scores to be taken from the key, are given in Appendix 2.

Data Collection during Formative Feedback Sessions

As the data collection tools, a problem-solving form (Appendix 3) and the rubric were used in the four cycles of giving feedback. The problem-solving form prompted the students to produce a drawing related to the problem,

a mathematical operation, and an explanation. The structure of the form was developed based on framework by Minton (2007) and was then adapted to Turkish. The language and format validity of the form was addressed by seeking an expert opinion. The form was piloted by two fifth-grade students, and statements in the form were found to be precise.

The questions used over the four weeks are shown in Table 3.

Table 3. Problems Used in the Feedback Cycles

1	The Şengör family bought a car. They agreed to pay the cost in installments for eighteen months. They have to pay 3,525 TL each month. How much is the car?
2	A shoe company takes an order for 490 pairs of sandals, 820 pairs of slippers, and twice as many trainers as sandals, to be delivered in May. What is the total number of items in the order?
3	There are 6,530 balloons in the store of a company that organizes various celebration ceremonies. Of these, 2,890 are yellow, and the rest are red. 3,800 red balloons are required from the company for a birthday celebration. Can the company meet this order? Explain.
4	The municipality has identified two plots for a children's park. The length of the short side of the first plot, which has a rectangular shape, is 18 m, and the longer side is 30 m. The circumference of the other plot, which has a square shape, is the same as the first plot. What is the length of one side of the second plot?

Regarding the suitability of these problems, the views of a mathematics education expert were received. Following completion of the pretest, the problems in the problem-solving test were administered in the classes in the researcher's presence. The students were given problem sheets and what was expected for each section of the problem-solving form was explained to them. After this, they were asked to draw pictures to represent the problem, solve the problem, and explain the process. For solving problems, they were given twenty minutes. Next, in the remaining twenty minutes of the forty-minute lesson, the students were given feedback individually by the researcher in light of the discussion regarding focus and content of feedback with the classroom teacher. They were then asked to act in line with the given feedback when solving the next problem. While the researcher was giving individual feedback, the classroom teacher gave the other students a task out of the particular lesson's content.

The teacher and the researcher conducted the whole process collaboratively. The test was administered by the classroom teacher in the presence of the researcher. The problems are selected together in light of the classroom teachers' experience and familiarity with the students' profiles. The administrative process of the test and feedback sessions in micro cycles were designed in collaborative discussion sessions. The focuses of feedback were identified by collaboration.

In all the feedback cycles, a similar procedure was followed:

1. The students are presented with the problem of the week in a problem-solving form.
2. The students read the form and say if there is any term unknown to them.
3. The students engage individually in solving the problem.
4. The researcher gives feedback to the students individually based on the rubric.
5. The students reflect on the written feedback given and on understanding the problem, and the solving processes.
6. If they need to, they discuss the feedback and develop their performances with the researcher.

Formative feedback was given based on the students' answers to the problems. In this process, successive administration of the feedback processes had the potential to provide for the students' development. In this formative feedback process, hints and strategies regarding students' work were provided to enhance this development. As in this example, students' work was evaluated within the framework of the expectations defined in the rubric, and individual feedback was provided to each student regarding the level of realizing these expectations.

In evaluating the findings for the first week, it was found that there were certain common points in the students' drawings, solutions, and explanations; that is, in general, there were similarities in their mistakes and missing parts. The written feedback statements were then converted to the graded scoring key, and during the following weeks, the students were given their feedback based on this table. The students were given formative feedback (as exemplified in Figure 2) and provided explanations related to their answers using the

rubric. The rubric consisted of both explanations and points. After dealing with the week's problem the completed table was given to the students for them to refer to in the next problem-solving process. The constructed feedback table is shown in Table 4.

Table 4. Rubric used in the cycles of giving feedback

	4 points	3 points	2 points	1 point	0 point
Drawing a picture to understand the problem	Drawing a picture to understand the problem with all elements -elements -their relationship -what is asked	Drawing a picture to understand the problem with two of the elements	Drawing a picture to understand the problem with one element	Drawing a picture to understand the problem partly including one element	Not drawing
Writing the mathematical sentence explaining the solution	Writing the mathematical sentence explaining the solution, correct operation selection, correct process, and correct result.	Writing the mathematical sentence explaining the solution-Correct operation selection, correct process.	Writing the mathematical sentence explaining the solution-one of them: Correct operation selection, partially correct process.	Writing the mathematical sentence explaining the solution-one of them: Correct operation selection.	Did not find the correct operation to solve the problem
Explaining the process followed to find the solution	Explaining the process followed to find the solution -why -what -how	Explaining the process followed to find the solution-two-and one is partially appropriate -why -what -how	Explaining the process followed to find the solution-two -why -what -how	Explaining the process followed to find the solution- one is appropriate -why -what -how	Did not write what you did, why you did it, or what you found as a result

The students were allowed to look back at their work once more based on the problem-solving form's written feedback. In addition, for each student, it was explained and exemplified which anticipation was at each stage accompanied by this rubric. They were also allowed to discuss, if they needed, how they could individually develop their performances.

Data Analysis

The paired sample t-test was used to analyze the students' development in problem-solving from pretest to posttest. Additionally, for the data collected during the micro-cycles, the three dimensions (drawing a picture to understand the problem, writing a problem sentence explaining the solution, and explaining the process followed to find the answer) revealed the points for which feedback was given. The distribution and change of the scores taken by the students across the weeks were analyzed to gain insight into the effectiveness and utilization of the feedback points.

For each micro-cycle, student responses were examined one by one, and the data was coded by a second encoder familiar with the subject. For the coding compatibility, a Cohen's Kappa coefficient was calculated and found to be .86, indicating substantial agreement. In all of the cycles, the researcher's role throughout the research was to follow the students' question-solving during the course, grade the students' work, and provide oral and written feedback in the light of the issues discussed with the classroom teacher. The classroom teacher took a role in every part of the process. Starting from selecting problems at the beginning to the administration of the posttest at the end, she was in close collaboration with the researcher and involved in the entire process. In addition to classroom practices, each week the researcher and the teacher collaborated on the process.

Results

The results of this study are presented in two stages. In the first stage, the pretest and the posttest results are compared, and the application's effectiveness is then determined. In the second part, in each micro-cycle of the implementation process, the students' mean scores in three dimensions are presented with frequency and rates. In addition, as the weeks progressed, the results relating to the kind of formative feedback provided in the process, with examples from student work, are given. Additionally, it is determined how the feedback has resulted in changes during the process.

Pretest and Posttest Results

The students' pretest scores were evaluated out of twenty and then converted into percentage values. The percentage values for the pretest and posttest results are given in Table 5.

Table 5. Pretest and Posttest Mean Scores

	1	2	3	4	5
Pretest	3,72	2,33	2,06	3,44	3,78
Posttest	4,00	2,83	2,89	3,33	3,89

When the pretest data is analyzed from normality, the mean score data is found to be Sig. = 00139> α = 0.05, meaning that the data shows normal distribution with 95% confidence. Similarly, since the posttest average score data is Sig. = 00200> α = 0.05, it can be said that the data fits normal distribution with 95% confidence. Since the pretest and posttest data shows normal distribution, the tests' relationship was examined with a paired sample t-test. Table 6 shows the result of the analysis relating to the t-test.

Table 6. Results of Paired Sample T-test for Pretest and Posttest

Paired Differences							Sig.(2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	
			Lower	Upper			
-,32222	,30785	,07256	-,47531	-,16913	-4,441	17	,000

The results of the t-test show that, with 95% confidence, there is a statistically significant difference between the mean scores before and after the teaching experiment.

Formative Feedback Session Results

First Dimension: Drawing a Picture to Understand the Problem

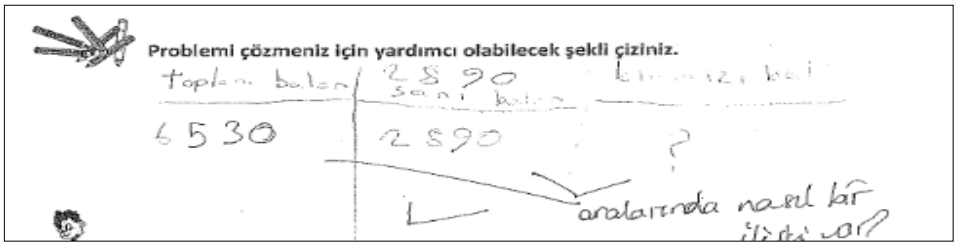
The students' scores from the dimension of drawing a picture over the weeks were 2.11, 3.17, 3.61, and 3.72. While the scores taken at the beginning of the study varied between 0 and 4, in the second week there were no children who scored 0 or 1 point, and when it came to the final week, the scores were mostly 3 and 4. Throughout the study, a continuous increase was observed in the means of the drawing scores. Table 7 shows the frequencies and percentages of the scores taken from the drawing dimension of the study.

Table 7. Scores Taken from the Drawing Dimension over the Weeks

	1st week		2nd week		3rd week		4th week	
	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)
4 P.	5	27,78	7	38,89	13	72,22	13	72,22
3 P.	4	22,22	7	38,89	3	16,67	5	27,78
2 P.	2	11,11	4	22,22	2	11,11	-	-
1 P.	2	11,11	-	-	-	-	-	-
0 P.	5	27,78	-	-	-	-	-	-

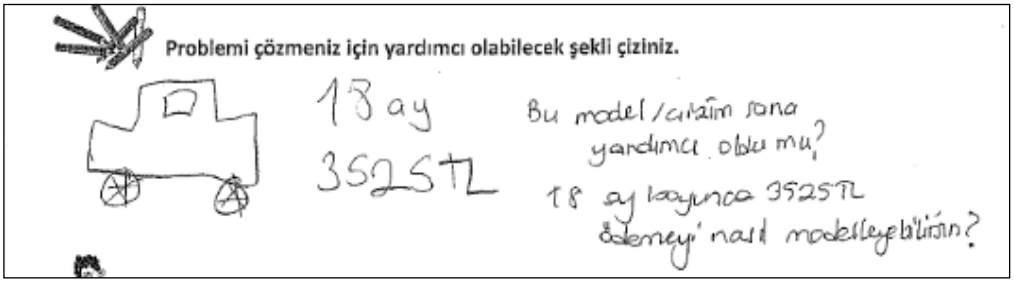
When the changes in the students' work were examined in terms of content, it was found that in the first week of the study, while only 27.78% of the students drew pictures that included all the elements of the problem, this percentage increased to 72.22% in the third and fourth weeks. While initially, nearly one-third of the students did not draw pictures that could help solve the problem, or did not draw any pictures at all, as of the second week, all of the students drew at least certain elements of the problem.

Examples of the students' drawings are given in Figures 2.1, 2.2, and 2.3.



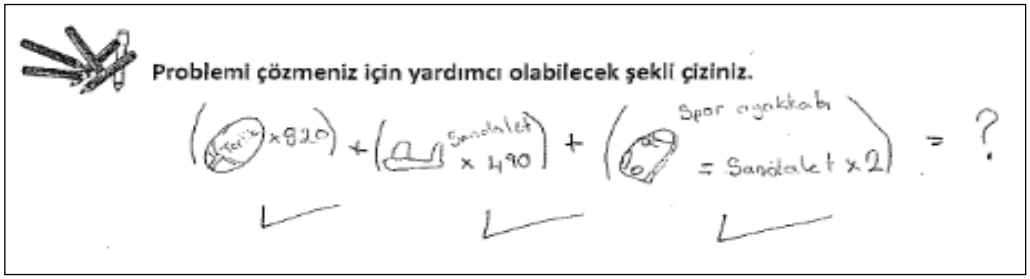
Drawing that shows students' understanding of the problem -with two of the elements

Figure 2.1. Drawing of student 2 (3 points)



Drawing that shows students' understanding of the problem- including one element partially

Figure 2.2. Drawing of student 8 (1 point)



Drawing that shows students' understanding of the problem with all elements

Figure 2.3.Drawing of student 13 (4 points)

As shown in Figures 2.1, 2.2, and 2.3, while the students did not experience much difficulty expressing each element in the problem, they experienced great difficulty in visually representing the relationships between the components. The focuses of the feedback that emerged in the first dimension, 'Drawing a picture to understand the problem' were:

1. Inclusion of elements making up the problem in the drawing produced for the problem.
2. Inclusion of the relationships between the parts of the problem.

Considering the drawings of students regarding this dimension from the first week to the last week, in the beginning, a number of students only expressed the elements in the problem visually. Some students did not specify what the images represent, including the visual component for only a part of the problem, and did not have the elements' relationships. It can be seen that the students' drawings became more and more appropriate in all respects. The students both shaped their previous studies with the individualized formative feedback given to them and became more aware of these new studies' expectations.

Second Dimension: Writing a Mathematical Sentence

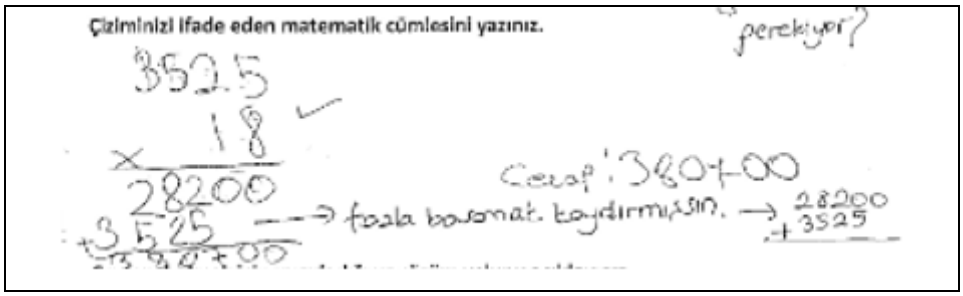
The students' mean scores from the drawing a picture dimension across the weeks were 2.72, 3.00, 3.78, and 3.94, while in the first week of the study, the students' scores were mostly 0, 3, and 4. In the second week, the number of students who received scores of 0 and 3 decreased, and the number of students with scores of 1, 2, and 4 increased. In the third week, only one student had a score of 2, and in the fourth week, almost all of the students received a score of 4. A continuous increase was observed in the students' mean scores for using a drawing expressing the problem situation. In Table 8, the distribution of the scores taken from the dimension 'Writing a mathematical sentence' by using a drawing expressing the problem is given as frequencies and percentages.

Table 8. Scores Taken from the Dimension of Writing a Mathematical Sentence Across the Weeks

	1st week		2nd week		3rd week		4th week	
	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)
4 P.	7	38,89	10	55,56	15	83,33	17	94,44
3 P.	7	38,89	3	16,67	2	11,11	1	5,56
2 P.	-	-	1	5,56	1	5,56	-	-
1 P.	-	-	3	16,67	-	-	-	-
0 P.	4	22,22	1	5,56	-	-	-	-

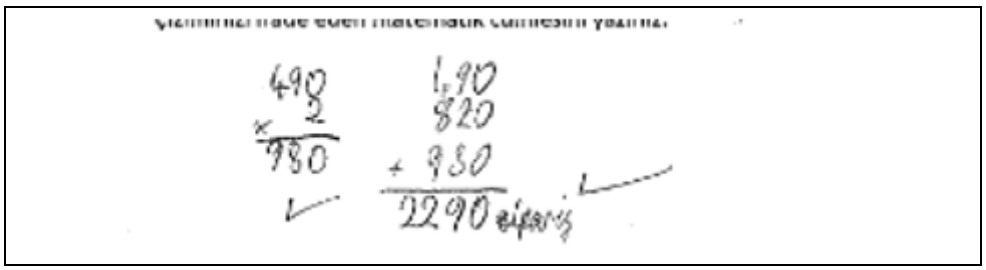
It was found that most of the students were able to use the correct operation to solve the problem primarily as of the first week. In the first work, one student's method of solving the problem did not include the steps leading to the solution, only the result. After the student was given feedback, this changed in the following solutions. In the third and fourth weeks especially, in addition to finding the correct operation, the students did not make mistakes in the intermediary stages and found the right answers. Therefore, progress was observed in their expressions of mathematical sentences.

Examples of the students' mathematical sentences produced in the problem-solving process are given in Figures 3.1, 3.2, and 3.3.



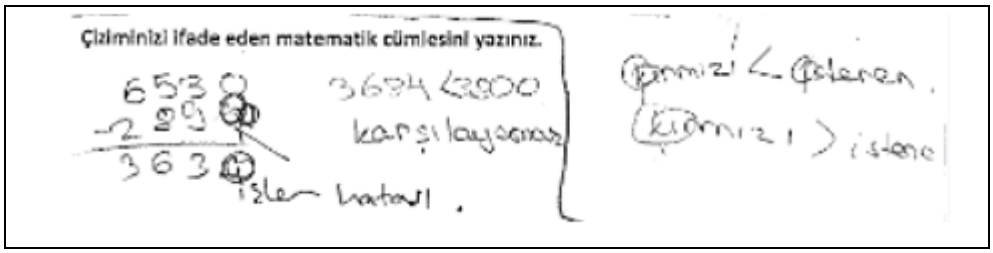
Mathematical sentence explaining the solution-one of them: correct operation selection, partially correct process

Figure 3.1 Mathematical sentence of student 4 (2 points)



Mathematical sentence explaining the solution correct operation selection, correct process, correct result

Figure 3.2 Mathematical sentence of student 7 (4 points)



Mathematical sentence explaining the solution-correct operation selection, correct process

Figure 3.3 Mathematical sentence of student 10 (3 points)

The focuses of feedback that emerged in the second dimension, 'Writing a mathematical sentence' were:

1. Writing the numbers correctly in the mathematical sentence,
2. Planning the operations correctly in the mathematical sentence,
3. Conducting the operations correctly in the mathematical sentence,
4. Conducting the operations in the correct order in the mathematical sentence, and
5. Finding the correct answer to the mathematical sentence.

In general, the students' constructed their mathematical sentences correctly. On the other hand, operational mistakes stemming from a lack of information in the necessary applications related to basic operational skills in certain of the problems were observed. For instance, a number of students performed multiplications without shifting the numbers one under the other by one digit in the calculation process. In addition, certain calculation errors, stemming from the students' carelessness were observed. Through the feedback given to the students, such calculation errors were reduced.

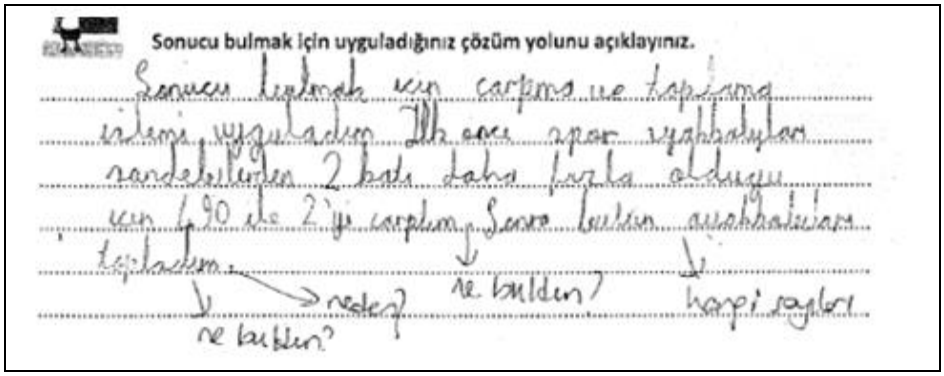
Third Dimension: Explaining the Process Followed to Find the Solution

While the students' mean scores were low in general, a continuous increase was observed and, in the last week, this ratio increased by a considerable extent. The scores were 0.83, 1.56, 3.33 and 3.58 for four weeks. When the changes in the students' scores taken from the dimension of writing an explanation were examined, it was found that, particularly in the first week, no student ultimately met expectations. In the work for the first week, while half of the students received 1 point, nearly half received 0 points. Only two students wrote what they did to solve the problem and why they did it, but they did not report what they had found as a result. In the following weeks, a continuous improvement was observed in their ratio of writing explanations and meeting expectations in their descriptions. In the final week, two-thirds of the students completely satisfied the expectation regarding writing a reason; that is, they could explain what they had done, why they had done it in the problem-solving process, and what they had found as a result. In Table 9, the distribution of the scores taken in the dimension 'Explaining the process followed to find the result' is given as frequencies and percentages.

Table 9. Scores in the Dimension of Writing an Explanation across the Weeks

	1st week		2nd week		3rd week		4th week	
	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)	# of students	Percent (%)
4 P.	-	-	1	5,56	12	66,67	12	66,67
3 P.	2	11,11	5	27,78	2	11,11	1	5,56
2 P.	-	-	2	11,11	3	16,67	3	16,67
1 P.	9	50,00	5	27,78	-	-	2	11,11
0 P.	7	38,89	5	27,78	1	5,56	-	-

Examples of the students' explanations are shown in Figures 4.1, 4.2, and 4.3.



Explaining the process followed to find the solution- one of them is available -why, what, how

Figure 4.1. Explanation of student 9 (1 point)

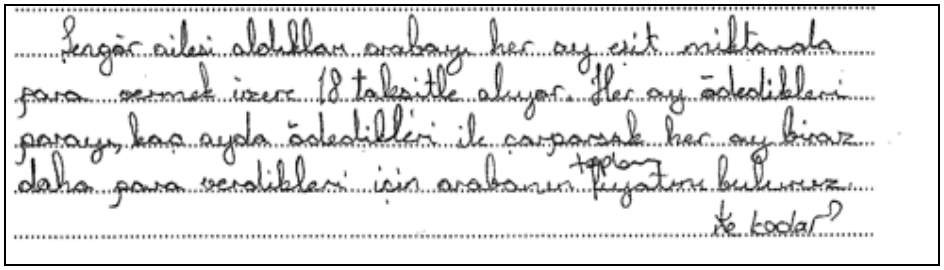


Figure 4.2. Explanation of student 14 (3 points)

Figure 4.3. Explanation of student 10 (4 points)

In Figure 4.1, student 9 mentions only one aspect, which is the operation to be used for the solution, without indicating the numbers, reason for using this operation, or how to do it. In Figure 4.2, student 14 explains the process by indicating how to calculate and why this did not provide the answer. In Figure 4.3, the student explains by answering how what, and why questions and received 4 points. The focuses of feedback emerging in the third dimension, 'Explaining the process followed to find the result' were:

1. Explaining what they had found as a result of the solution.
2. Explaining why they had used the numbers and operations in the solution.
3. Explaining which numbers and operations they had used in the solution.

The students tended to write 'what they had done' when explaining the process and finding the solution. While a number of students used highly generalized expressions, such as 'First I added and then I multiplied' others explained which operations they had used with which numbers in a detailed manner, such as, "I subtracted 2,890 red balloons from the 6,570 balloons". The elements less mentioned in their explanations are related to 'why they did what they did' and 'what they found as a result'. In their first week's work, the students usually did not mention why they had used certain operations in their explanations. Following the feedback cycles, they paid greater attention to explaining what they had done and why they had done it and what they had found.

Discussion

The purpose of this study is to elicit the role of formative feedback in the development of fourth-grade students' problem-solving performance. They were engaged in the sub-processes of expressing a problem situation visually and describing their thinking structures in writing. Through this connection, the study reveals the focuses of formative feedback in making students' thoughts visible in the problem-solving process. In Table 10, the points of feedback are summarized.

Table 10. Focuses of Formative Feedback

Problem-solving process	Formative Feedback points
Drawing a picture to understand the problem	In the picture drawn to represent the problem, inclusion of the elements making up the problem Inclusion of the relationships between the elements of the problem

Writing a mathematical sentence explaining the solution	Writing the numbers correctly in the mathematical sentence explaining the problem Planning the operations correctly in the mathematical sentence explaining the problem Conducting the operations correctly in the mathematical sentence explaining the problem Conducting the operations in the correct order in the mathematical sentence explaining the problem Finding the result correctly in the mathematical sentence explaining the problem
Explaining the process followed to find the solution	Explaining what is found in the solution followed to find the result Explaining why these numbers and operations are used in the solution followed to find the result Explaining which numbers and operations are used in the solution followed to find the results

The results of the study, in which the students performed drawings to understand problems, found solutions and explained their methods, shows that the students made progress in the problem-solving process. This finding is consistent with the results of other studies in the literature pointing out that feedback is beneficial (e.g. Hattie & Gan, 2011; Luwel, Foustana, Papadatos, & Verschaffel, 2011; Mory 2004; Rittle-Johnson, 2006; Shute, 2008). It can be said that the students' overall performance towards the development of problem-solving has increased and that they created products that are more suitable for teacher expectations.

The results of the current study show that the students improved their written expressions regarding their thinking structures involved in the problem-solving process as of the first week. This may indicate that feedback is a useful tool for making students' thoughts visible in the problem-solving process. On the other hand, students should need to have the necessary knowledge to use feedback effectively to improve their work (Stone, 2000). The feedback was given to the students to reflect on what, why, and how they did what they had done and what they had found. As a result, the problem-solving process over time encouraged the students to initiate a reflective process independently and to carry out this process without assistance.

In addition to the improvements observed in written expression, the results show that the students progressed from producing visual drawings, including essential elements, while visually expressing what they understood from the problem toward creating more complex visuals that better explain the whole structure and the relationships involved in the problem. When a drawing was expected regarding a problem, the students developed their visual expressions according to expectations. In many implementations in the literature, the same feedback is provided without considering about the degree of accuracy (Attali & van der Kleij, 2017). However, contrary to the feedback given to the students, irrespective of the correctness of their solutions or regardless of their prior knowledge, when individualized formative feedback is provided, as in this study, the visual and written explanations of the students regarding the problem-solving processes can be improved.

Another dimension intended to be supported with feedback in the current study is, 'Writing a mathematical sentence', and it was concluded that the feedback given to the students in this regard was useful. This study finding coincides with the finding of Fyfe and Rittle-Johnson (2017). Therefore, feedback provided during the application helped students perform better. The students' mathematical operation mistakes were reduced over time in the process. Lee (2006) claims that feedback is useful only when students use it effectively. Therefore, it can be said that the students in this study used their existing knowledge that they benefitted during the formative feedback process to scaffold their new learning.

In this study, the formative feedback presented to students is seen to support their performance in problem-solving. Detailed feedback was given for task-based performances, and given in correct time as similarly claimed in different literature sources (e.g. Brookhart, 2008; Fyfe & Brown, 2020, Fyfe & Rittle-Johnson, 2017; Hattie & Yates, 2014; Narciss et al, 2014). In this process, the quality of both the accuracy and appropriateness of the students' answers, their drawings and their explanations of the problems increased. At this point, it is important for students to understand the rubrics used and the expectations in practice. Students benefited from the rubrics to both confirm the accuracy of their performances and to provide the changes of necessary elements in the problem-solving process. They need to know of the teacher expectations through the rubrics provided for them with the opportunity to learn about their performance and make changes regarding it (Fyfe & Brown, 2020; Mory, 2004).

The improvement in performance is at the same level for every student and for every problem, which coincides with the results of previous findings in the literature. Variables, such as students' prior knowledge (Fyfe &

Rittle-Johnson, 2016), ability (Butler, Godbole & Marsh, 2013), and the content of the subject (Chase & Klahr, 2017) may have caused students' performances to be different and developed at different levels. In many implementations, the same feedback is provided regardless of the answer's correctness (Attali & Van der Kleij, 2017). However, contrary to the feedback given to students, irrespective of the correctness of their solutions and regardless of their prior knowledge, when individualized formative feedback is provided, as in this study, the visual and written explanations regarding the problem-solving processes of students can be improved.

It is shown in the meta-analysis study of Alfieri, Brooks, Aldrich, and Tenenbaum (2011) that feedback is beneficial in specific ways, and that scaffolding is beneficial in the process. The results of the current study are intended to reveal the role of feedback in making students' conceptions visible in different aspects to achieve improvement in different dimensions of the process. The items on how the formative feedback process focuses on three dimensions, summarized in Table 10, are the most used focuses in giving individual feedback. At this point, it can be assumed that scaffolding was provided by way of formative feedback.

It can be said that the students showed less improvement in the fourth problem compared to the other problems. This finding coincides with the conclusion expressed by Chase and Klahr (2017) that the effectiveness of feedback may differ in different problems within the same subject area. Furthermore, the students did not encounter a problem from the learning area of numbers and operations, unlike with the other three problems. This problem also includes a context related to geometry and measurement learning areas that may have caused students to perform differently than with other problems.

The effect of feedback may vary based on the type of activity, a particular context, the type of information required, or the students' current knowledge (Chase & Klahr, 2017; Fyfe & Rittle-Johnson, 2016, Fyfe & Brown, 2018). In addition, the use of visualization in problem-solving may not be considered for all word problems. Feedback may also differ among students and may require different processes for different learning stages (Stevenson, 2017). In this study, a number of students showed faster improvement in their problem-solving performance than others. On the other hand, they improved in all three dimensions from the beginning to the end of the study. In this respect, the results of this study can provide an example of how feedback may be used to guide students towards goal-oriented work, based on the task given in problem-solving (Hattie & Yates 2014).

Conclusion

One of the critical results regarding the problem-solving process in this study is that the students used both the feedback given to improve their current work and to consider what they learned in subsequent problem-solving processes. Therefore, as a practical implication of the study, detailed information can be provided to students through this kind of formative feedback process. The students can be guided with regard to what type of work they should do for their development. In addition to this, teachers can use the problem-solving form to make students' thoughts visible in different problem-solving processes in the curriculum. Furthermore, the rubric and focus points in the feedback process can be used in classes to give verbal or written feedback in problem-solving processes. In this regard, the results of the current research may shed light on mathematics and primary school teachers seeking to develop their students' habits in problem-solving.

This study has the potential to contribute to the literature in terms of clarifying how, when and for which purpose formative feedback should be given in the problem-solving process in mathematics. As a limitation, this study was carried out with nineteen students over a six-week period. Different studies conducted at different grade levels may yield different results. Different applications may take place in conducting similar studies in more crowded classrooms. In addition, studies investigating how students reflect their acquisitions on subsequent problem-solving processes can be conducted. Therefore, future research may investigate the effects of the routine use of the process tried in this study for longer periods of time, at different class levels, in other learning areas and problem situations, in various school structures, and with different student profiles. Moreover, empirical studies could be conducted to reveal how feedback can be provided in the problem-solving process with different variables.

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Appendix 1

Problems Used in the Pretest and Posttest

The distance between City A and City B is 1,124 km. A bus leaving City A has traveled 137 km. How many kilometers more must it travel to arrive at City B?
Every day, an athlete runs 3,000 meters around a piece of land in the shape of a square the side length of which is 200 meters. The athlete has completed three circuits around the land. How many more meters should he run to complete 3,000 meters?
A mining company will transport ore by way of rail from Turkey to Kazakhistan. Each of the freight cars can carry eighteen tons of cargo. The train has seven freight cars. How many times should it travel to carry 250 tons of coal?
In a 4×400 flag race run in teams of four, when the third runner gives the flag to the fourth runner, he has completed 1200 meters. How many meters will the last runner run?
A toy seller, Cevdet, counted the toys in his store at the end of the year. He found that there are 275 toy cars, 148 dolls, 1,023 balls, and 816 kites. In total, how many toys are there in his store?

Source: . (Öztürk, Kişi, Öztaş, & Oruç, 2011).

Appendix 2.

Pretest and Posttest Graded Scoring Key

Assessment criteria	Score
Finds the correct operation to solve the problem, finds the intermediary stages correctly, and finds the correct result.	4
Finds the correct operation to solve the problem, finds the intermediary stages correctly, but makes mistakes in finding the correct result.	3
Finds the correct operation to solve the problem, but makes mistakes in the intermediary stages.	2
Finds the correct operation to find the solution.	1
Leaves empty.	0

Appendix 3.

Problem-Solving Form

Problem-solving form

Name (First and Last): Class: Date:

Problem

Draw a picture that can help you solve the problem.
Write a mathematical sentence explaining your solution.
Explain the process you followed to find the solution.

International Journal of Contemporary Educational Research (IJCER)

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Review of Primary School English Coursebooks in Terms of Creative Writing Activities

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Article History
Received: 09.03.2020
Received in revised form: 01.05.2021
Accepted: 21.06.2021
Available online: 03.09.2021

To cite this article:

Bal, O. & Şahin, H. (2021). Review of primary school English coursebooks in terms of creative writing activities. *International Journal of Contemporary Educational Research, 8*(3), 150-162. DOI: https://doi.org/10.33200/ijcer.893993

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 150-162 ISSN: 2148-3868

Review of Primary School English Coursebooks in Terms of Creative Writing Activities

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Abstract

In this paper, the writing sections in Primary School English Coursebooks were reviewed to determine the creative writing activities and content analysis method was used in the context of document review. In this process, the coursebooks published by Ministry of National Education Publications and private publishing houses were both selected from each grade level. Results of the review showed that, creative writing types are not included enough in 4th, 5th, and 6th grade textbooks. Though 7th and 8th grade books have a large number of creative writing activities, they do not have enough genre types. In addition to that review, writing skill learning outcomes given in the syllabi and the writing activities in the books reviewed in this paper are also compared. After a comparison of the books of the publications was made, it is revealed that the private publishing houses' textbooks have more types of genre than the other ones have.

Keywords: Creative writing; English; Primary school English course; Coursebooks.

Introduction

It is inevitable for nations around the world to keep pace with the developing and advancing world with the increasing knowledge and the transformation of science into technology, facilitating the sharing of information among people and the rapid spread of information. Indeed, as a result of the emergence of these conditions, the need mastering the languages used to meet the needs of people to communicate with other individuals and societies emerged. Communication needs of humanity, which seem to have personal dimensions such as sharing information, establishing friendships, strengthening science, are transported to international media over time and keep growing. A world where strong and fast communication is established is no longer a large land mass, but it becomes as small and accessible as our home.

According to The Key Data on Teaching Language in Schools in Europe report published by the European Commission (European Commission, 2012), children are reported to start learning foreign languages at an earlier age in Europe and most students start learning foreign languages at the age of 6-9. The vast majority of countries or regions have lowered the beginner age level for compulsory language learning over the past 15 years, and some of these countries have even started offering foreign language education in pre-school education. For example, the German-speaking community in Belgium provides foreign language learning for children under 3 years old. The report also confirms that English is the most widely taught foreign language in almost all European countries, followed by French, Spanish, German.

In a research conducted in a cancer center in New York (Kim, Relkin & Lee, 1997), brain maps of bilingual people were examined by the MR (Magnetic Resonance) technique and it was determined that the second language acquired at the age of children was kept in the same place as the native language in the brain. Based on this study, it can be said that the second foreign language acquired at an early age will have more permanence and fluency in use. Thus, around the world, many administrations have drawn English language education to primary school level, depending on the idea that the process will be easier, profitable and better for children who start English language education at an early age. (Brewster, Ellis & Girard, 2003). Mirici (2001) clearly states that practices in major European countries that starting foreign language education in the early stages of primary education is important. For example, foreign language education begins in the first year in Greece and the Netherlands and in the third year in Germany and Italy. Today, in Turkey, English language education, starts in the 2nd grade primary education level, continues in the 3rd, 4th, 5th, 6th, 7th and 8th grades.

There are four different skills, namely listening, reading, speaking and writing, which focus on the language education process. According to Richard (2002) "Writing is the most difficult skills for second language learner to master of putting together strings of grammatically correct sentences". Based upon this, we can say that writing skills are the most difficult of the four, as many foreign language students and foreign language teachers state. For any writing activity, even in the native language, there may not be enough time in the lesson for writing activities compared to listening, reading and speaking activities due to the limited duration of the lessons. In addition, the students' lack of some basic writing skills to do their writing activities may be another reason to ignore these activities for the teachers. The importance of writing skills becomes more evident when it comes to English, which is an international communication tool. Hyland (2003) believes that language development performance is possible with the development of writing skills. It is believed that the piece written by an English-language student must be logical, content-consistent, clearly formed, fluent, richly worded, and mechanically well organized. However, since writing activities are regarded as a part of grammar teaching rather than having a mechanical teaching on their own, independent from other language skills, these activities are not given sufficient importance in the language teaching process and thus the resulting works are not satisfactory. In addition to that, Demirel (1999) mentioned that some foreign language teachers also consider writing as an assignment outside the classroom rather than classroom teaching activity.

Creative Writing has growingly become the subject of research interest just because academics benefited from today's literary and cultural theory in order to create new methodology in pedagogy and to understand the importance of Creative Writing for modern cultures well (Dawson, 2005). Just to explain the significance of teaching creative writing and including it in textbooks and lessons we need to talk about the definiton of it at firstt. Ramet (2006) explains creative writing as "having the power to create an imaginative, original literary production or composition". Also, according to Orhon (2003) creative writing means one's putting his or her ideas and feelings about a particular topic on paper by using his or her imagination freely. Creative writing depends on expressing the impression of outer world in an alternate way and it offers freedom to students to pick their own writing subjects and strategies. The significance of creative writing is undubitable to improve the cognitive and communicative abilities of youngsters (Cristopher, 1996). Starting from this point of view it can be said that creative writing activities applied to improve writing skills in English lessons, should not be restricted with certain types of literature, such as memories, poems, stories, etc. Students should be improved by carrying out activities related to different types of literature. While Chamcharatsri (2012, 2013) was performing creative writing activities involving different types of literature, he wanted to bring a different perspective on the use of the emotions of the writer and guide them in this regard. He stated that performing different types of creative writing activities enables participants to take different roles in terms of emotional expression. From this standpoint, it can be said that the use of different creative writing activities in the lessons contributes to the development of emotional intelligence of students by entering different emotions and also has an important place in the development of their literary abilities. Harris (2015) states that the students who learn English as a second language have only written expression skills and lack internal consistency and commitment to the main subject. For this reason, solutions can be produced for these problems with frequent and regular writing tasks related to different types, and potential future problems related to writing skills in foreign language can be prevented at the primary level.

Based on this significance of creative writing as highlighted in the related literature, this study aims at determining the frequency of creative writing activities usage in primary school English textbooks in order to determine how strong the basis of the foreign language was at the primary level where the students meet the foreign language for the first time.

Literature Review

In this section, common and similar studies take part to show the studies which have been done relating to the subject of this study.

Acar (2006) investigated the effectiveness of the textbook Spotlight on English used in the state primary schools in Turkey based on the post-use textbook evaluation practice and ultimately to develop a new model which will compensate for the weaker parts of the textbook. In another study on the primary school ELT coursebooks Arıkan and Tekir (2007) got the opinions of 7th grade students' and teachers' on Let's Speak English 7 and as a result of this study they suggested that both teachers and the students have rather negative feelings about Let's Speak English 7, the teachers having more negative feelings towards it. Also, Kırkgöz (2009) completed an evaluation of the three English textbooks which were used in grade 4 classes by the Turkish Ministry of

National Education in state primary schools. In her study, 37-item textbook evaluation scheme (Smiley Questionnaire) was asked to be responded by teachers and students to reflect their ideas about varied aspects of the textbooks and she resulted that the three books are carefully designed to meet the MoNE curriculum goals and objectives. Inal (2006), in his research on the problems of written expression lesson, in order to improve the writing skills of students in our country, concluded that different writing programs from the simplest level to the most advanced level should be included in the syllabus, and teachers who are experts in the field of written expression alternately should help students with writing skills on certain days of the week. Considering the results of this study, the fact that creative writing activities should be organized based on one of the principles of teaching English, from simple to complex, should be introduced to students with a guide at an early age. Göçen (2019) examined the effect of creative writing activities on students 'success and concluded that creative writing activities had a positive effect on students' creative writing success, writing attitude and motivation. In their study, Tok and Kandemir (2015) examined the effect of creative writing activities on 7th grade students' writing activities in English and concluded that the use of creative writing exercises had a positive effect. In his research on writing activities in high school textbooks, Kıray (2013) stated that the types of literature included in coursebooks are sufficient, but the amounts are insufficient, and stated that the effectiveness of the writing activities is controversial, believing that the purpose of the given types is not clear but hidden. Ak (2011) states that as a result of the study named "The effect of creative writing techniques on written expression skills of Turkish 5th grade students in Turkish lesson", he found a significant difference in favor of the experimental group in their final test success scores. In other words, it is clearly stated that creative writing activities contribute to activities in the mother tongue. In his research, Pelcova (2015), examined the use of creative writing as a tool in teaching English and concluded that the English teachers involved in the study did not have sufficient knowledge about the application of creative writing activities, but teachers had the opinion that these activities had positive effects on students' writing skills. In addition to ones mentioned before, in a study conducted in Hong Kong (Cheung, Tse & Tsang, 2011), although the elementary teachers in their study liked creative writing activities and thought it would be useful to use these activities in the lesson, revealed the fact that many of them applied classical teaching methods. For this reason, including creative writing activities in textbooks and course contents is not only enough, but also teachers who can master these activities should be responsible for having a meaningful effect.

Problem Statement, Purpose Statement And Significance

The problem of the research is to determine how often creative writing activities are used in the 4th, 5th, 6th, 7th and 8th Grade English course books. As a result of the comprehensive literature study, no study on the review of creative writing activities in primary school English textbooks has been found. For this reason, with this study, it was aimed to determine the frequency of creative writing activities usage in primary school English textbooks in order to determine how strong the basis of the foreign language was at the primary level where the students meet the foreign language for the first time. In the TOEFL test score report (ETS, 2018) by Educational Testing Services (ETS), published in 2018, Turkey has a writing skills average score of 20 out of 25 points. At the same time, in the report, including all countries' GRE scores, published by ETS in 2018 (EST, 2018a), Turkey's Analytical Writing section score average is 3.1 out of 6. In the report released in 2018 (the British Council, IDP Education, Cambridge Assessment, 2018), which has IELTS exam performance scores, Turkey's writing skills average score is 5.7 over 9 of both Academic and General Training exams. In Graduate Management Admission Council's (GMAC) Graduate Management Admission Test (GMAT) GeoChart Tendency Report in 2018 Turkey's general average score is mentioned but there is no special writing section result score special for the country. There is no special result section for Turkey in the results reports of the international English placement tests such as Scholastic Aptitude Test (SAT) and American College Testing (ACT). It can be clearly understood that Turkey's exam results remained at average or below average by looking at the exam score results of the non-native English spoken countries' average. In the writing sections of these exams, candidates who take the exam are asked to write articles that require the use of creative writing skills and are evaluated according to the resulting product. For this reason, it can be said on the basis of this data that it is important to include creative writing activities on English writing skills from the beginning of primary school education in textbooks. Thus, it is possible to help students think both analytically and start writing fictional articles, and to achieve more successful results in the writing sections of the international English placement tests by having them work in different types of literature in a foreign language at an early age. In the light of all this, it is thought that this research will be significant and useful, as it will present suggestions for the wide range of creative writing activities in English textbooks, taking into account students' developmental situations.

Method

In this research, the data were analyzed by using content analysis, which is one of the qualitative research methods, within the framework of document review. The data needed during the document review; can be provided without the need for observation or interview. Textbooks can be used as a data source while conducting document reviews in educational researchs (Yıldırım & Şimşek, 2008).

In the English Course Education Program (Primary and Secondary Education, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th grades) published by Republic of Turkey Ministry of National Education (MoNE, 2018),

> *" As the CEFR considers language learning to be a lifelong undertaking, developing a positive attitude toward English from the earliest stages is essential; therefore, the new curriculum strives to foster an enjoyable and motivating learning environment where young learners/users of English feel comfortable and supported throughout the learning process. Authentic materials, drama and role play, and hands-on activities are implemented to stress the communicative nature of English. At the 2nd and 3rd grade levels, speaking and listening are emphasized; while reading and writing are incorporated in higher grades as students become more advanced. Throughout each stage, developmentally appropriate learning tasks provide a continued focus on building the learner autonomy and problem-solving skills that are the basis for communicative competence " (p.3).*

statement is located. For this reason, 2nd and 3rd grade textbooks were excluded and 4th, 5th, 6th, 7th, 8th grade English textbooks are included in this study and examined. The books that were taught at primary level and included in the study were determined using the purposive sampling method. Two different textbooks were selected for each grade level, as long as one from the Ministry of National Education Publications (MoNEP) and one from a private publishing house. These books were obtained from the website of the Ministry of National Education's Education Information Network (EBA) and included in the scope of the research. For the 4th-grade level, *Elementary School-Learn with Bouncy-Student's Book 4* from the MoNEP and *Primary School English 4* textbooks from FCM Publishing; for the 5th-grade, *Secondary School and Imam Hatip Secondary School English 5* from MoNEP and *Secondary School and Imam Hatip Secondary School English 5* textbooks from Özgün Publications; for the 6th-grade, *Secondary School and Imam Hatip Secondary School English 6* from the MoNEP, and *Secondary School and Imam Hatip Secondary School English Route 6* books from Monopol Publications; for the 7th-grade level, *Secondary School and Imam Hatip Secondary School 7* from the MoNEP and *Secondary School and Imam Hatip Secondary School English 7* from Kök Yayıncılık; for the 8th-grade level, *Secondary School and Imam Hatip Secondary School Mastermind English 8* from the MoNEP and *Secondary School and Imam Hatip Secondary School Upswing English 8* from Tutku Yayıncılık were selected.

The sections, including writing activities of these textbooks, were examined and the activities in these sections were classified using the "Types of Creative Literature" table developed by the researchers. Over the course of developing the table, after a long literature review process, a pool of genres was established. After that, as a result of discussions and opinions of experts (one in curriculum design, one in English teaching, one in creative writing), “Types of Creative Literature”, which comprises 14 genres, was finalized. Types of literature in this table are Memoir, Biography, Essay, Travel Writing, Journal, Card-Note-Poster, Non-Fictional Story-Tale, Fictional Story-Tale, Letter, Byword-Slogan-Aphorism, Speech, Poetry, Depiction, Theater Play-Sketch. Species with similar characteristics were collected under the same title.

Findings

In this section, the number of these creative literature types located in the selected textbooks for the study were specified. In each chart, only one book’s data from one publishing house is shown.

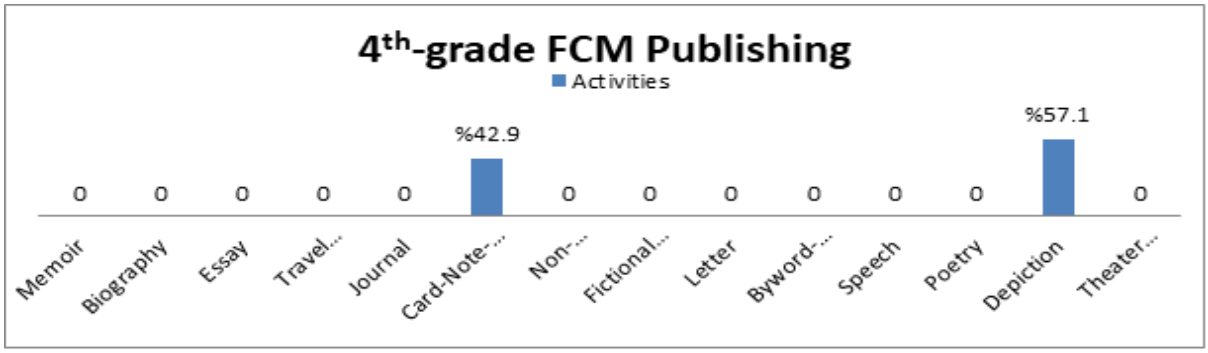

Chart 1: Genres in the 4th grade FCM Publishing book

English lessons are taught in the 4th, 5th, 6th, 7th and 8th grades at the primary school level. Within the framework of the research, two different books of 4th grade were examined: one from MoNEP and one from FCM Publications. It can be seen that the one from MoNEP includes listening and speaking activities but does not have writing activities at all. However; 4 different kinds of literature types, in a total of 7, were encountered in the English course books and these were classified as 3 Cards-Notes-Posters (%57,1 of all), 4 Depictions (%42,9 of all), in Chart 1.

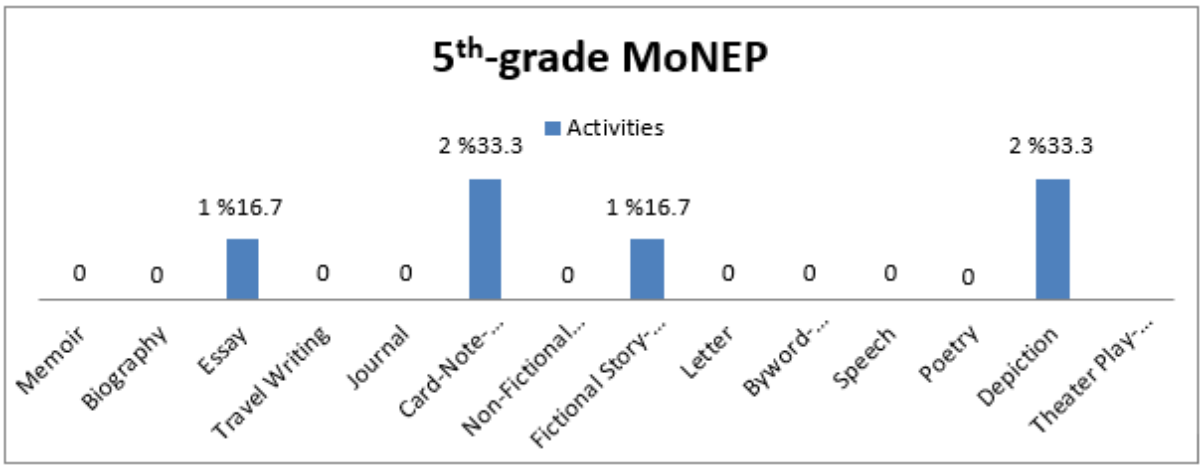

Chart 2: Genres in the 5th grade MoNEP book

It was observed that 4 different types of literature -6 in total- are included in the 5th-grade textbook published by MoNEP 1 (%16,7 of all) Essay, 2 (%33,3 of all) Cards-Notes-Posters, 1 (%16,7 of all) Fictional Story-Tale, 2 (%33,3 of all) Depictions were detected, and it was confirmed that other types of writing were not included. All these statistical data are shown in Chart 2.

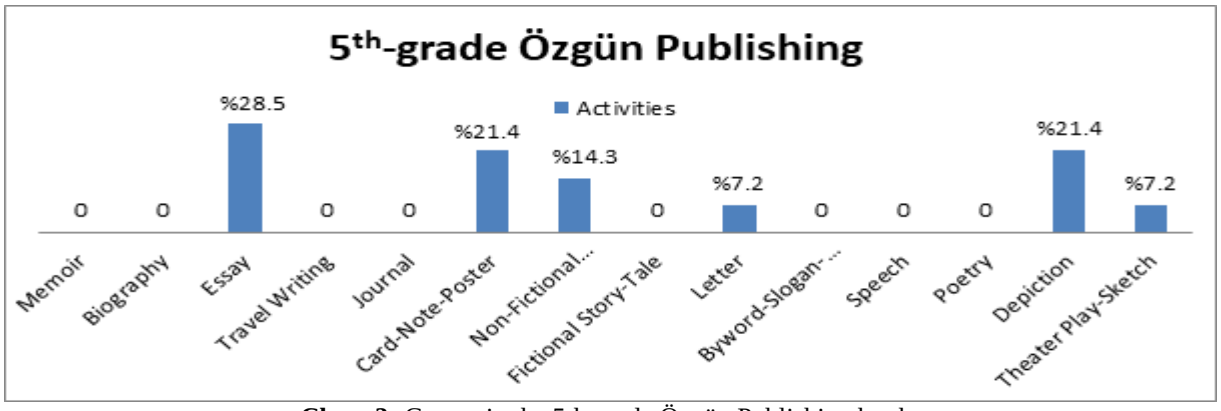

Chart 3: Genres in the 5th grade Özgün Publishing book

In Chart 3, frequencies of creative writing activities in the English textbook published by Özgün Publications are given. In this textbook, it was seen that a total of 6 different types of literature were included 14 times. It was observed that 4 (%28,5 of all) Essays, 3 (%21,4 of all) Cards-Notes-Posters, 2 (%14,3 of all) Non-Fictional Stories-Tales, 1 (%7,2 of all) Letter, 3 (%21,4 of all) Depictions and 1 (%7,2 of all) Theater Play-Sketch were found but it was actually clear that there were no other types of literature.

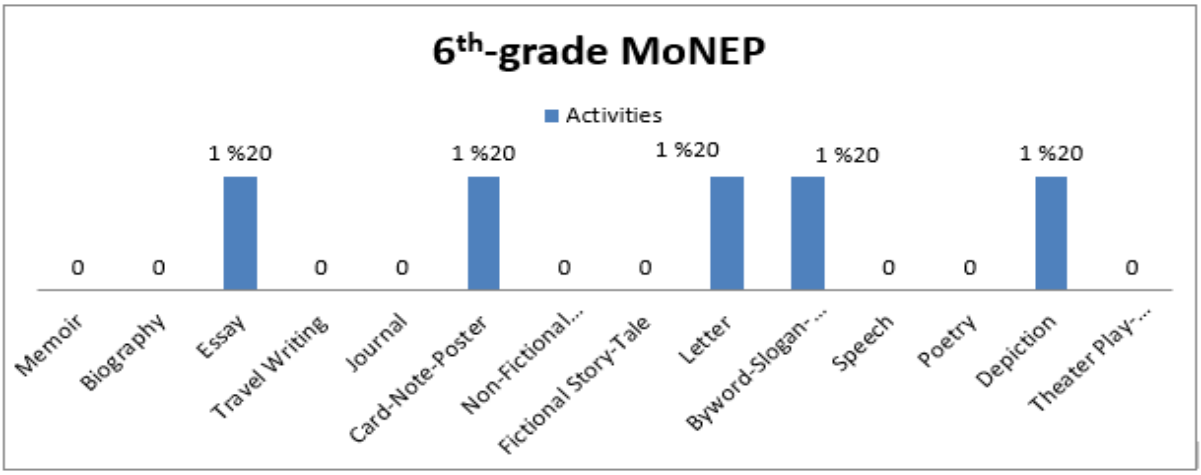

Chart 4: Genres in the 6th grade MoNEP book

As it is seen in Chart 4, a total of 5 different types of literatüre are included 5 times in the 6th-grade textbook published from the MoNEP 1 (%20 of all) Essay, 1 (%20 of all) Card-Note-Poster, 1(%20 of all) Letter, 1(%20 of all) Byword-Slogan-Aphorism, 1 (%20 of all) Depiction were encountered but there were no other types of literature.

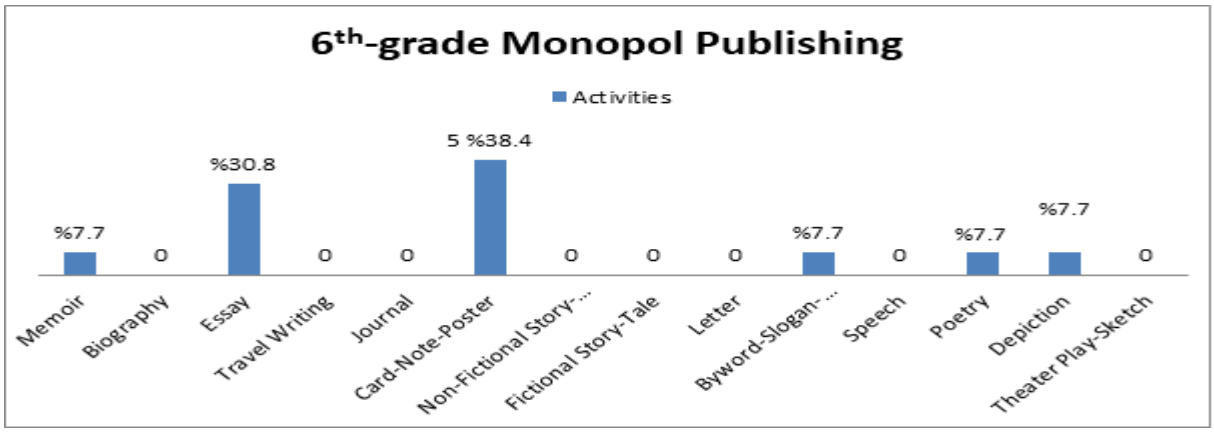

Chart 5: Genres in the 6th grade Monopol Publishing book

In Chart 5, activities in the textbook in the 6th-grade from Monopol Publications are shown. In this book, it was observed that a total of 6 different types of literature were included 13 times. 1 (%7,7 of all) Memoir, 4 (%30,8 of all) Essays, 5 (%38,4 of all) Cards-Notes-Posters, 1 (%7,7 of all) Byword-Slogan-Aphorism, 1 (%7,7 of all) Poetry, 1 (%7,7 of all) Depiction were observed but other types were not observed at all.

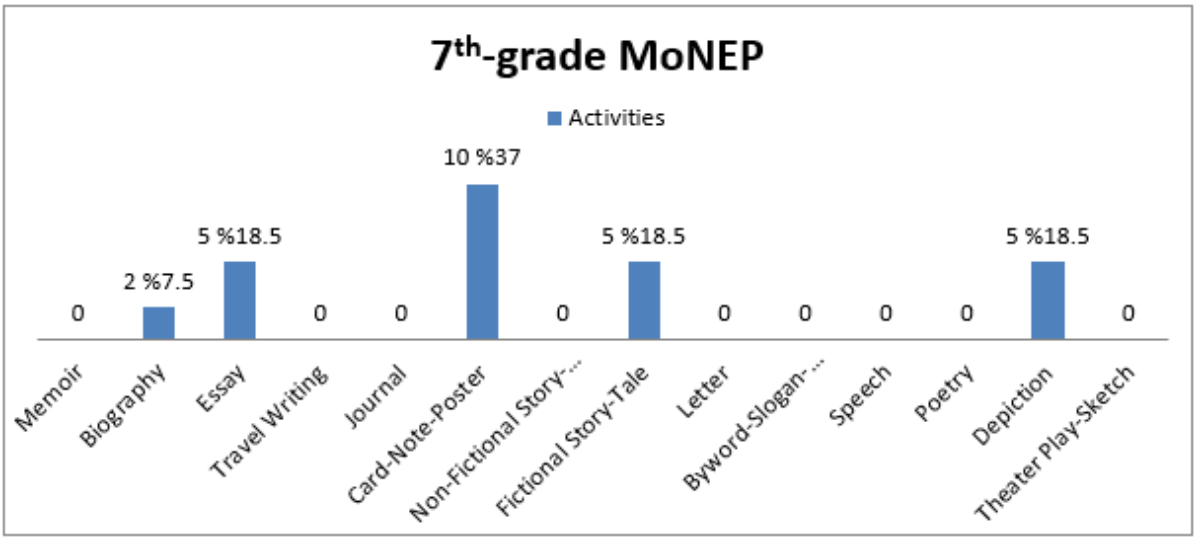

Chart 6: Genres in the 7th grade MoNEP book

In Chart 6, activities in the textbook in the 7th-grade from MoNEP are shown. In this book, it was observed that a total of 5 different types of literature were included 27 times. 2 (%7,5 of all) Biographies, 5 (%18,5 of all) Essays, 10 (%37 of all) Cards-Notes-Posters, 5 (%18,5 of all) Fictional Stories-Tales, 5 (%18,5 of all) Depictions were found, but other types were not included in the book.

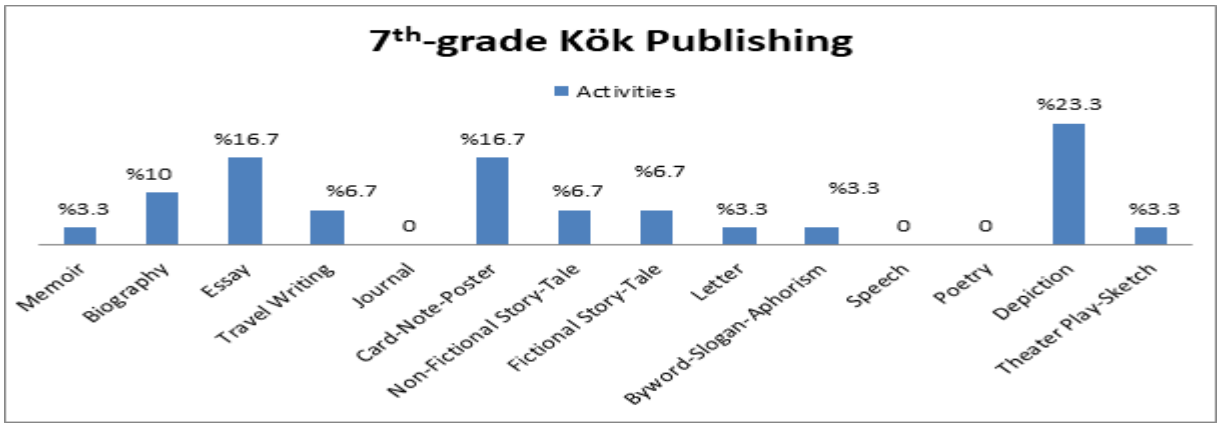

Chart 7: Genres in the 7th grade Kök Publishing book

As can be seen in Chart 7, 11 different types of literature were included 30 times in total in the textbook published from Kök Yayıncılık at the 7th-grade level. 1 (%3,3 of all) Memoir, 3 (%10 of all) Biographies, 5 (%16,7 of all) Essays, 2 (%6,7 of all) Travel Writings, 5 (%16,7 of all) Cards-Notes-Posters, 2 (%6,7 of all) Non-Fictional Stories-Tales, 2 (%6,7 of all) Fictional Stories-Tales, 1(%3,3 of all) Letter, 1 (%3,3 of all) Byword-Slogan-Aphorism, 7 (%23,3 of all) Depictions, and 1 (%3,3 of all) Theater Play-Sketch were found and it was observed that there were no other types of literature.

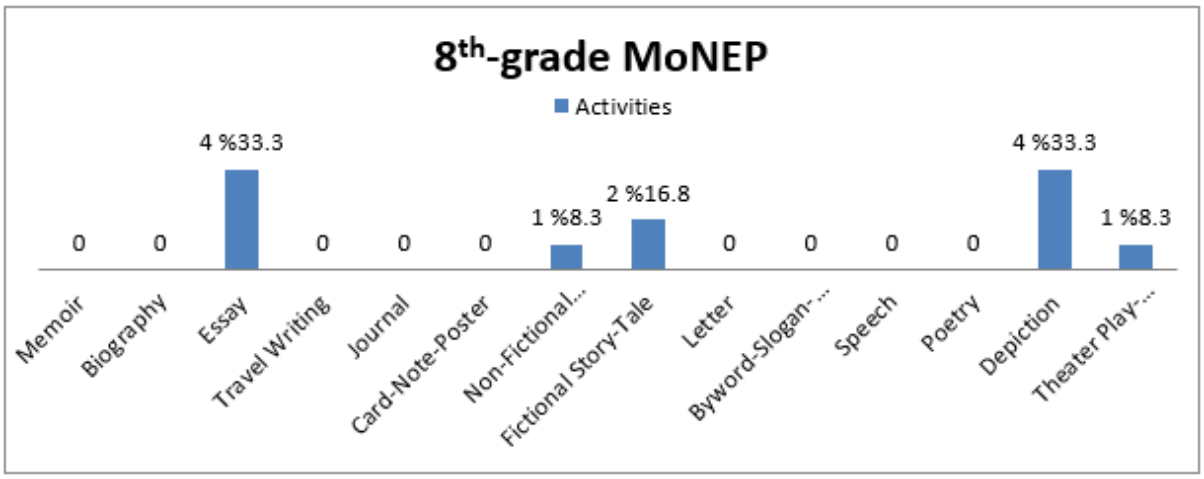

Chart 8: Genres in the 8th grade MoNEP book

When Chart 8 is analyzed, it is seen that in the textbook published from the MoNEP in the 8th grade, 5 different types of literature are included 12 times in total. 4 (%33,3 of all) Essays, 1 (%8,3 of all) Non-Fictional Stories-Tales, 2 (%16,8 of all) Fictional Stories-Tales, 4 (%33,3 of all) Depictions, 1 (%8,3 of all) Theater Play-Sketch were determined, and the remaining types of literature were not found in the book.

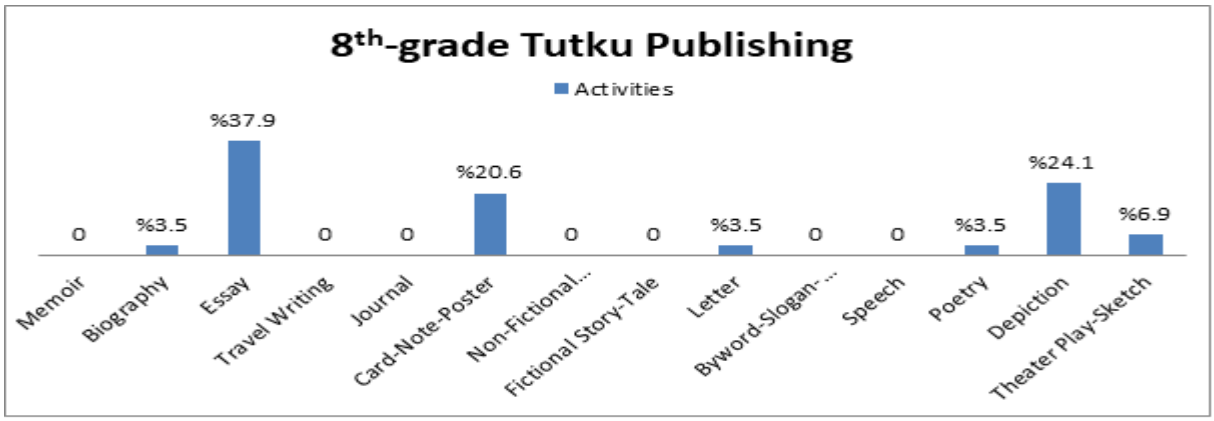

Chart 9: Genres in the 8th grade Tutku Publishing book

It was determined in the textbook, which was published at the 8th-grade level, from Tutku Publications, that 7 different types of literature were included 29 times in total and it was shown in Chart 9. 1 (%3,5 of all) Biography, 11 (%37,9 of all) Essays, 6 (%20,6 of all) Cards-Notes-Posters, 1 (%3,5 of all) Letter, 1 (%3,5 of all) Poetry, 7 (%24,1 of all) Depictions, 2 (%6,9 of all) Theatre Plays-Sketches were found but the other types of literature were not.

Considering the 10 books examined, 328 writing activities were examined, 143 of these activities were evaluated as creative writing activities. The other 185 activities were not included in the evaluation of creative writing because they consist of filling or matching activities and 143 creative writing activities were used as a dataset. There were 7 creative writing activities at the 4th-grade level, 20 at the 5th-grade level, 18 at the 6th-grade level, 57 at the 7th-grade level, and 41 at the 8th-grade level. Although it was observed that the 8th-grade English textbooks have relatively more creative writing activities than the 4th-grade level books have, this increase between grade levels was found to be ups and downs rather than regular. When the textbooks are classified into two categories as the books published by MoNEP and private publishing houses, it turns out that there is a significant difference.

No activity was found in the textbook at the 4th-grade level from the MoNEP, and 7 creative writing activities were found in the textbook from the private publishing house. Six creative writing activities were determined in the 5th-grade textbook published by MoNEP, and 14 activities were identified in the one from the private publishing house. There were 5 creative writing activities in the book at the 6th-grade level from MoNEP and 13 in the book from private publishing. The richest grade level of the textbooks series in terms of creative writing activities was determined as the 7th-grade level; 27 of 57 activities were in the textbook published by MoNEP and 30 were found in the textbook published by the private publishing house. Although it is not as high

as the 7th-grade textbooks, there are more activities in 8th-grade level books than the 4th, 5th and 6th-grade books.

According to the Elaboration Theory of Charles M. Reigeluth (1983) a curriculum should be designed as pursuant of an increasing system of complexity for the good of learning. This approach offers simple to complex sequence that is applied to main structure of a period and for curriculum. The strategy provides a simple and general education and an outlook or prospect of main topic of educational content and in the following of training gradually deals with more expansion and description of topic. This theory suggests using spiral approach in designing a curriculum and educational materials as well. In a spiral curriculum, topics, subjects, or themes are revisited iteratively during the course. A spiral curriculum is more than just a series of lessons on the same subject. It also necessitates its growth, with each encounter building on the one before it (Bruner, 1960). Thereby, it can be stated that the contents of the textbooks are supposed to be prepared by respecting the principle of spiral approach in foreign language teaching, as the number of activities increases as the grade level increases. Therefore, the selection of subject and writing focus at the 4th-grade level, such as preparing birthday cards, posters with graphics and pictures, introducing people or family members shows that this principle is respected. However, it is important to include examples of bywords and aphorisms in textbooks thus, this makes it easy faciliating the transition of students by using short sentences to write thinkpiece, and also letting them start poetry. The contents in 5th-grade level books are rich in terms of both the number of activities used and the types of literature in comparison to the contents of 4th-grade level books. 6th-grade textbooks are at the same level as 5th-grade books in terms of the number of literature types, but relatively few examples are found in the books of this level. In this case, it can be concluded that the 6th-grade textbooks are not at the expected level in regard to including creative writing activities despite the increase in the grade levels and no progress was made in literature types and diversity.

The 7th and 8th-grade textbooks are the richest books in the series in terms of both the number of samples and the number of literature types. Especially the 7th-grade English textbook from Kök Publishing stands out as the richest book in terms of creative writing activities by including 11 different types of creative literature and 30 different examples. The 8th-grade level is expressed as a level where students reach A2 level and is the stage just before moving to secondary education, where English grammar development is largely grounded. In this context, it can be easily stated that 8th-grade level English textbooks are expected to be the richest books in terms of creative writing activities, number of genres and number of uses of these genres. However, it can be seen that, in both textbooks, a total of 9 different types of literature were included 41 times, and it was observed that these books were insufficient in terms of creative writing activities to meet students' development levels.

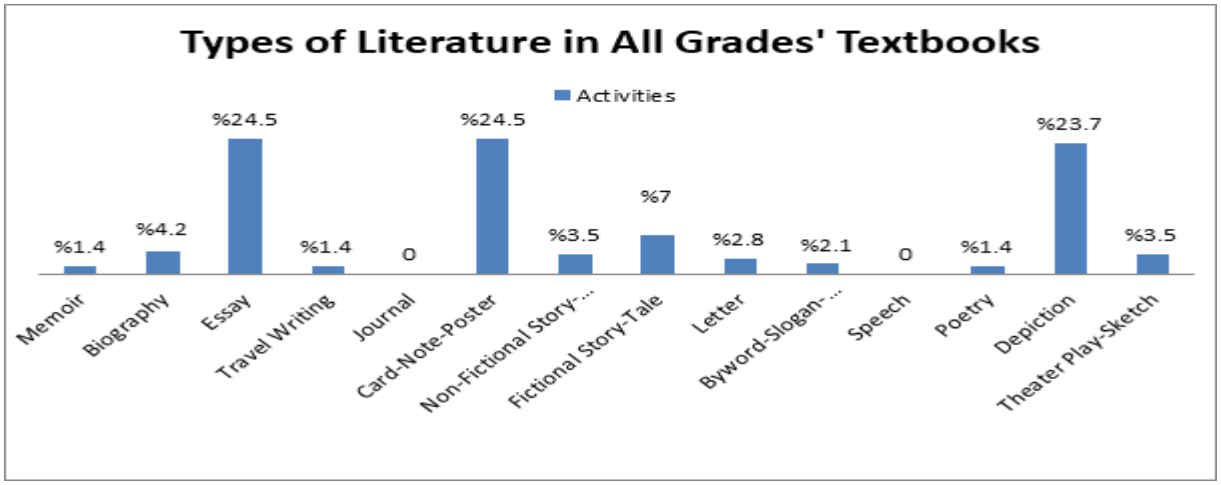

Chart 10: Genres in all books

12 of the 14 different categories in the Creative Literature Types, created by the researcher, are included in textbooks at all grade levels, but it is striking that Journal and Speech genres are not included in any grade-level textbooks. Whereas students need to express themselves easily and put their feelings into words, thus using journal writing activities in textbooks is important in terms of English grammar practice because students generally have the chance to use and practice tenses as they describe what they did before, what they are doing at the moment, and what will they do in the future. And also; it is also important to include the Speech genre in the textbooks. To improve the person's rhetoric, to make clear speeches against people and to express himself/herself easily, it is necessary to give importance to the use of Speech genre. The frequency of using other types of literature is shown in Chart 10. According to this chart, the most common types of literature used

in the textbooks of all grade levels were Card-Note-Poster (%24,5 of all) and Essay (%24,5 of all). The frequency of the other types of literature is as follows; Depictions 34 (%23,7 of all) times, Fictional Story-Tale 10 (%7 of all) times, Biography 6 (%4,2 of all) times, Theater Play-Sketch and Non-Fictional Story-Story 5 each (%3,5 of all), Letter 4 (%2,8 of all) times, Byword-Slogan-Aphorism 3 (%2,1 of all) times, Memoir (%1,4 of all), Travel Writing (%1,4 of all) and Poetry (%1,4 of all) are twice in all grade-level books.

In addition to these, it has been analyzed whether the expected learning outcomes of the writing skill according to the grades (MoNE, 2018) in the English Course Eduation Program of the Ministry of National Education and the writing activities in the books are compatible with each other. As a result, the activities related to writing skills given to students according to the expected learning outcomes and grade levels are compared in the table below. There is no writing skill learning outcome given in the 4th, and 5th grade syllabuses thats why those grades' syllabuses are not included in the table. Likewise, there is no writing skill learning outcome in the 6th grade syllabus from the first unit to the 6th unit.

Table 1. Comparision of books and desired outcomes

Grades	**Writing Skill Learning Outcomes in the English Language Syllabus**	**Writing Activites in the Books**
6th Grade	Unit 6/ Students will be able to produce a piece of writing about occupations and the dates. Unit 7/Students will be able to write short and simple pieces in various forms about holidays. Unit 8/Students will be able to write about past events with definite time. Students will be able to write about the locations of people and things. Unit 9/ Students will be able to write simple pieces about the protection of the environment. Unit 10/Students will be able to write simple pieces about concepts related to democracy.	1 Memoirs, 5 Essays, 6 Cards-Notes-Posters, 1 Letter, 2 Bywords-Slogans-Aphorisms, 1 Poetry, 2 Depictions.
7th Grade	Unit 1/Students will be able to write simple pieces to compare people. Unit 2/Students will be able to write pieces about routines/daily activities by using frequency adverbs. Unit 3/Students will be able to write a short and simple report about past events. Unit 4/Students will be able to write pieces describing wildlife. Unit 5/Students will be able to write pieces about daily routines and preferences. Unit 6/Students will be able to write invitation cards. Unit 7 /Students will be able to write pieces about predictions and future events. Unit 8/Students will be able to write pieces about explanations with reasons. Unit 9/Students will be able to write short, simple messages about environment. Students will be able to write short description of a process. Unit 10/ Students will be able to write short and basic descriptions of facts and general truths.	1 Memoir, 5 Biographies, 10 Essays, 2 Travel Writings, 15 Cards-Notes-Posters, 2 Non-Fictional Stories-Tales, 7 Fictional Stories-Tales, 1 Letter, 1 Byword-Slogan-Aphorism, 7 Depictions, 1 Theater Play-Sketch
8th Grade	Unit 1 /Students will be able to write a short and simple letter apologizing and giving reasons for not attending a party in response to an invitation. Unit 2/ Students will be able to write a short and simple paragraph about regular activities of teenagers. Unit 3/ Students will be able to write a series of simple phrases and sentences by using linkers to describe a process. Unit 4 /Students will be able to write short and simple conversations. Unit 5/Students will be able to write a basic paragraph to describe their internet habits. Unit 6/ Students will be able to write a short and simple paragraph comparing two objects. Unit 7/Students will be able to design a brochure, advertisement or a	1 Biography, 15 Essays, Cards-Notes-Posters, 1 Letter, 1 Poetry, 1 Non-Fictional Stories-Tales, 2 Fictional Stories-Tales, 11 Depictions, 3 Theater

	postcard about their favorite tourist attraction(s). Unit 8/Students will be able to write short and simple poems/stories about their feelings and responsibilities. Unit 9/Students will be able to write simple descriptions of scientific achievements in a short paragraph. Unit 10/Students will be able to write a short and simple paragraph about reasons and results of natural forces and disasters.	Play-Sketches

When we look at the Table List 1 carefully, it is clear that the expected learning outcomes and the writing activities in the books almost overlap, but the low number of literary types may reduce the impact on the permanence of learning and the usability of the desired learning outcome.

Suggestions

If we ask ourselves the reason why we write, the first answer to this question may be to convey the information we need to transmit to someone we are not able to speak at that moment. The second answer (especially when we think of the needs of society as a whole) is that the knowledge and memories are not forgotten throughout our lives, as the human brain has to store more than it can remember; it may be healthy storage and transfer (Brookes & Grundy, 1998). In foreign language education, writing activity is learned at school even if it is a native native language. For this reason, many teachers and students think that students' writing skills should be taken into consideration during the planning period of writing. Course contents and textbooks should be designed and prepared for the development of students so that the content can be made unique at each grade level over the years.

Table 2. Model English Language Teaching Program (for 2nd-8th-grades)

Levels [CEFR*] (Hours/ Week)	**Grades**	**Skill focus**	**Main activities/ Strategies**
1 [A1] (2)	2	Listening and Speaking	TPR/Arts and crafts/Drama
	3	Listening and Speaking Very Limited Reading and Writing°	
	4	Listening and Speaking Very Limited Reading and Writing°	
2 [A1] (3)	5	Listening and Speaking Limited Reading° Very Limited Writing°	Drama/Role-play
	6	Listening and Speaking Limited Reading° Limited Writing°	
3 [A2] (4)	7	Primary: Listening and Speaking Secondary: Reading and Writing	Theme-based ∞
	8	Primary: Listening and Speaking Secondary: Reading and Writing	

As seen in Table List 2, although the language focus of writing skills is very limited, it is included in the scope of teaching activities in the Model English Language Teaching Program (for 2nd-8th-grades) located in the English Course Teaching Curriculum released by the Republic of Turkey Ministry of National Education (MoNE., 2018). However, when the books were reviewed, it was found that the 4th grade English textbooks did not have enough writing activities, besides filling in teh blanks, word matching or open-ended questions. Considering the competency of students on their native language and the familiarity of the foreign language even if they are in the initial stage of learning a foreign language, it is possible to make it easier for them to move to the next grade levels with easy-to-write literature types such as Poetry, Card-Poster and Aphorism.

Kirby, Liner and Linz (1988) suggested that not all types of writing should be tried at the beginning of creative writing activities. Otherwise, they stated that the students would get bored and deviate from the focus of the activity. Thus, a good start to writing types can be achieved by using some creative writing techniques such as free writing, brainstorming, and anecdotal use after the initial activities.

Orhon (2008) provides ideas that can help developing creative writing skills, writing poetry by looking through an imaginary window, writing stories with the group, writing stories by deriving words, creating original sayings, creating a dialogue with stuff. Such activities can be included in the textbooks for being used in the classroom, or they can also be used as additional activities.

Ögeyik (2007) emphasized that poetry can be a useful tool in language teaching with her phrase "performing poetry teaching at the basic level in the context of foreign language teaching to children may require poetry to be used as a tool rather than teaching poetry." Also, Kirby, Liner and Linz (1988) stated that collaborative and classroom poetry activities can be used to start poetry activities in the course. In this activity, each student anonymously participates in poetry with a verse, and the teacher writes each verse on the board so that a whole poem is created together. Therefore, repetition and practice of basic grammar structures are also provided with such activities in order to increase the numbers of poetry writing activities and them effective in the textbooks.

Within the framework of principles of Spiral Program, which is generally used in organizing the content of foreign language lessons, taking into account the learning backgrounds of the students, the types of memoirs, travel writings, diaries and letters can be included more in English textbooks. Students can be more courageous and creative when it is necessary to write about topics that are close to them and have knowledge about. For example, students can write their experiences using guided writing activities such as “Write an interesting event that happened on your summer vacation” or “Describe a place you went with your family during your summer vacation”. In addition, students may be asked to record their summer holidays as project assignments at regular intervals by using the English grammar structures they cover all year long before going on a summer vacation. In this way, a kind of preliminary to the next year’s curriculum.

Based on both the European Language Portfolio and the developmental characteristics of students, it is expected that creative writing activities in textbooks should be enriched in terms of type, number and content as the grade level increases. For this purpose, it is expected that more detailed creative writing activities will be included in the textbooks at each grade level in order to increase the foreign language grammar competencies of the students and to give them the frequency of applying the knowledge they have acquired. Thus, the basis can be provided for students to strengthen their mastery of all types of literature, to minimize anxiety about writing activity and to get higher grades in the writing sections of international English placement exams.

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International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

The Scale of Teachers' Self- Disclosure Through Social Media: Validity And Reliability Studies

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Article History
Received: 13.01.2021
Received in revised form: 02.05.2021
Accepted: 06.05.2021
Available online: 03.09.2021

To cite this article:

Demir, M. & Demir, O. (2021). The scale of teachers' self- disclosure through social media: validity and reliability studies. *International Journal of Contemporary Educational Research*, *8*(3), 165-177. DOI: https://doi.org/10.33200/ijcer.860534

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 165-177 ISSN: 2148-3868

The Scale of Teachers' Self- Disclosure through Social Media: Validity and Reliability Studies

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Abstract

The purpose of this study was to develop a valid and reliable scale that can be used to identify the perceptions of teachers on their self-disclosure to their students in their interactions with them through social media. This study was designed as a sequential exploratory mixed method. So validity and reliability studies were conducted for this purpose. Data from 301 teachers for EFA and 422 teachers CFA were used pyschometric properties of "The Scale of Teachers' Self-disclosure through Social Media" (STSSM). The exploratory factor analysis yielded four-factor model with 21 items. As a result of the analyses of confirmatory FA, it was found that the scale produced sufficient goodness of fit values. Finally, the findings on the reliability proved that "The Scale of Teachers' Self-disclosure through Social Media" can reliably measure the perceptions of teachers on self-disclosure to their students on social media.

Keywords: Teachers' self-disclosure, Social media, Self-disclosure on social media

Introduction

In the twenty-first century, which is characterized by the transformation of communication and technology, developments reached incredible dimensions, and social environments and communication have been transferred to computers and the internet with Web 2.0 technology (Günaydın, 2017). Although there is a one-side interaction based on the presentation in classical web-based education, Web 2.0 and, based on this, social networks offer shared and multilateral interaction (Barış, 2011). Web 2.0 technology provided its users with the ability to create and share content. The power of social media, whose contents are created by its users, comes from the fact that communication allows more common interaction compared to one-way dissemination, giving users the opportunity to interact in a multifaceted way, communicate democratically and simultaneously, and to socialize (Aküzüm & Saracoğlu, 2017). There was a change in the way we communicate with the increase in the use of social media, and this changing communication form became a habit and a part of everyday life (Tutgun Ünal, 2015). All these changes also affected education systems and teachers.

It can be argued that the implementation of social networks in educational environments will provide more effective communication between students and teachers, as well as increased opportunities for teachers and students to know each other (Özturk & Talas, 2015). Indeed, the active role of social networks in education strengthened communication between both teachers and students effectively, offering the opportunity to know each other individually (Konuk & Güntaş, 2019). Teachers use many methods and techniques in this communication and recognition process. When these methods and techniques are examined, it will be noticed that education with computers, the internet, and social media has an important place in ensuring the cognitive and emotional learning of students (Diverniero & Hosek, 2011). One of the methods used to make the teaching process more effective is "self-disclosure" (Demir, 2020). Basically, self-disclosure is "the process of sharing personal information, thoughts and feelings with other people" (Derlega, Metts, Petronio, & Margulis, 1993, narrated by Qian & Scott, 2007; Foubert & Sholley, 1996), and might encompass any human relation, including student-teacher interaction (Saylag, 2012). Teachers' self-disclosure can be in different ways in different classes. For example, when a mathematics teacher at an elementary school creates a problem, s/he may attract the attention of students by mentioning his/her frequent walks, memories of the mountains climbed, etc. Based on

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their own story and experience, teachers can help students benefit from this content. Another example is a teacher teaching the subject of war in history class by sharing photos and memories of relatives participating in one of these wars, associating his personal information with the course, and bringing this event to students (Zhang, Shi, Luo & Ma, 2009). Sorensen (1989) emphasized the self-disclosure of teachers as sharing information about him/her that students cannot learn from other sources, and described this as a unique means of teaching. In this way, the information described by the teacher, whether directly related to the teaching content or not, affects the academic learning, teacher-student relation, student participation, and communication of students significantly (Cayanus & Martin, 2009; Mazer, Murphy & Simonds, 2007; Sorensen, 1989). Cayanus & Martin (2016) also considered it important for the teacher to reveal himself/herself in teacher-student interaction and described the self-disclosure of the teacher as the high school of disclosure of personal information and the development of strong ties between teacher-student, in the teaching process or during the student interaction. A limited number of scale development studies measuring the status of "self-disclosure" in the literature (Cayanus & Martin, 2004; Çağ & Yıldırım, 2017; Oral, 1994; Selçuk, 1989; Topkaya, 2011; Wheeless & Grotz, 1976); however, a scale study on teachers' self-disclosure on social media was not been detected. In line with the above explanations, it was seen that self-disclosure to students with social media has a positive effect on student development. This study intended to develop a valid and reliable scale that can be used to measure the status of teachers' self-disclosure to their students on social media. It is considered that the data obtained from the implementation of the scale will give significant feedbacks to both the implementers and researchers and the resulting feedbacks will contribute to the literature.

Method

In this study, in order to develop a valid and reliable scale that can be used to identify the perceptions of teachers on self-disclosure to their students in their interactions with their students through social media, a sequential exploratory mixed method was used. The main purpose of sequential exploratory mixed method design is to explore a phenomenon with quantitative analysis and interpretation, following the priority given to qualitative methods (Creswell, 2003). This design is "especially advantageous when a researcher is building a new instrument" (Creswell, 2003, p. 216). For this purpose, first qualitative methods (literature review and expert analyses) were used to build a draft item pool and next quantitative methods were used to test the psychometric properties of STSSM

Study Groups

Study Group for EFA

In order to determine the participants in line with the purpose of the research, in the first semester of the 2019-2020 academic years, within the scope of the development of the trial scale form, the sample was determined by criterion sampling method, one of the purposeful sampling methods. In this regard, the use of social media was taken as the criterion. In this direction, teachers were contacted through social media groups where teachers were members, and a study group was created with 301 teachers who volunteered to participate (refined from 235 teachers after initial analysis). As a result, 301 teachers were included in the study. The data of the teachers included in the study are given in Table 1.

Table 1. Distribution of EFA Teacher Study Group according to Descriptive Characteristics (N=301)

Variable	Group	*f*	%	Variable	Group	*f*	%
Gender	Female	164	54,5	Faculty of Graduation	Faculty of Education	240	79,7
	Male	137	45,5		Faculty of Sci- Letters	38	12,6
	Total	301	100		Educational Institute	11	3,7
Education Status	Bachelor	247	82,1		Other	12	4
	Master	46	15,3		Total	301	100
	PhD	8	2,7	Daily Social Media Usage	1-60 minute	103	34,2
	Total	301	100		61-120 minute	99	32,9
School Level Served	Preschool	5	1,7		121-180 minute	53	17,6
	Primary school	57	18,9		181 minute and above	46	15,3
	Secondary school	192	63,8		Total	301	100
	High school	47	15,6	Years of Seniority	1-10 years	109	36,2
	Total	301	100		11-20 years	146	48,5
School Type Served	Public school	271	90		21-30 years	39	13
	Private	30	10		31 years and more	7	2,3
	Total	301	100		Total	301	100

Study Group for CFA

Since it would be more appropriate to apply the confirmatory factor analysis after the exploratory factor analysis on another sampling (Henson & Roberts, 2006), 422 teachers were included with the convenient sampling method.

Table 2. Distribution of CFA Teacher Study Group according to Descriptive Characteristics (N=422)

Variable	Group	*f*	%	Variable	Group	*f*	%
Gender	Female	242	57,3	Faculty of Graduation	Faculty of Education	324	76,8
	Male	180	42,7		Faculty of Sci-Letters	61	14,5
	Total	422	100		Educational Institute	9	2,1
Education Status	Bachelor	334	79,1		Other	28	6,6
	Master	82	19,4		Total	422	100
	PhD	6	1,5	Daily Social Media Usage	1-60 minute	102	24,2
	Total	422	100		61-120 minute	143	33,9
School Level Served	Preschool	17	4		121-180 minute	82	19,4
	Primary school	93	22		181 minute and more	95	22,5
	Secondary school	225	53,4		Total	422	100
	High school	87	20,6	Years of Seniority	1-10 years	154	36,5
	Total	422	100		11-20 years	201	47,6
School Type Served	Public school	389	92,2		21-30 years	57	13,5
	Private	33	7,8		31 years and more	10	2,4
	Total	422	100		Total	422	100

Development of the Data Collection Tool

In this study, it was planned to develop a scale for teachers to disclose themselves to their students through social media. In this respect, the literature on teachers' use of social media and teacher-student interaction on social media was reviewed (Acar & Yenmiş, 2014; Alican & Saban, 2013; Arthur & Bostedo-Conway, 2012; Atkins, 2010; Bridges, 2009; Cayanus, 2004; Cayanus & Martin, 2004; Cayanus & Martin, 2008; Cayanus, Martin & Goodboy, 2009; Çakmak & Arap, 2013; Dawson, 2008; Eke, Omekwu & Odoh, 2014; Eugenia & Wong, 2013; Farani & Fatemi, 2014; Ha & Shin, 2014; Haeger, Wang & Lorenz, 2014; Hassan & Landani, 2015; Hosek & Thompson, 2009; Hurt et al., 2012; Irwin, Desbrow & Leveritt, 2012; Ili, 2013; Junco, Heiberger & Loken, 2011; Kırksekiz, 2013; Kuzu, 2014; Lam, 2012; Lane, 2013; Lane & Lewis, 2013; Liccardi, 2007; Mazer, et al., 2007; Mazer & Hosek, 2012; Munoz & Towner, 2009; Nkhoma et al., 2015; Sang, 2014; Saylag, 2012; Smith, 2015; Tarantino, McDonough & Hua, 2013; Tarawneh, 2014; Tiryakioğlu & Erzurum, 2011; Togay et al., 2013; Tombuloğlu & Işman, 2014; Tucker, 2012; Weiler, 2006; Wheeless & Grotz, 1976; Zardeckaite-Matulaitiene & Paluckaite, 2013).

As a result of the rewiev of these studies, a question pool of 43 items was created on teachers' self-disclosure to their students through social media. During the process of creating the items, short and clear expressions were written in order not to have participants bored and distracted. Then, to pre-examine these items in terms of understandability, the opinions of one Turkish teacher and one field specialist were taken, and as a result of this process, an expert evaluation form with 40 items was created.

In order to ensure the content validity, the expert evaluation form with 40 items was sent to five experts who has written book chapters, articles in peer-reviewed journals, and books in this field and who had postgraduate studies on social media in Turkey and four of these experts returned feedbacks within the specified time period. In line with expert opinions, 6 items were excluded as not appropriate in terms of the scope, accessibility and understandability through social media. Also, the remaining items were examined again by a field specialist, items that expressed multiple tasks were limited to a single task, and items that performed similar tasks were eliminated, and trial form of the scale with 34 items was created. After the review of these studies and asking for views of an expert panel, content and face validity of the scale was secured. Then, the trial form of the scale was subjected to construct validity studies. On the other hand, the items in the trial form of the scale were rated as "1- I do not agree at all, 2- I do not agree, 3- I partially agree, 4- I agree, 5- I absolutely agree", which would allow participants who would respond to the form to express their opinions in degrees.

Analysis of the Data

Exploratory and confirmatory factor analyzes was tested this study for the construct validity of the scale. In the factor analysis that is used to measure the validity of the construct, it is examined whether the scores obtained as a result of the implementation of the scale measures the characteristics that the test wants to measure (Büyüköztürk et al., 2011). Although there are many different techniques in factor analysis, the principal components analysis, which is often referenced as factoring technique, was used in the present study (Büyüköztürk, 2014, p.134). After the exploratory factor analysis (EFA), confirmatory factor analysis was tested. The purpose of confirmatory factor analysis (CFA) is to test a hypothesis or a theory regarding the structure obtained on the basis of interrelationships between variables (Büyüköztürk, 2014).

Based on these, the answers of the 301 teachers for EFA and 422 teachers for CFA who participated in this study given to the items in the pre-application form were scored and the data obtained were analyzed by using the SPSS 18.0 Package Program and Lisrel Program respectively; and the level of significance was considered as 0.05 in interpreting the results.

Results

In this part of the study, the details of the validity and reliability studies of the scale and the findings obtained as a result of the analyses are included.

Findings on Construct Validity

The Exploratory Factor Analysis Results:

Before the Exploratory Factor Analysis (EFA), the Kaiser Meyer Olkin (KMO), which is used to test the suitability of sampling size, and the Bartlett Sphericity Test, which is used to determine whether the data come from normal multivariable distribution or not (Akdağ, 2011), were applied firstly. According to the results of these tests (Kaiser Meyer Olkin = .936, Bartlett Sphericity Test = 5483,192, df= 210, p= .000), it was determined that the data were suitable for factor analysis (Büyüköztürk, 2014; Şencan, 2005), and then EFA was initiated. The resulting factors obtained after the analysis were subjected to axis rotation. In this study, Varimax, which is a common orthogonal rotation technique revealing which items are in a higher relation with the factors, was preferred in order to ensure maximum factor variances with fewer variables (Büyüköztürk, 2014, p. 136; Özdamar, 1999, p.247). As a result of successive exploratory factor analysis, 13 items that did not meet the criteria were eliminated, and the analyses were done again on the remaining 21 items. Also, the scree plot was examined to confirm the number of factors of the scale.

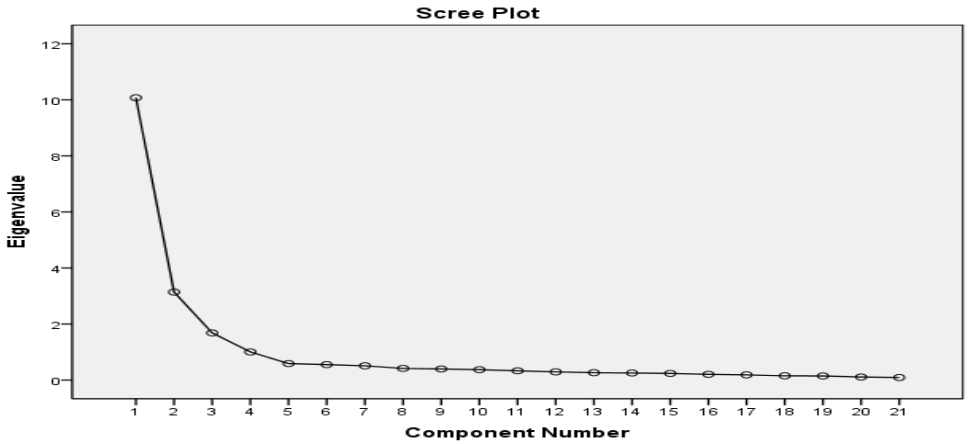

Figure 1. Scree Plot of STSSM

As shown in Figure 1, the slope of the line moved to a horizontal direction after the 5th point, and when the point ranges until to this point were counted, the scale appeared to have 4 factors. Also, the distribution of the items to factors was named by subjecting them to the content analysis:

The 9 items in the first factor (1, 2, 3, 4, 5, 6, 7, 8, 9) made up the *Communication and Confidence* [CC], the 5 items (15, 16, 17, 21 and 22) in the second factor made up the *reason for Self-Disclosure* [RSD], the 4 items in the third factor (23, 25, 26 and 27) made up the *Tendency to Self- Disclosure* [TSD], and the 3 items in the fourth and final factor (32 , 33 and 34) made up the *Frequency of Self-Disclosure* [FSD]. The results regarding the scale after the Exploratory Factor Analyses are shown in Table 3:

Table 3. Exploratory Factor Analysis results for "The Scale of Teachers' Self-disclosure through Social Media"

Items	Communalities	CC	RSD	TSD	FSD	Corrected item-total correlation
Item 1	.772	.813				.779
Item 2	.735	.830				.711
Item 3	.786	.800				.808
Item 4	.802	.851				.773
Item 5	.835	.870				.792
Item 6	.763	.807				.758
Item 7	.767	.823				.758
Item 8	.807	.852				.780
Item 9	.770	.826				.761
Item 15	.870		.832			.736
Item 16	.846		.842			.698
Item 17	.847		.820			.728
Item 21	.709		.747			.672
Item 22	.665		.740			.621
Item 23	.626			.702		.486
Item 25	.669			.796		.407
Item 26	.773			.815		.471
Item 27	.657			.730		.489
Item 32	.750				.822	.345
Item 33	.696				.776	.347
Item 34	.754				.785	.399
KMO= .936						
Bartlett Sphericity Test= 5483,192; p= .000						
Eigenvalue		10,075	3,140	1,683	1,004	
Variance exploratory rate (%)= 75.721 (Total)		33,073	18,820	13,365	10,463	
Cronbach Alpha= 0,942 (Total)		0,964	0,930	0,835	0,803	
Guttman Split-Half Coefficent		0,92	0,84	0,80	0,74	

Note.: Factor load values below .30 have not been shown here.

As seen in Table 3, factor loads of items varied between ".702" and ".870". As a result of the Exploratory Factor Analysis, it was determined that the scale, which consisted of a total of 21 items and which had a four-factor structure, had 75.721% explanatory level on the total variance. The explanatory level being over 40% is considered to be one of the important indicators for construct validity (Kline, 1994; Narrated by Özer & Dönmez, 2013). In this respect, it has been revealed that the construct validity of "The Scale of Teachers' Self-Disclosure through Social Media" is ensured.

Confirmatory Factor Analysis

Since it might be misleading to analyze the confirmatory factor analysis following the exploratory factor analysis with the same dataset (Çokluk, Şekercioğlu and Büyüköztürk, 2012; Henson & Roberts, 2006). The four-factor and 21-item structure of the STSSM was tested by using the Lisrel Program with a new sampling group consisting of 422 people. It was seen that the *t* values for explaining the observed variables of the hidden variables were observed to be significant at the level of .01 for the 4-factor model (Çokluk et al., 2012). In the 4-factor 21-item model, the error variances of the observed variables were between 0.13 and 0.63, and the standardized parameter values defined from the hidden variables towards the observed variables were between .61 and .93. These values indicate that there were no serious problems for the model tested (Çokluk et al., 2012). In Table 4, the goodness of fit values obtained before and after the modification for the model are presented comparatively. The values presented in the table about the goodness of fit were described as "excellent" and "acceptable" by complying with the generally accepted criteria in the relevant literature (Çokluk et al., 2012; Seçer, 2013; Şimşek, 2007).

Table 4. Results of CFA for pre-modification and post-modification (final) models of STSSM

Goodness of fit values	Perfect (M)	Acceptable (K)	Pre-modification	Post- modification
P[a]	>0,05[b]	< 0,05[b]	0,000 (K)	0,000 (K)
X^2/sd	≤ 3	3-5	665,40/183=3,63(K)	528,71/181=2,92 (M)
RMSEA	≤ 0,05	≤ 0,08	0,079 (K)	0,068 (K)
RMR	≤ 0,05	≤ 0,08	0,056 (K)	0,055 (K)
SRMR	≤ 0,05	≤ 0,08	0,051 (K)	0,05 (M)
GFI	≥ 0,95	≥ 0,90	0,87	0,90 (K)
AGFI	≥ 0,95	≥ 0,90	0,83	0,87
CFI	≥ 0,95	≥ 0,90	0,98(M)	0,98(M)
NFI	≥ 0,95	≥ 0,90	0,97(M)	0,97(M)
NNFI	≥ 0,95	≥ 0,90	0,97(M)	0,98 (M)

[a]The fact that the ***p*** was not significant shows that there were no differences between the observed and expected covariance matrices; in other words, the model was confirmed. In the case of significance, other criteria are considered (Çokluk, Şekercioğlu and Büyüköztürk, 2012: 307). [b]The level of significance (p) was taken as 0.05 for this study.

In the Confirmatory Factor Analysis, it was observed that there were significant differences between the expected and observed covariance matrix for the 4-factor model ($p < .05$), and other parameter values other than "GFI = .87, AGFI= .83" were at acceptable or excellent levels in terms of criteria. It is important to try the modification processes suggested in the Confirmatory Factor Analysis, to contribute significantly to the fit indexes and to achieve better fit values (Karagöz, 2017; Seçer, 2013). At this stage, modification recommendations were examined to improve the model. After these two modifications, X^2 decreased significantly [the Chi-square 1 free-frame difference = 136.69 (p = 0.000)]. It was seen that the goodness of fit values for the 4-factor model after the modification were at excellent levels (p=0.000; X^2/sd=2.92; SRMR=0.05; CFI=0.968; NFI= 0.97 and NNFI=0.98), or at acceptable limits (RMSEA= 0.068; RMR = 0.055 and GIF= 0.90), and only the AGFI value was lower than expected; however, according to Çelik and Yilmaz (2013), this value can be considered to be "Acceptable" at "AGFI ≥ 0.86" level. For this reason, it can be argued that the structure of the 4-factor measuring model, which was tested again in the scope of the second pilot application, was confirmed at an adequate level. The path diagram of the standardized factor loads, error variances, and modifications of the 4-factor model is shown below.

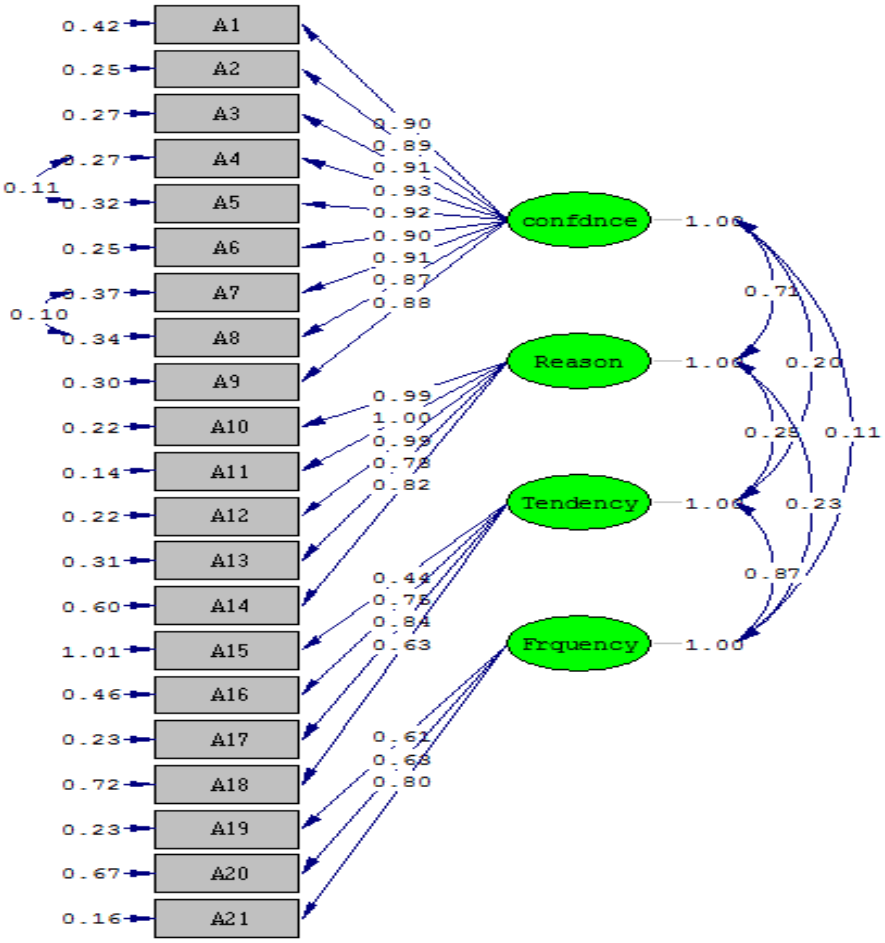

Figure 2. The path diagram of the 4-dimension model after the modification

The Findings and Comments on the Reliability of the STSSM

After the Confirmatory Factor Analyses of the pilot applications, the reliability of the final 4-factor model was tested by calculating the Cronbach Alpha, Internal Consistency Coefficient, with Guttmann two semi-reliability coefficients, with corrected item total correlations, and t values for comparing the lower- and upper group averages of 27%. For this purpose, the datasets employed in pilot applications were combined, and the data set of 723 (301 + 422) people was used in the analysis.

The Cronbach Alpha and Guttmann two-half reliability coefficients for the reliability of the data coming from the scale in terms of internal consistency of 0.96 and 0.92 for *Communication and Confidence Factor*, respectively; 0.93 and 0.84, for the *Reason for Self-Disclosure Factor*, respectively; 0.83 and 0.80 for the *Tendency to Self-Disclosure Factor*, respectively and finally 0.80 and 0.74 for the *Frequency of Self-disclosure Factor*, respectively (see Table 3). It can be argued that the scales with the reliability values of .70 and above have adequate reliability in the scale development processes (Büyüköztürk, 2014; Seçer, 2013).

For all the items in the scale, the total correlations of the items were between .391 and .784, and the *t* values were significant (p<.001). These results can be interpreted as having high validity in items of the scale, and items for measuring the same behavior (Büyüköztürk, 2014). The Cohen's *d* formula was used, and it was determined that the effect of the significant difference between the lower and upper groups for all items was at "wide (≥.8)" effect size (Cohen *d*= 0.86-3.33). Based on these, it can be argued that the items tend to measure the same behavior with the factors in which they are included, and their discrimination level is high (Büyüköztürk, 2014).

STSSM was prepared in 5-point Likert design, and the options were 1 to 5 from "I do not agree at all" to "I absolutely agree". There are a total of four factors and 21 items in the scale. The lowest score in the scale is 21, and the highest score is 105.

Discussion and Conclusion

One of the important factors in healthy interpersonal relations is the self-disclosure behavior, which also contributes significantly to the ability of individuals to know and understand each other more in interpersonal relations, also playing very effective roles in establishing relations more easily, developing these relations more quickly, and sustaining them more safely (Çetinkaya, 2005). Considering that communication occurs with social networks as well as face-to-face at significant levels in this age, the importance of "social media" is seen in teacher and student interaction. Many studies were detected that examined the importance of teachers' self-disclosure to their students in terms of student development (Cayanus & Martin, 2004; Cayanus, Martin & Goodboy, 2009; Cayanus & Martin, 2016; Demir, 2020; Downs, Javudi & Nussbaum, 2009; Fusani, 1994; Goldstein & Benassi, 1994; Lannutti & Strauman, 2006; Mazer et al., 2007; Rouse & Bradley, 1989; Song, Kim & Park, 2019; Zhang et al, 2009); however, no scale development studies were detected measuring the status of teachers' self-disclosure to their students on social media. In this study, it was especially intended to develop a valid and reliable measurement tool that can be used to determine the status of teachers' self-disclosure status to their students on social media.

As a result of the literature review, the item pool was presented primarily for the approval of an expert group in the context of content and face validity studies. After the construct validity of the scale was tested with Exploratory Factor Analysis with a dataset of 301 people, the 4-factor model was subjected to Confirmatory Factor Analysis based on the data obtained from a new group of 422 people.

The initial construct validity analyses showed a 4-factor measuring model with acceptable goodness of fit values (X^2/sd=665.40/183=3.63; p=0.000; RMSEA= 0.079; GFI= 0.87; AGFI= 0.83; SRMR=0.051; CFI=0.98; NFI= 0.9 and NNFI=0.97). There is the Communication and Confidence [CC], which consists of 9 items (1, 2, 3, 4, 5, 6, 7, 8, 9) in the first dimension in this 4-factor model that consisted of a total of 21 items, the Reason for Self-Disclosure [RSD], which was formed by 5 items (15, 16, 17, 21 and 22) in the second dimension, the Tendency to Self-Disclosure [TSD] that consisted of 4 items (23, 25, 26 and 27) in the third dimension, and the Frequency of Self-disclosure [FSD] consisting of 3 items (32, 33 and 34) in the fourth and final dimension. According to the results of the Exploratory Factor Analysis, this model explained 75.721% of the total variance. As a second result of the the study, confirmatory analysis, conducted in line with the modification recommendations with an independent group, a significant decrease was detected in X^2 value [the Chi-Square difference at 1 freedom level = 136.69 (p = 0.000)]. It was also found that the goodness of fit value was at excellent level for the 4-factor model after the modification (p=0.000; X^2/sd=2.92; SRMR=0.05; CFI=0.968; NFI= 0.97, and NNFI=0.98) or was within acceptable levels (RMSEA= 0.068; RMR = 0.055 and GIF= 0.90), and only AGFI scores were below the expected levels. When the average variance explanatory rates of the items was considered, it was calculated to be approximately 77% for Communication and Confidence factor, approximately 78% for the Reason for Self-Disclosure factor, approximately 65% for the Tendency to Self-Disclosure factor, and approximately 72% for the Frequency of Self-Disclosure factor.

The Cronbach Alpha Internal Consistency Coefficient for the internal consistency reliability of the scale items was tested by calculating the Guttmann two semi-reliability coefficients, corrected item total correlations, and t values for comparing lower and upper group averages of 27%. For this purpose, the datasets that were used in pilot applications were combined, and the dataset of 723 (301 + 422) people was used in the analyses. The Cronbach Alpha and Guttmann two semi-reliability coefficients for internal consistency of the data of the scale were 0.96 and 0.92 for Communication and Confidence factor, respectively; 0.93 and 0.84, respectively, for the Reason for Self-Disclosure factor; 0.78 and 0.80 for the Tendency to Self-Disclosure factor and finally 0.79 and 0.74 for the Frequency of Self-Disclosure factor, respectively. It was also found that the total correlations of the item were determined to be between .391 and .784 for all items on the scale, and the t values were significant ($p<.001$). Cohen's d formula was used to determine the effect of the significant difference, and the difference between the lower and upper groups was found to be the at "wide (≥.8)" effect size for all items (Cohen d= 0.86-3.33). Based on this, it was determined that the items tended to measure the same behavior as the factors in which they were included, and had high differentiation levels.

When the literature is examined, there are also studies in which different dimensions are used for teachers self-disclosure on social media. Mazer, Murphy and Simonds (2009) examined teachers in terms of competence, honesty and sensitivity on Facebook, one of the social media platforms, and revealed the status of teachers at "low, medium and high". Snell, Miller and Belk (1988) also focused on the psychological dimension of self-disclosure behavior, and in this direction, they created an emotional self-disclosure scale that includes the sub-dimensions of depression, happiness, jealousy, anxiety, anger, calmness, apathy, and fear. Cayanus & Martin (2008) also created a three-dimensional (amount, negativity, and relevance) Likert-type scale for teachers' self-

disclosure. In this scale, they also included items such as "I often talk about what I do on the weekends", "I reveal unwanted things about myself" and "I use personal examples to create content about students". In the scale study conducted by Zhang et al. (2009) about teachers' self-disclosure, it was seen that a dimensioning was made as "the subject that the teacher opened up to himself, his goals and the student's importance". As can be seen, the concept of "self-disclosure", which offers a multi-dimensional view, can be reflected in different dimensions and content. Unlike these studies on teachers' self-disclosure, it is seen that this study focuses on the level of teachers' self-disclosure to their students through social media rather than self-disclose to all social media users.

The concept of self-disclosure, which has a significant potential in the realization of student learning in the educational process (Cayanus & Martin, 2016; Clark, 1978; Zardeckaite-Matulaitiene & Paluckaite, 2013). In this study, the concept of self-disclosure, "communication and confidence, reason for self-disclosure, tendency to self-disclosure and frequency of self-disclosure", is discussed with its dimensions. Considering the reflection of self-disclosure in the educational environment, the importance of teachers' self-disclosure will emerge, especially in providing a positive learning environment and creating a safe space based on an effective communication between teacher and student (Cayanus, 2004; Mazer & Hosek, 2012). In this context, Dobransky & Bainbridge Frymier (2004), in their study examining the relationship between students and teachers in outdoor environments, determined that teachers who trust their students and communicate more effectively with their students make a difference and that these teachers' students have more learning opportunities. In addition to communication, trust and teacher-student closeness, teachers' tendency to open themselves up and the amount of self-disclosure are also very important (Cayanus & Martin, 2008). In this respect, Cayanus, Martin, and Weber (2003) conducted their research on teachers' self-disclosure and found that teachers who open themselves up to their students and tend to open themselves up to their students more ensure their participation in classes and communicate better with students.While affective features such as communication, trust, and disposition in teachers' disclosure to their students are under similar concepts in other scales, the "frequency" degree of self-disclosure is also included in this study. According to Cayanus & Martin (2008), teachers' level of self-disclosure is also very important in quantitative terms. Apart from this, there are also studies that reveal the reasons for teachers' self-disclosure. For example, Zhang et al. (2009), in their research examining teachers' self-disclosure, determined that teachers listed the following reasons: "To present practical examples from the real world, to attract students' attention, to create positive teacher-student relationships, to create social role models, to create a comfortable classroom environment for students, to develop students' interests. , entertaining students and satisfying themselves ".

Considering all these findings, in today's society where social media is used so frequently and widely, it is seen that the STSSM is a valid and reliable measuring tool that can be used to determine the status of teachers' self-disclosure to their students on social media. Teachers' self-disclosure in social media can be measured using other cognitive and affective concepts. In addition to quantitative measurements, the behavior of self-disclosure can also be examined with qualitative methods that enable in-depth understanding. It also needs to be tested with different universes and samplings to test whether the scale can make valid and reliable measurements.

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Appendix: The Scale of Teachers' Self- Disclosure through Social Media- STSSM
Personal Information Form:

1) Gender :
2) Years of Seniority :
3) Education Status:
4) School Type Served:
5) School Level Served:
6) Social Media Usage:
7) Faculty of Graduation:

No	ITEMS	1	2	3	4	5
1	Interacting with my students over the SM help me communicate more strongly with my students.	☐	☐	☐	☐	☐
2	Interacting with my students on the SM increase my students' commitment to me.	☐	☐	☐	☐	☐
3	When add my students to my SM account and self-disclose information about my personal and/or professional life to them over the SM, my students know me better, and increase the trust they have in me.	☐	☐	☐	☐	☐
4	Interacting with my students over the SM, it allowed my students to know me better and express themselves more comfortably in the classroom.	☐	☐	☐	☐	☐
5	As a result of my interactions with my students over the SM, they know me better, which makes my students more confidence in the classroom.	☐	☐	☐	☐	☐
6	Knowing me better as a result of my interactions with my students over the SM increases engagement of my students in the class.	☐	☐	☐	☐	☐
7	My posts on SM and positive interactions with my students (e.g. messages, likes about their shares, making positive and supportive comments, and celebrating special days) make my students more careful and attentive to me in class.	☐	☐	☐	☐	☐
8	Seeing that my students have common interests with me on SM makes my students feel closer to me.	☐	☐	☐	☐	☐
9	The interactions with my students over the SM have positive effects on the motivation of my students for the class.	☐	☐	☐	☐	☐
	I add…					
10	…my students to my SM account and interact with them to attract their attention.	☐	☐	☐	☐	☐
11	…my students to my SM account and interact with them to establish relations with them.	☐	☐	☐	☐	☐
12	…my students to my SM account and interact with them to be a role model for them.	☐	☐	☐	☐	☐
13	…my students to my SM account and interact with them to ensure that they receive information about various subjects related to school and/or classes.	☐	☐	☐	☐	☐
	I share…					
14	…information about myself over the SM so that students can share their information more comfortably.	☐	☐	☐	☐	☐
15	…my thoughts on topics on the daily agenda on SM.	☐	☐	☐	☐	☐
16	…information about my personal life and relations over the SM.	☐	☐	☐	☐	☐
17	…information about my emotional high school over the SM.	☐	☐	☐	☐	☐
18	…information about things I like and/or do not like over the SM.	☐	☐	☐	☐	☐
	I often…					
19	…share information about my personal problems over the SM.	☐	☐	☐	☐	☐
20	…share information about my beliefs and thoughts over the SM.	☐	☐	☐	☐	☐
21	…share information that reflects my emotional high school over SM.	☐	☐	☐	☐	☐

Note:(SM=Social Media)

International Journal of Contemporary Educational Research (IJCER)

www.ijcer.net

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Article History
Received: 11.01.2021
Received in revised form: 15.05.2021
Accepted: 06.06.2021
Available online: 03.09.2021

To cite this article:

Uyumaz, G. & Sırgancı, G. (2021). Determining the factors affecting the psychological distance between categories in the rating scale. *International Journal of Contemporary Educational Research, 8*(3), 178-190. DOI: https://doi.org/10.33200/ijcer.858599

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 178-190 ISSN: 2148-3868

Determining the Factors Affecting the Psychological Distance Between Categories in the Rating Scale

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Abstract

In this study, the assumption of the equality of psychological distance between categories of rating scale was tested based on the number of categories and ability distributions. Category parameters were estimated by using generalized partial credit model. The data sets based on the conditions of categories counts and ability distributions were generated by WinGen3 software. The results show that the assumption of the equality of psychological distance between categories of rating scale was not provided in any different ability distribution and different category counts conditions. However, the number of categories influenced the psychological distance between categories, particularly for the 7-point scale. As the number of categories increases, the deviation amount from the conventional category value also increases. Also, endpoints of scales tend to close to middle point of scale when the number of categories is increased. When the converted scale values of the cases with the different ability distribution characteristics were compared, it was seen that the deviation from the conventional category value slightly varied in all the number of categories. However, these differences did not have a systematic order. The degree of violation of the assumption increases as the number of categories increases.

Key words: Interval equality, Number of categories, Ordinal response scale, Likert-type scale

Introduction

Measurement tools used in measuring psychological properties in social sciences are generally ordinal response scale. Scales higher than the ranking scale are almost nonexistent. An ordinal scale consists of values in which order is known, but not the distance between the values. From a mathematical point of view, using ordinal values for calculations such as addition, subtraction, multiplication, and division do not give meaningful results in a strict sense since the distance between two values on an ordinal scale is unknown (Arvidsson, 2019). Because of practical issues or mathematical calculations, many scales used to measure psychological properties are considered equal interval scale, although they are ordinal scale. Therefore, it is assumed that these measurement tools can be scaled and made interval type (Balcı, 2010; Karasar, 2012; Tavşancıl, 2010). Likert scales fall within the ordinal level of measurement (Pett, 1997; Blaikie, 2003; Hansen, 2003). In other words, the response categories are ranked, but the intervals between values cannot be assumed to be equal, although researchers often assume that they are (Blaikie, 2003). However, Cohen, Manion, and Morrison (2000) contend that it is "illegitimate" to assume that the intensity of sentiment between "strongly disagree" and "disagree" is equal to the intensity of sentiment among other consecutive categories on the Likert-type scale. Distance between categories is unequal and unknown (Wu, 2007; Ferrando, 2003; Munshi, 2014), and subjects do perceive Likert-type scales as non-equidistant (Bendixen & Sandler, 1995).

In the social sciences, ordinal variables which have at least five categories and are measured on scales with equal interval length (i.e., equal distances between categories, such as in a Likert-type scale) are regarded as quasi- or pseudo-metric variables, which means they can be treated as metric variables in the empirical analysis (Völkl & Korb, 2018). Pell (2005) suggests that if the Likert-type scale had been conceived to be symmetrical and the assumption of the equal distances between choices had been made, the Likert-type scale may then be expected to provide measures at the interval level. These kind of data is at an ordinal level because the distance

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between categories is not constant throughout the scale; the distance between the 1st and the 2nd categories may not be the same as the distance between the 2nd and the 3rd categories (Harwell & Gatti, 2001). Although a scale needs to be structured in accordance with a coding system based on equal units, it cannot be said with certainty that these numerically equal differences create equal differences in terms of psychological or another basic meaning dimension (Tavşancıl, 2010). Indeed, when using ranking scales, it is often erroneously assumed that equal distances between categories (e.g., the distance between categories 1 and 2 and between categories 2 and 3) correspond to equal distances in measured dimensions (Latorraca, 2018). The main bias in ranking scales is that different respondents associate different meanings to the categories; thus, the perceived distance between categories varies according to the cultural background of the respondents (Crask & Fox, 1987). It is not possible to claim that numerical difference equality (5-4=1)=(4-3=1) exists in terms of semantic difference on a scale where response options are graded from "5.strongly agree" to "1.strongly disagree". Is the difference in meaning between "strongly agree" and "agree" really equal to the meaning difference between "agree" and "neither disagree nor agree"? In the literature, it is argued that for Likert-type scales, only the endpoints labeled scales, the respondents assume that the numerically labeled categories in the middle are equally spaced, and therefore the scale should be seen as interval (Schaeffer & Presser, 2003), fully labeled scales are generally considered ordinal (Wakita, Ueshima & Noguchi, 2012).

Undoubtedly, suppose the unit defined in a scale does not represent the same property in every range of the property being measured. In that case, this means the intervals are not equal, resulting in measurements that cannot accurately represent the quantities of differences across objects/individuals. Thus, the scale's strength to notice the amount of inter-individual differences is gone (Tavşancıl, 2010). In this case, the usability of the results obtained with such a scale and the accuracy of the decisions based on this scale are suspected. Wakita (2004) recommended a method for calculating the distance between categories. The distance between categories (widhts) were defined as W1=C2-C1, W2=C3-C2, W3=C4-C3, and it was displayed that the psychological distances between each category were equal when W1:W2:W3=1:1:1. As a result of the study, it is reported that the distance between categories was affected by the item content. When negative items are used in the scale, the distribution of scores tends to be skewed, and the neutral response category comes near other categories. Another study about the distance between response categories in Likert-type scales with four, five, and seven point scales conducted by Wakita et al. (2012) showed that the equality of distance between response categories differed by number of categories. Thus, they suggest that the differentiation in the number of categories damaged the basic assumption of Likert-type scales. In this case, they stated that the accuracy of the measurements made was at risk. Some studies in the literature show that differentiation of the number of categories affects the validity and the reliability of measurement property (Oskamp, 1977; Tavşancıl, 2010; Tezbaşaran, 1997). The original Likert-type scale contains five verbal response categories. In the rating scales developed later, double, triple, quadruple, six, and seven response categories were also used (Anderson, 1988); however, it is stated that the ideal number of categories is five (Erkuş, 2003; Lozano, García-Cueto & Muñiz, 2008). However, the issue of the optimal number of response categories in rating scales is still unresolved (Preston & Colman, 2000). In fact, one of the main goals in increasing the number of response categories is to obtain high level of internal consistency of the scale (Köklü, 1997). Along with depends on the feature to be measured, to a certain degree, as the number of categories decreases, the sensitivity of the measurement decreases, and it is increases as it increases. After a certain point, either the scale's capacity for distinguishing between categories fails, or information loss occurs because the scale goes to classification level (Erkuş, 2003; 2012). Internal consistency reliability significantly increases until the response category is seven; however, the increase is not remarkable when the number of categories is above seven. Thus, the rating scales, which have over seven categories are mostly not preferred. In other words, when the scale over seven categories is used, it becomes difficult to write a meaningful response category label, and the individual has difficulty in finding a suitable response category (Thorndike, 1997).

In the literature, it is seen that the studies examined psychometric property of scales based on number of response category have different findings. In the studies of Atılgan and Saçkes (2004), Kan (2009), Masters (1974), Matell and Jacoby (1971), Uyumaz and Çokluk (2016), it was found that the differences in the number of categories in Likert-type scales affect the validity of the scale while in the studies of Erkuş, Sanlı, Bağlı and Güven (2000), Leung (2011) and Preston and Colman (2000), it was reported that validity was similar in forms with different category numbers. In the studies of Kan (2009) and Uyumaz and Çokluk (2016), the validity evidence improved as the number of categories increased, while the validity evidence worsened as the number of categories increased in the study of Atılgan and Saçkes (2004). In some studies examining the effect of number of categories on reliability, it was observed that as the number of categories increased, the reliability of the scale increased (Atılgan & Saçkes, 2004; Cicchetti, Showalter & Tyrer, 1985; Masters, 1974; Preston & Colman, 2000; Tate, Simpson, Soo & Lane-Brown, 2011; Uyumaz & Çokluk, 2016; Weng, 2004;), while some of the others showed that reliability did not differ significantly (Bending, 1953; Brown, Wilding & Coulter,

1991; Chang, 1994; Erkuş, et al., 2000; Komorita, 1963; Leung, 2011; Matell & Jacoby, 1971; Uyumaz & Çokluk, 2016; Wakita, et al., 2012).

The usability of the results obtained from any scale, the accuracy and significance of the decisions made are closely related to the psychometric properties of the measurement tool. If a measurement scale does not provide the necessary assumptions and have low validity and reliability, it causes the decisions made about individuals to be inaccurate. In this study, we aimed to examine how the differentiation of the number of categories (four, five, six, and seven) and ability distribution characteristics (normal distribution and beta distribution) affected the distance between response categories in the scale.

Method

Research Model

In this study, how the psychological distances between the categories of rating scale change under different conditions has been explored. In this respect, the research is a simulation study that contributes directly to theoretical studies.

Simulation Design

In order to determine the psychological distances between categories, the Generalized Partial Credit Model (GPCM) (Muraki, 1992) was used. The Partial Credit Model (PCM) is used in measures evaluating the process (problem solving, project evaluation, etc.) and in personality and attitude scales that are scored polytomous. It is seen as an extension of the one-parameter logistic model, and the slopes of the items are considered equal. In GPCM, the slope parameter is estimated separately for each item. The slope parameter describes the degree of differences of categorical response as ability level changes (Embertson & Reise, 2000). GPCM allows more insight into the characteristics of the items than does the PCM. For these reasons, in this study, since the effect of different ability distributions on the psychological distance between categories is examined, GPCM is used for parameter estimation. Item parameters reflecting real-life conditions were chosen. The discrimination parameter "a" was produced from a uniform distribution with a minimum value of 0.5 and a maximum value of 1.5. The difficulty parameter "b" was produced from standard normal distribution with a mean of 0.0 and a standard deviation of 1.0. Similarly, Ogasawara (2001), Paek and Young (2005), Penfield and Bergeron (2005) used a uniform distribution for the "a" parameter in their research. Kim and Lee (2004), Ostini and Nering (2006) determined "b" parameters similarly in this study.

The conditions of the ability distribution are formed by representing the values the situations where the standard normal distribution and the Beta distribution are normal, skewed, and kurtic. The conditions of person parameters are drawn from standard normal distributions which are N(0,1), N(2,1), N(-2,1), N(0,3) and N(0,0.3). These distributions are chosen for representing ability differences of participants and homogeneity and heterogeneity of groups. As suggested by previous IRT literature, the person parameters may be drawn from the same distributions or different distributions (e.g., Dai, 2009, 2013; Li, 2014). In this study, the reason for examining the conditions of the beta distribution in addition to the standard normal distribution is that the Beta distribution is used as conjugate prior for Bernoulli, binomial, negative binomial, and geometric distributions Bayesian inference. The use of the conjugate a priori is quite convenient, as the estimation of the posterior using a conjugate a priori allows avoiding the long and large number of computations of the Bayesian estimation. Thus, we also examined in the effect of different conditions of beta distributions on the psychological distance of rating scales. The conditions reflected different beta distributions are chosen based on previous literature (Moitra, 1990; Pérez, Martín, García & Granero, 2016).

The fixed and manipulated conditions of the study are displayed in Table 1. The normal and beta distribution of the ability distribution in the study, and the conditions in which the number of categories are four, five, six and seven have been examined. Altogether, there were (2x4)x5=40 simulation conditions that were studied. For each condition, 1000 replications were performed, and a total of 40000 data files were examined. The data generation model was GPCM. WinGen3 software was used for data generation (Han, 2007). In the preliminary study, 1000 replications suggested in the litreture for simulation studies are conducted in one condition for the data-generating model. The standard errors of the item and ability parameters were examined for the function of the number of replications. Although the average standard errors show different decreasing or increasing patterns when the replication number ranges till 15, they tend to be stable when the replication number reaches 20. In the study, test lenght and the sample size were kept constant. Moreover, in line with the studies in the literature

(Fitzpatrick & Yen, 2001; Liou, Cheng & Johnson, 1997), all conditions reflect the responses of 1000 participants to 10 items.

Table 1. Fixed and manipulated factors and their corresponding levels in the simulation

Manipulated Factors		
Ability Distribution	Standart Normal Distribution X~N(μ, σ)	Beta Distribution X~Beta(α, β)
	N(0,1): Standard Normal	Be(5,5) : Mesiokurtic
	N(2,1): Standard Normal (High ability)	Be(2,8) : High Positive
	N(-2,1): Standard Normal (Low ability)	Be(8,2) : High Negative
	N(0,3) : Platykurtic	Be(3,3) : Platykurtic
	N(0,0.3): Leptokurtic	Be(8,8) : Leptokurtic
Number of categories	4, 5, 6 and 7	
Fixed Factors		
	Test lenght	10
	Sample Size	1000

Data Analysis

In the data analysis, first of all, McDonald's Omega reliability coefficients were calculated to compare the reliability across conditions. Via a macro for SPSS, IBM SPSS Statistics 26 was used for reliability analysis.

Then, the following steps were applied to determine the psychological distance between response categories:

- Conversion is applied to make conditions with different number of categories comparable. The conversion was made according to the five-point ranking, which is the optimum number of categories. When the item values before the conversion are set at x and those after the conversion are set at y, y=5/4x in the case of the 4-point scale, y=5/6x in the case of the 6-point scale and y=5/7x in the case of the 7-point scale.
- Threshold parameters of all items for each condition were estimated based on GPCM.
- Category parameters were converted to normal distribution, and then standard normal distribution functions were obtained from Equation 1.

$$f(x)=\frac{1}{\sigma.\sqrt{2\pi}}e^{-\frac{(x-\mu)^2}{2\sigma^2}}=\frac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}} \qquad (1)$$

  μ : population mean σ^2 : population standart deviation

- For each number of categories, the scale values were calculated through Equation 2 using the category parameters and category distribution functions of each category.

$$\mu_p=\int_{c_{p-1}}^{c_p} x\frac{f(x)}{\int_{c_{p-1}}^{c_p} f(x)dx}dx=\frac{f(c_{p1-1})-f(c_p)}{\int_{c_{p-1}}^{c_p} f(x)dx} \qquad (2)$$

  c_p : category parameter value of *P*th category, $f(c_p)$: distribution function of *P*th category

- Scale values have been converted into a range of categories through Equation 3.

$$\gamma_n=\frac{p-1}{p_{son}-p_{ilk}}\mu_n \qquad (3)$$

- Converted scale values (d) were obtained by converting the found γ_n values into the category range. If the converted scale values are equal to the category value for all categories, it means that the assumption of the equal interval is provided; in other words, the psychological distances between categories are equal.

Results and Discussion

This section, in parallel with the aim of the study, presents the findings related to the reliability estimates and the determination of the psychological distances between response categories.

Reliability Estimates

The reliability estimates for each condition of normal distribution and beta distribution and for each number of response categories were calculated with McDonald's Omega reliability coefficients, the findings are presented in Table 2.

Table 2. McDonald's omega reliability coefficients

	Normal Distribution					Beta Distribution				
Number of Categories	N(0,1)	N(2,1)	N(-2,1)	N(0,3)	N(0,0.3)	Be(5,5)	Be(2,8)	Be(8,2)	Be(3,3)	Be(8,8)
4	0.999	0.995	0.998	0.999	0.999	0.945	0.966	0.972	0.945	0.955
5	0.998	0.997	0.999	0.999	0.999	0.953	0.972	0.966	0.986	0.911
6	0.998	0.997	0.999	0.998	0.999	0.978	0.967	0.978	0.986	0.923
7	0.998	0.997	0.999	0.998	0.999	0.956	0.963	0.978	0.990	0.656

As shown in Table 2, the reliability estimates are very close to the upper limit of 1.00 and ranges between 0.995 and 0.999 under the normal distribution of the ability distribution. In cases where the ability distribution is compatible with the beta distribution, the reliability coefficients range between 0.656 and 0.990. Independent of the number of categories, reliability in all conditions of the normal distribution is higher than all conditions of the beta distribution.

Different Category Numbers in The Same Ability Distribution

Table 3 to Table 12 shows the threshold parameters (b), the scale value (μ) and the converted scale value (d) obtained by GPCM in different category numbers and ability distribution. If the converted scale value is equal to the category value for all categories, it means that the assumption of the equal interval is provided in practice, in other words, the psychological distances between categories are equal.

The differences between the transformed scale values presented in Table 3 and the conventional item values were calculated for each number of rated response categories. For example, when the number of response categories is four, the amount of deviation from the actual value of the category was calculated by subtracting the converted scale value 2.085 from this value for the conventional category value 2 (| 2 - 2.085 | = 0.085). In this case, the conventional item value of a person who marked the response category "Sometimes" on a graded response scale consisting of four categories such as "Never", "Sometimes", "Often" and "Always" is 2, in fact the response of the individual is 2.085 coincides with the point. Hence, this indicates a difference of 0.085 points between the actual value of the item for that response category and its conventional value. In the N(0,1) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.420, 0.288, 0.009, 0.299, and 0.420, respectively.

Normal Distribution

Table 3. The results of the N(0,1) distribution condition

		Response Categories						
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.854	-0.027	0.821				
	μ	-1.384	-0.373	0.416	1.410			
	d	1.000	2.085	2.933	4.000			
5	b	-1.024	-0.329	0.285	1.052			
	μ	-1.567	-0.637	0.021	0.650	1.544		
	d	1.000	2.196	3.042	3.850	5.000		
6	b	-1.123	-0.472	0.017	0.530	1.179		
	μ	-1.670	-0.825	-0.267	0.223	0.770	1.625	
	d	1.000	2.283	3.129	3.873	4.703	6.000	
7	b	-1.254	-0.633	-0.196	0.198	0.627	1.245	
	μ	-1.724	-0.906	-0.406	-0.001	0.408	0.914	1.732
	d	1.000	2.420	3.288	3.991	4.701	5.580	7.000

(b): Threshold Parameters, (μ): The Scale Value, (d): Converted Scale Value

As the number of categories increased, the amount of deviation from conventional item values increased. Also, it is observed that converted scale values tend to be higher than conventional scale values in low response categories, and converted values tend to be lower than conventional value in high response categories. Another finding is that when the number of response categories are odd, the deviation from the conventional category value is the lowest in the middle category (0.042 in 5 category and 0.009 in 7 category).

Table 4. The results of the N(2,1) distribution condition

		Response Categories						
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.867	0.027	0.872				
	μ	-1.423	-0.423	0.393	1.420			
	d	1.000	2.055	2.917	4.000			
5	b	-1.024	-0.294	0.307	1.012			
	μ	-1.534	-0.633	-0.006	0.630	1.544		
	d	1.000	2.172	2.985	3.812	5.000		
6	b	-1.152	-0.480	-0.005	0.485	1.141		
	μ	-1.639	-0.784	-0.235	0.238	0.786	1.648	
	d	1.000	2.301	3.136	3.855	4.689	6.000	
7	b	-1.260	-0.622	-0.195	0.210	0.629	1.273	
	μ	-1.748	-0.919	-0.413	-0.007	0.402	0.910	1.737
	d	1.000	2.427	3.298	3.997	4.702	5.576	7.000

In the N(2,1) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.427, 0.298, 0.003, 0.298, and 0.424, respectively.

Table 5. The results of the N(-2,1) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.833	-0.011	0.840				
	μ	-1.399	-0.390	0.399	1.393			
	d	1.000	2.084	2.932	4.000			
5	b	-1.024	-0.324	0.283	1.073			
	μ	-1.584	-0.643	0.020	0.647	1.544		
	d	1.000	2.203	3.051	3.853	5.000		
6	b	-1.164	-0.484	-0.008	0.508	1.190		
	μ	-1.679	-0.817	-0.245	0.241	0.793	1.658	
	d	1.000	2.293	3.150	3.877	4.704	6.000	
7	b	-1.273	-0.628	-0.186	0.211	0.632	1.221	
	μ	-1.705	-0.900	-0.415	-0.013	0.400	0.918	1.748
	d	1.000	2.399	3.241	3.941	4.658	5.558	7.000

In the N(-2,1) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.399, 0.241, 0.059, 0.342, and 0.442, respectively.

Table 6. The results of the N(0,3) distribution condition

Response Categories								
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.793	0.037	0.860				
	μ	-1.414	-0.424	0.357	1.362			

	d	1.000	2.070	2.914	4.000			
5	b	-1.024	-0.311	0.292	1.006			
	µ	-1.530	-0.622	0.009	0.640	1.544		
	d	1.000	2.182	3.003	3.823	5.000		
6	b	-1.156	-0.493	-0.005	0.503	1.172		
	µ	-1.665	-0.807	-0.244	0.244	0.795	1.651	
	d	1.000	2.293	3.143	3.878	4.709	6.000	
7	b	-1.238	-0.609	-0.162	0.242	0.659	1.266	
	µ	-1.742	-0.933	-0.444	-0.040	0.379	0.893	1.719
	d	1.000	2.402	3.250	3.951	4.677	5.569	7.000

In the N(0,3) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.402, 0.250, 0.049, 0.323, and 0.431, respectively.

Table 7. The results of the N(0,0.03) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.845	-0.022	0.804				
	µ	-1.371	-0.369	0.410	1.402			
	d	1.000	2.084	2.926	4.000			
5	b	-1.024	-0.299	0.302	1.026			
	µ	-1.546	-0.636	-0.001	0.633	1.544		
	d	1.000	2.179	2.999	3.820	5.000		
6	b	-1.175	-0.493	-0.001	0.519	1.175		
	µ	-1.667	-0.817	-0.253	0.242	0.802	1.667	
	d	1.000	2.274	3.120	3.863	4.703	6.000	
7	b	-1.314	-0.647	-0.220	0.182	0.631	1.256	
	µ	-1.734	-0.913	-0.400	0.019	0.427	0.945	1.782
	d	1.000	2.400	3.276	3.990	4.687	5.571	7.000

In the N(0,0.3) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.400, 0.276, 0.010, 0.313, and 0.429, respectively.

Beta Distribution

Table 8. The results of the Be(5,5) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.876	-0.038	0.821				
	µ	-1.384	-0.368	0.431	1.426			
	d	1.000	2.085	2.937	4.000			
5	b	-1.024	-0.293	0.297	1.006			
	µ	-1.529	-0.624	-0.002	0.629	1.544		
	d	1.000	2.178	2.988	3.810	5.000		
6	b	-1.133	-0.495	-0.002	0.504	1.187		
	µ	-1.677	-0.813	-0.246	0.243	0.787	1.633	
	d	1.000	2.304	3.162	3.901	4.722	6.000	
7	b	-1.299	-0.659	-0.220	0.205	0.622	1.255	
	µ	-1.733	-0.908	-0.408	0.007	0.433	0.946	1.769
	d	1.000	2.413	3.270	3.981	4.710	5.590	7.000

In the Be(5,5) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.413, 0.270, 0.019, 0.290, and 0.410, respectively.

Table 9. The results of the Be(3,3) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.871	-0.008	0.853				
	μ	-1.409	-0.397	0.413	1.423			
	d	1.000	2.072	2.930	4.000			
5	b	-1.024	-0.306	0.297	1.042			
	μ	-1.559	-0.639	0.004	0.637	1.544		
	d	1.000	2.186	3.015	3.830	5.000		
6	b	-1.195	-0.517	-0.012	0.498	1.164		
	μ	-1.658	-0.800	-0.237	0.259	0.824	1.683	
	d	1.000	2.283	3.126	3.869	4.714	6.000	
7	b	-1.289	-0.657	-0.217	0.192	0.608	1.271	
	μ	-1.745	-0.905	-0.394	0.013	0.429	0.941	1.761
	d	1.000	2.437	3.312	4.008	4.722	5.597	7.000

In the Be(3,3) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.437, 0.312, 0.008, 0.278, and 0.403, respectively.

Table 10. The results of the Be(8,8) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.893	-0.004	0.859				
	μ	-1.414	-0.402	0.419	1.440			
	d	1.000	2.063	2.927	4.000			
5	b	-1.024	-0.286	0.324	1.059			
	μ	-1.573	-0.661	-0.019	0.625	1.544		
	d	1.000	2.170	2.994	3.821	5.000		
6	b	-1.137	-0.504	0.035	0.531	1.179		
	μ	-1.671	-0.826	-0.277	0.229	0.793	1.636	
	d	1.000	2.277	3.107	3.873	4.726	6.000	
7	b	-1.289	-0.642	-0.199	0.196	0.624	1.258	
	μ	-1.735	-0.910	-0.404	0.002	0.414	0.932	1.761
	d	1.000	2.416	3.285	3.981	4.688	5.578	7.000

In the Be(8,8) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.416, 0.285, 0.019, 0.312, and 0.422, respectively.

Table 11. The results of the Be(2,8) distribution condition

	Response Categories							
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.831	0.003	0.825				

	μ	-1.387	-0.391	0.390	1.391			
	d	1.000	2.075	2.919	4.000			
5	b	-1.021	-0.283	0.306	1.048			
	μ	-1.564	-0.647	-0.011	0.625	1.544		
	d	1.000	2.180	2.998	3.816	5.000		
6	b	-1.179	-0.518	-0.009	0.491	1.144		
	μ	-1.641	-0.789	-0.236	0.258	0.818	1.670	
	d	1.000	2.287	3.122	3.868	4.714	6.000	
7	b	-1.242	-0.657	-0.205	0.211	0.656	1.240	
	μ	-1.721	-0.921	-0.426	-0.003	0.424	0.923	1.723
	d	1.000	2.393	3.256	3.993	4.737	5.607	7.000

In the Be(2,8) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.393, 0.256, 0.007, 0.263, and 0.393, respectively.

Table 12. The results of the Be(8,2) distribution condition

Response Categories								
Number of Categories		1.	2.	3.	4.	5.	6.	7.
4	b	-0.875	0.007	0.842				
	μ	-1.400	-0.401	0.406	1.426			
	d	1.000	2.061	2.918	4.000			
5	b	-1.023	-0.287	0.314	1.042			
	μ	-1.559	-0.649	-0.013	0.626	1.544		
	d	1.000	2.173	2.992	3.817	5.000		
6	b	-1.147	-0.452	0.037	0.522	1.178		
	μ	-1.669	-0.820	-0.274	0.203	0.768	1.644	
	d	1.000	2.282	3.105	3.825	4.678	6.000	
7	b	-1.246	-0.644	-0.192	0.203	0.633	1.244	
	μ	-1.724	-0.909	-0.411	-0.005	0.411	0.917	1.725
	d	1.000	2.416	3.282	3.989	4.714	5.594	7.000

In the Be(8,2) distribution condition, the largest distance between the conventional values of the response categories and the transformed scale values happened when the number of response categories was seven. The deviations from the second, third, fourth, fifth and sixth categories were 0.416, 0.282, 0.011, 0.286, and 0.406, respectively.

Different Ability Distributions in The Same Category Numbers

The findings on how the psychological distances between response categories vary according to the ability levels of individuals and the number of response categories of the scale are evaluated together in four figures below.

Figure 1. Converted scale value of the 4-point scale for the normal and beta distribution.

In Figure 1, it is seen that the deviation from the conventional values of the categories in all conditions of both beta and normal distribution is very close to each other and at most 0.085.

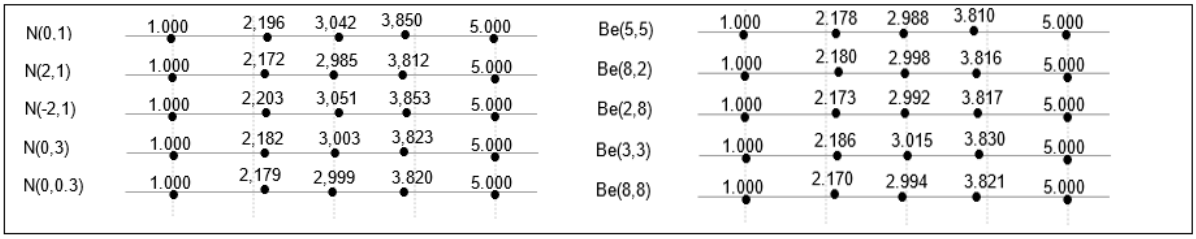

Figure 2. Converted scale value of the 5-point scale for the normal and beta distribution.

Figure 2 summarized that the deviations from the conventional values of the categories are close to each other in all conditions of both normal and beta distributions. The highest devision in the normal distribution is 0.203, and the highest devision in the beta distribution is 0.19. The lowest deviations in both distributions were in the middle category. Usually the endpoint categories tend to close towards the mean.

Figure 3. Converted scale value of the 6-point scale for the normal and beta distribution.

Figure 3 summarized that the deviations from the conventional values of the categories are close to each other in all conditions of both normal and beta distributions. The highest devision in the normal distribution is 0.311, and the highest devision in the beta distribution is 0.322. The highest deviations in both distributions were seen in the 2nd and 5th categories while the lowest deviation was seen in the 3rd and 4th categories. Usually the endpoint categories tend to close towards the mean.

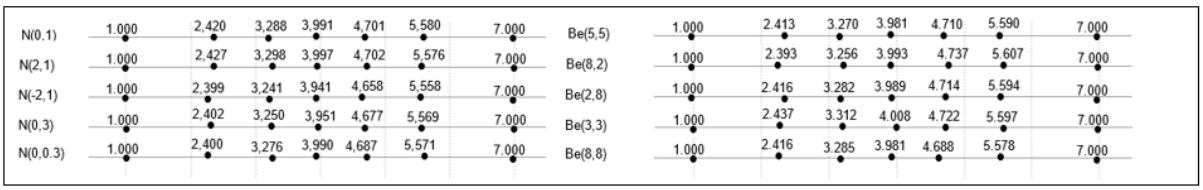

Figure 4. Converted scale value of the 7-point scale for the normal and beta distribution.

Figure 4 summarized that the deviations from the conventional values of the categories are close to each other in all conditions of both normal and beta distributions. The highest devision in the normal distribution is 0.442, and the highest devision in the beta distribution is 0.422. In both distributions, the lowest deviation was seen in the middle category, and the endpoint categories tend to be close to middle. In the beta distribution, the highest deviation from the conventional value of the response categories was observed in the leptokurtic distribution of beta. Particularly, it is seen that the most deviasion from conventional category parameters displayed in the 7-point scale in all conditions of both normal and beta distribution. This deviasion was from the endpoint catogories to midpoint category. Wakita, et al. (2012) illisturated that in the 7-point scale, the participants tended to avoided selecting both ends of categories. These findings show that unequal distance between categories on a 7-point scale may happen respondents' biases against categories containing the strongest statements, not because of the ability distribution of respondents.

Conclusion

Likert-type scales, which are frequently used in social sciences to measure emotional characteristics, have an important assumption. It is the equality of psychological distances between categories. In this study, this assumption was examined by calculating the interval values. It is examined how the number of rating response categories in the scale and the differentiation of ability distribution characteristics of the group affected the reliability of the measurement tool and the psychological distances between the response categories in the scale.

First of all, it has been concluded that the reliability coefficient is at a high level in all types of the normal distribution, independent of the number of categories. In conditions where the ability distribution is compatible with the normal distribution, the reliability values do not change in all conditions of both the distribution and the number of categories. Therefore, in cases where the ability distribution is compatible with the normal

distribution, it has been determined that the reliability coefficient is independent of the number of categories. This result is supported by the studies in the literature (Brown, Wilding & Coulter, 1991; Chang, 1994; Komorita, 1963; Wakita, Ueshima & Noguchi, 2012). When the ability distribution is the beta distribution, reliability coefficient value differs according to the shape of the distribution and the number of categories. However, these differences do not show a consistent structure. Also, the internal consistency reliability coefficient was calculated lower than the normal distribution in every condition of the beta distribution. The beta distribution is skewed compared to the normal distribution. Therefore, it is concluded that the reliability decrases independent of the number of categories when the distribution is skewed. In conditions where the ability distribution is compatible with the beta distribution, the reliability values are affected by the number of categories; in other words, it differs as the number of categories changes. However, this change is not consistent (increasing/decreasing) in the conditions. Hamby and Levine (2016) found that the reliability estimates were higher in conditions where the number of categories was higher than four. Preston and Colman (2000) found that 4-point scale performed poorly on reliability in comparison to scales with more levels. Although there are studies in the literature stating that as the number of categories in the rating scales increases, the reliability of the scale increases (Atılgan & Saçkes, 2004; Cicchetti, Showalter & Tyrer, 1985; Masters, 1974; Preston & Colman, 2000; Tate, Simpson, Soo & Lane-Brown, 2011; Uyumaz & Çokluk, 2016; Weng, 2004), this study shows that the equality of the psychological distances between categories breaks as increases the number of the categories in a scale. For this reason, taking the purpose of the study and the level of the group into account, it seems beneficial not to choose response options containing too many categories.

In sum, it is seen that as the number of response categories increases, the amount of deviation from the conventional category value increases in Likert-type scales. In all cases, it was found that the assumption of the equality of psychological distance between categories could not be fully provided, and there were deviations from the conventional category value in each category. However, the conditions in which the number of categories is fewer are closer to fulfilling the assumption. As a result of this study, it was found that the differentiation in the number of categories in the rating response scales disturbs the equality of psychological distance between categories, which is the basic assumption of the scale. The degree of violation of the assumption increases as the number of categories increases. Therefore, the accuracy of the findings and decisions taken from the applied scale at risk. This finding is in line with the study of Hamby and Levine (2016); Wakita et al. (2012).

In this study, it was determined that the deviations from the category values towards the midpoint category at all category numbers, in other words, conventional category values came over towards the midpoint. While the deviation from the category value is higher in the endpoint categories, it decreases as it gets closer to the midpoint category. In the case of an odd number of categories (five and seven), the deviation from the category value is low in the midpoint category. At the same time, it is high in even number of categories. Thus, one must find an accomondation between potentially increasing the imprecision associated with rating scales by using too many categories and inviting the error of extreme responses by using fewer categories. For this purpose, using 5-point end scales is recommended Hamby and Levine (2016).

Wakita (2004) examined psyhological distance in real data study and reported that when the distribution is skewed, the neutral response category came over towords to other categories (the distance between them decreases). This study determined that in conditions where the ability distribution is skewed to the right and left, the midpoint response category is almost equal to its category value (or the deviation is very small). Also, it was found that the deviations in the right and left categories of the midpoint category change to approach the midpoint category.

When the converted scale values of the situations with the same number of categories and different ability distribution characteristics were examined, it was seen that the deviation from the category value slightly varied in all the number of categories according to the characteristics of the distribution, However, these differences did not have a systematic order.

This study aimed to examine whether the number of options and different ability distributions had an effect on the psychological distance between categories in the Likert scale by applying IRT theory to consider the appropriate number of options. The results of IRT analysis indicated that when the number of options increased, pyshological distance between categories differed from conventional category value, especially in the 7-point scale. Also, it was found that ability distribution did not effect the pyshological distance between categories. However, this study was conducted as simulation study. These results should be supported with real data examinations.

Acknowledgements or Notes

A part of this study was presented 5th Congress of Measurement and Evaluation in Education and Psychology, Antalya, Turkey.

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Article History
Received: 16.02.2021
Received in revised form: 27.05.2021
Accepted: 06.06.2021
Available online: 03.09.2021

To cite this article:

Eryılmaz, Ö., Bozkurt, M. & Boyraz, C. (2021). Mapping research on social studies education in Turkey: A bibliometric review. *International Journal of Contemporary Educational Research*, *8*(3), 191-205. DOI: https://doi.org/10.33200/ijcer.881165

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 191-205 ISSN: 2148-3868

Mapping Research on Social Studies Education in Turkey: A Bibliometric Review

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Abstract

The main objective of this study is to evaluate the social studies education literature in Turkey through systematic bibliometric analysis. The science mapping method was employed to analyze studies. 252 studies that were extracted from the Web of Science (WoS) database were analyzed. The findings revealed that the number of studies has been dramatically increased in the last decade. Besides, It was found that the majority of publications were published in local journals. Moreover, theses produced in this field are the most cited sources in the articles. It was also concluded that even though there are 65 social studies education departments in Turkish universities, only a few numbers of them made collaborations in the publications. Besides, it was found that there are no multi-country collaborations in social studies education literature in Turkey.

Key words: Social studies education, bibliometric analysis, science mapping

Introduction

Social studies as a concept were first defined in the United States in 1916 as "the body of knowledge about the human being, because its subject is directly an element of the organization, development and social unions of the human community" and began to take place as a course in schools (Moffat, 1957). In Turkey, Civics, History and Geography lessons are taught in primary and secondary schools before 1960 as the single disciplined courses that are directly related to the Social Studies. These courses, which were combined with the name of Society and Country Studies in 1962, were given the name "Social Studies" in 1968 and started to be taught in primary schools for the first time in 1968, and then in the secondary schools in the academic year of 1970-71 (Akpınar & Kaymakçı, 2012; Çayır & Gürkaynak, 2007). With the effect of the political developments in the 1980s, one-disciplinary courses named National History and National Geography were taught instead of the Social Studies course. With the educational reform in 1998, the National History and National Geography courses were abolished and the Social Studies course, which was prepared by adopting the collective education principle, took its place in the curriculum (Öztürk, 2012).

As a reflection of Turkey's European Union candidacy process, radical reform in education was carried out in 2005, and education, as in all areas, has witnessed radical changes (Aksit, 2007; Grossman, Onkol, & Sands, 2007). As a reflection of this, revision studies were also carried out in the Social Studies Curriculum (Şahin, 2017). The biggest change that emerged as a result of the revision studies was the adoption of the constructivist teaching approach in the curriculum. The adoption of this approach has focused the curriculum on gaining skills and value rather than transferring knowledge. In the measurement-evaluation dimension, using alternative measurement and evaluation methods together with written and multiple-choice exams were recommended to teachers. In the rather local Social Studies curriculum, a separate learning area called "Global Connections" was created in the curriculum by emphasizing the global perspective, with the effect of the education reform realized. Although the 2005 social studies curriculum contains radical changes, it can be said that it is quite similar to the Social Studies curriculum created by NCSS in both content and structure (Açıkalın, 2014; Tarman, 2014). Finally, the requirements that emerged in line with current developments and technological innovations led to development efforts in the Social Studies course curriculum in 2018 (MoNE, 2018). The most significant difference of the 20 Social Studies curriculum compared to the previous program is that it is quite simple and

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shortened. The content of the intensive curriculum was diluted by reducing the number of outcomes from 174 to 132. Besides, some skills and values have been added. However, the philosophy and structure, which it is based on, has not changed significantly (Çoban & Akşit, 2018, Selvi, 2018).

Within this change process, the need of social studies teachers was appeared after primary education law and amendment about the social studies course in primary schools in 1998. In order to satisfy this need Social Studies Education Department was started to be established in the education faculties of universities. The lecturers working in the Social Studies Education Department started to make researches on social studies education and in the following years, they gave consultancy to many master's and doctoral theses, with the opening of Social Studies Education graduate programs. In addition to the academicians working in these departments, academicians working in various departments, especially Elementary Education and Educational Sciences, have also provided consultancy to many postgraduate theses related to social studies education and contributed to the literature on social studies education. Between 1990 and 2009, a total of 486 graduate theses, of which 436 master's and 50 doctoral dissertations, were viewed with the keywords searches of "social studies", "citizenship" and "human rights". While the number of theses produced annually in the '90s varied between 1 and 5, it was observed that the number of theses produced annually in 2000 and following years was between 40 and 60 (Şahin, Gögebakan Yıldız, & Duman, 2011). Until today, the number of theses produced has continued to increase every year and it has been observed that a total of 117 graduate theses, 96 master's and 21 doctoral dissertations, were produced in 2020 alone (YÖK National Thesis Center, 2020). This situation shows that the number of researchers related to social studies education and consequently research on social studies education has been increasing cumulatively and continues to increase day by day.

It can be said that the literature on social studies education is expanding in scope and it is quantitatively increasing. Social studies are associated with various subject areas such as global education (Açikalin, 2010), multicultural education (Banks, 1987), human rights education (Ramirez, Suarez, & Meyer, 2007), gender (Crocco, 2001), ethnic studies, career education, character education, consumer education, environmental education, peace education (Ravitch, 2003), and in this context, the literature continues to expand. In addition, technological developments in recent years have affected social studies education and technology has made itself being felt in the literature of social studies education (Doolittle & Hicks, 2003; Whitworth & Benson, 2002). Similarly, the expansion occurred in Turkey as in other countries where the teaching of social studies, researchers conducted their research in line with these developments. This situation has enabled the literature on social studies to spread to a much wider spectrum. On the other hand, considering that studies on social studies education are carried out not only with students but also with various stakeholders of education such as disadvantaged groups, social studies teachers, pre-service teachers, academicians, parents, policymakers. Therefore it is clearly understood that social studies have a very wide and in-depth structure as a subject area of the literature.
When a search carried out in Turkey's most comprehensive national database, "Dergipark" with the "social studies" keyword; 289 articles between the 2002-2012 years, 734 articles between 2012-2017 years, 582 articles between 2017-2020 years can be accessed in search results, (Dergipark, 2020). Although this increase in the number of articles is directly proportional to the increasing number of journals and the number of researchers, it is an important indicator of national literature's quantitative development on social studies education. When it is considered that researchers interested in social studies education in Turkey also made studies in many different formats such as book chapters and journal articles, it can be said that the social studies in 22 years spread over a fairly large area of education literature.

When all this information is considered in the evaluation of the literature on social studies education in Turkey, making inferences regarding the current situation and the implications of being developed with the strengths of the area in terms of providing a perspective on the clear direction are considered to be important. When the literature is examined, it has been determined that there are various studies in which evaluations regarding the social studies education literature are carried out. It is seen that most of these studies are carried out in the form of evaluating the literature on postgraduate theses related to social studies education (Oruç & Ulusoy, 2008; Aksoy, Sönmez, & Merey, 2009; Tarman, Acun, & Yüksel, 2010; Şahin, Göğebakan Yıldız, & Duman, 2011; Canbulat, Avcı, & Sipahi, 2016; Öner & Öner, 2017; Dilek, Baysan, & Öztürk, 2018; Oğuz Haçat & Demir, 2018, Uygun, 2020). Besides, it can be said that there are meta-analysis studies (Yaşar, Çengelci Köse, Göz, & Gürdoğan Bayır, 2015) examining the effectiveness of collaborative learning (Gürdoğan Bayır & Bozkurt, 2018) and student-centered teaching strategies, methods and techniques in social studies education. It is seen that the review studies conducted for the evaluation of articles on social studies education are limited to national databases (Akaydın & Kaya, 2015; Geçit & Kartal, 2010). In the study conducted by Sönmez (2020), articles on social studies education published in journals indexed in international indexes were evaluated with the science mapping method using the VosViewer program. However, it is seen that the number of articles examined in the

study conducted without restricting the country is quite limited (154). Whereas, it can be achieved more Turkey-based study when making a scan through WoS. In this context, there has been no research met in the literature that systematically examines and evaluates Turkey-based articles in greater numbers published in journals indexed in relevant international indexes of social studies education through the R Bibliometrix software program (Aria & Cuccurollu, 2017). Besides, it has been observed that there are quite a limited number of studies in which the systematic review of the literature is carried out through the science mapping method. The main objective of this research is to examine the Turkey-based scientific literature related to social studies education that is displayed on the Web of Science (WoS) database with the science mapping method. In line with the main objective of the research related to social studies education of Turkey-based articles scanned at WoS;

- How do publications and sources change?
- What are the publication and citation status of researchers and articles?
- How are institutional collaborations shaped?
- What are the trends in the most studied topics by years?

Method

Since examining the thematic change regarding the literature of social studies in Turkey was aimed, science mapping methodology was adopted in the present study. Science mapping is a generic process technique that creates bibliometric maps to analyze the network and relationship of studies, reports, or authors conducted in certain disciplines or specialties (Cobo, Lopez Herrera, Herrera Viedma, & Herrera, 2011). This method allows analysis of multiple reports obtained from a database by science mapping through bibliometric tools (Hallinger & Kovacevic, 2019).

The use of bibliometric methods enables making more objective and reliable analyzes based on statistical techniques. This methodology enables making both general (e.g. number of studies by years) and advanced (e.g. use of co-author and co-authoring) analysis of the enormous documentation collected from a relevant database of the literature (Diodato & Gellatly, 2013). Bibliometric tools for network analysis can be used to visualize and examine the data in the science mapping and allows analyzing the social, intellectual, and conceptual structure of the research field. Specifically, these kinds of tools aim at visualizing links between sources, publications, or authors, considering the scope of the analysis (Marshakova, 1981).

Defining of sources

In science mapping studies, databases such as Pubmed, Scopus, Web of Science (WoS), Google Scholar are used. The data sets obtained from these databases are analyzed through bibliometric tools, and the performance of the relevant field is revealed. In this research, the WoS database was preferred due to its scope in educational researches. It can be said that the analysis by Falagas, Pitsouni, Malietzis, and Pappas (2008) was effective for this preference. In their study, Falagas et al. (2008) stated that the Pubmed database mostly indexed publications related to the field of medicine, and citation analysis was not performed, whereas Google Scholar did not compile publication and citation data and did not classify the publications. In the study, it was revealed that Scopus put more emphasis on life and health sciences and WoS on social sciences in terms of publication content. In the evaluation made by Karasözen, Bayram, and Zan (2011), it was stated that the WoS database went deeper in social and human sciences topics than the Scopus database. For these reasons, data was obtained using the WoS database to get the best results from the research. After the database was determined, the historical time interval of the research was determined. To be able to analyze a wide field of social studies education in Turkey, it was decided to scan the time interval from a starting date of 1975, the oldest date in the WoS database, until the end of 2020.

Search strategy and data collection

A systematic review was conducted in the study. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (See. Fig. 1) directives were applied (Moher et al., 2009).

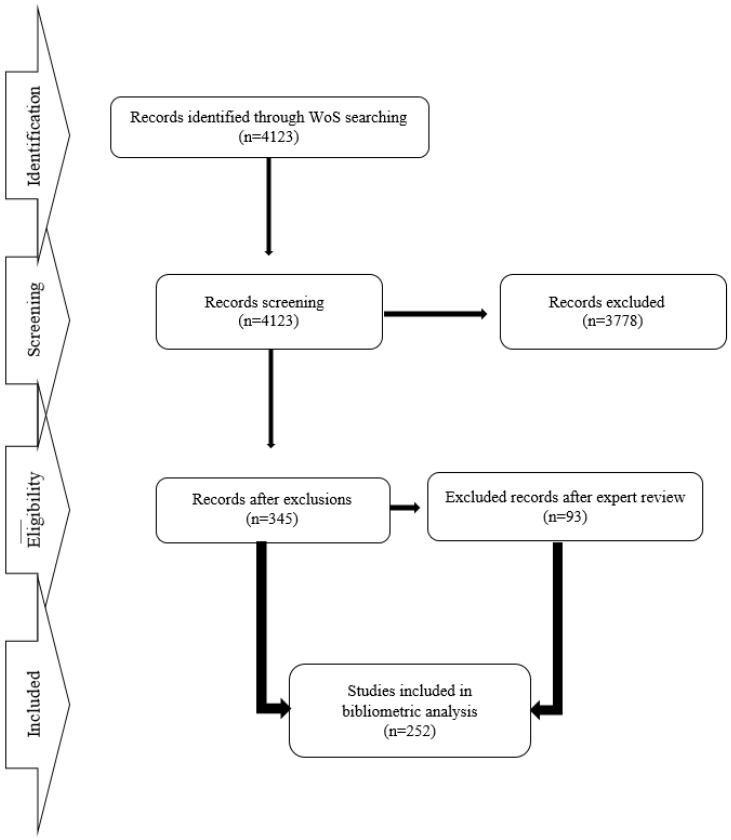

Figure 1. PRISMA flow diagram detailing steps in the identifications and screening of sources

First of all, several different combinations of search terms such as "social studies education," "education," "social studies" were tried, and according to the data gathered, the keyword "Social Studies" was decided as a search term. When the concepts of direct search and the year range are entered without any restrictions, the total number of studies was determined as 4123. When the "Turkey" criterion is selected in line with the exclusion criteria in the search code, the first search result is 345. Then, to identify the studies that can be included in the analysis process, the appropriateness of all records was examined by the researchers, and 93 studies were found to be not related to social studies were removed from the data set. Therefore, a dataset including 252 studies was selected for analyzes and converted to a “plain text”.

Data Analysis

Bibliometric analysis can be performed through various open-source software packages. However, many of these software packages could not assist scholars in the recommended workflow. In science mapping research, commenly used software tools are CitNetExplorer (Van Eck & Waltman, 2014), VOSviewer (Van Eck & Waltman, 2010), SciMAT (Cobo et al., 2012), BibExcel (Persson, Danell, & Schneider, 2009), Sci2 tool (Sci2 Team, 2009), CiteSpace (Chen, 2006), and VantagePoint (www.thevantagepoint.com). In recent years, R Studio is one of the frequently used tools in science mapping studies. The analysis of the data collected within the scope of this research was carried out with the R Studio (ver.1.3.959) program developed by R Core Team (2018). The bibliometric analyzes performed were made through the "Bibliometrix" package, which is one of the R program extensions. The bibliometrix provides various options for bibliometric studies. The existence of substantial, effective statistical algorithms, access to high-quality numerical routines, and integrated data visualization tools are perhaps the strongest qualities to prefer R to other languages for scientific computation (Aria & Cuccurollu, 2017, p. 963).

In the study, citations, authors, and keywords are the topics included in the bibliometric analysis. Citation analysis calculates the number of times a study/author in the dataset of the researchers has been cited by others. Co-citation analysis determines the 'similarity' of two items by examining the frequency of items that are cited together in the reference list of the researchers (Small, 1973). Analysis of the authors displays cooperation between authors, countries, and institutions. Keyword analysis examines the frequency of “common” words in the titles, keywords, and indexes of documents in the dataset reviewed and provide information regarding the

most researched topics and concepts (Zupic & Cater, 2015). Accordingly, the general information regarding the obtained dataset is shown in Table 1.

Table 1. General information about the data set

Timespan	2007-2020
Documents	252
Documents per year	6,41
Authors	301
Single-authored documents	105
Authors of single-authored documents	76
Authors of multi-authored documents	225
Author appearances	443
Documents per author	0,837
Authors per document	1,19
Co-Authors per documents	1,76
Collaboration index	1,53
Citations per document	1,476
Authors' keywords	662
Keywords plus	204

When Table 1 is examined, it is seen that the first publication about social studies education in Turkey scans in in 2007 in WoS databse. It is also seen that 252 documents in the data set between 2007 and 2020 were produced by 301 authors in total. It was found that 105 of these documents are single-authored documents and they are belonged to 76 different authors. So, it is understood that some authors produced more than one single-authored publication. On the other hand, 225 of all documents are seen as mutli-authored publication. Considering that the scanning covers 13 years, it is seen that the annual average production of total studies is 19.38 studies. Moreover, the avarage citation per document was found as 1,476 citations in terms of citations.

Results and Discussion

As a result of data analysis, annual scientific production in the field of social studies education in Turkey was reached. Information on the annual number of scientific publications related to the production of social studies education in Turkey is presented in Figure 2.

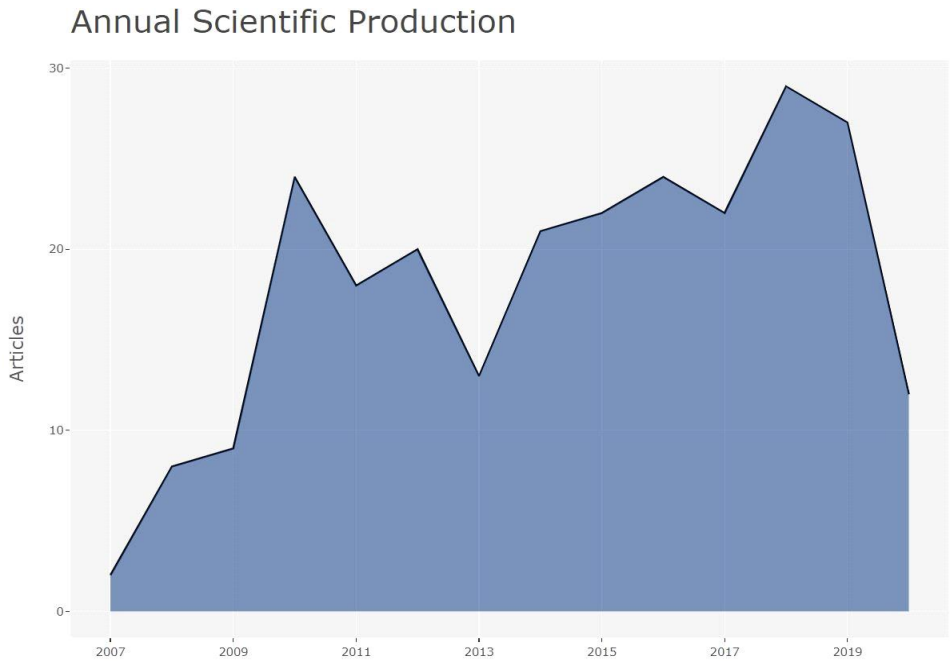

Figure 2. Annual scientific production

When Figure 2 is examined, it is seen that the annual number of scientific publications scanned in WoS increased irregularly between 2007 and 2020. It was observed that the number of publications scanned in WoS had been increased until 2018. On the other hand, it was seen that the number of publications have decreased since 2018. Although there was a decrease in the number of scientific publications between 2010 and 2013, it is seen that there was a considerable increase after 2013. Although there were occasional decreases in the number of scientific publications between 2007 and 2020, it was determined that the average growth over the years was 14.78%.

In the research, findings about the most relevant sources such as books and journal were obtained. Most relevant source where scientific publications related to social studies education are published are shown in Figure 3.

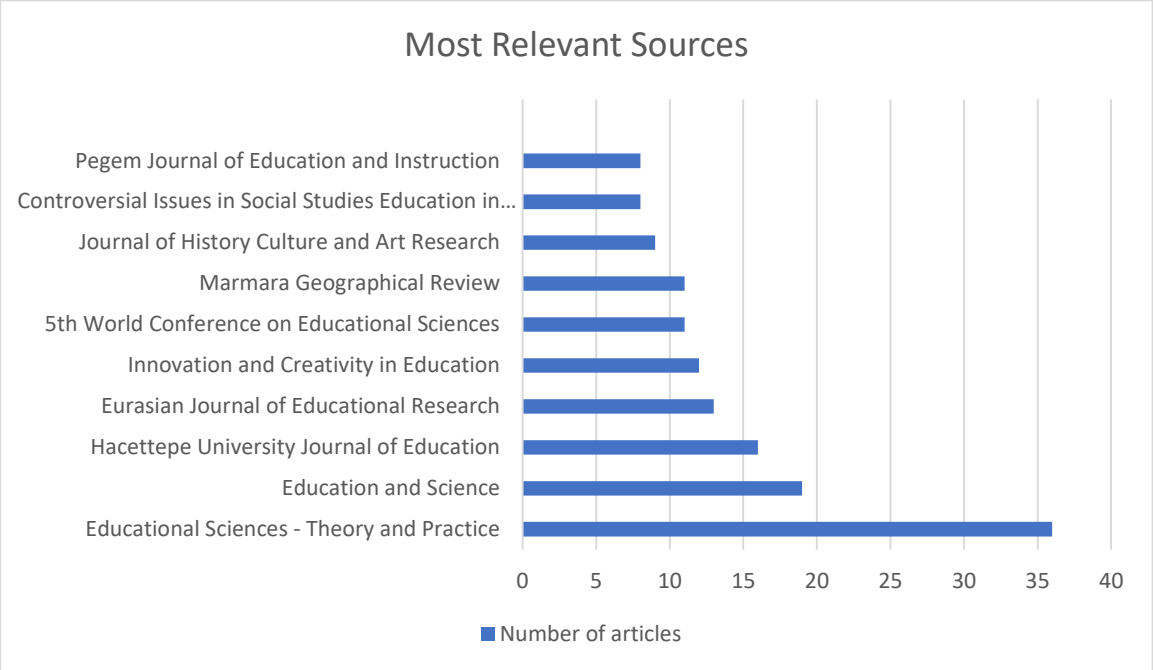

Figure 3.Most relevant sources

When Figure 3 is examined, it is seen that the publications related to social studies education are mostly published in “Educational Sciences in Theory and Practice (KUYEB) journal. KUYEB is followed by "Education and Science" and "Hacettepe University Journal of Education". It is considerable that the vast majority of articles related to social studies education published in journals in WOS are originated from Turkey. In other words, only a small number of articles which were conducted by researchers from Turkish universities have been published in journals of foreign origin.

In the research, findings related to the top ten mostly cited sources such as dissertations, books and journals related to social studies education were obtained. The most cited studies are shown in Figure 4.

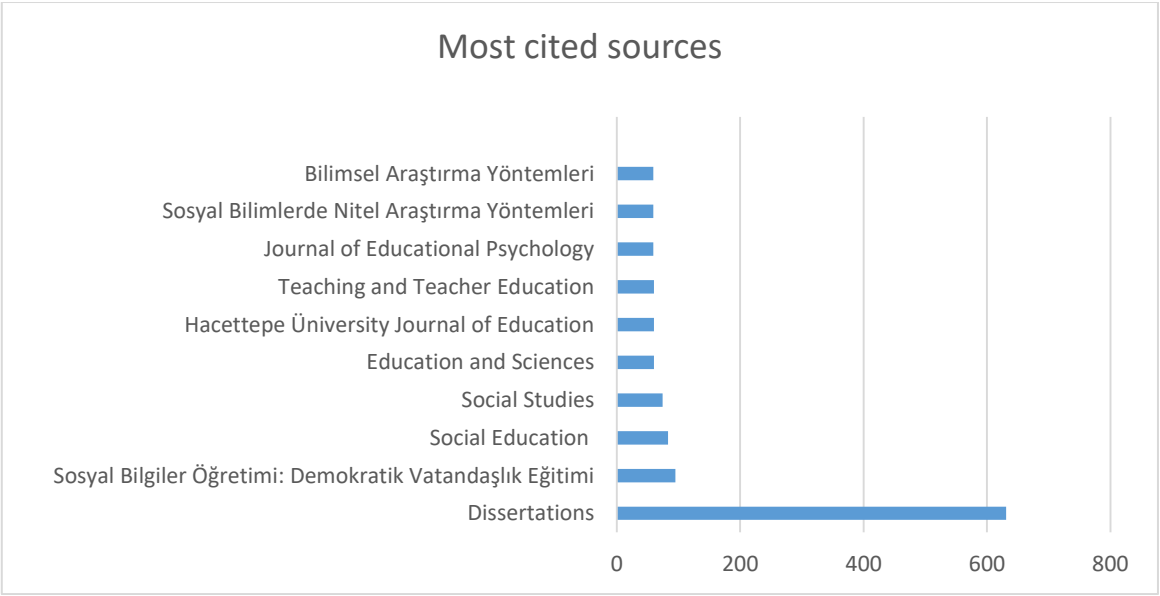

Figure 4. Most cited sources

When Figure 4 is examined, it is seen that the most cited source in scientific studies on social studies education is the dissertations. It was also determined that the book "Sosyal Bilgiler Öğretimi: Demokratik Vatandaşlık Eğitimi (Teaching Social Studies: Democratic Citizenship Education)" was cited the most in the scientific studies published in studies which were indexed WoS database. Besides, Social Education, Social Studies, and Education and Science journals were found most cited journals among all sources. It is noteworthy that four of the cited sources are from abroad and six of them are domestic.

Another result of the study is about most cited researchers in the field of social studies in Turkey. Information about most cited researchers in the field of social studies in Turkey are presented in Figure 5.

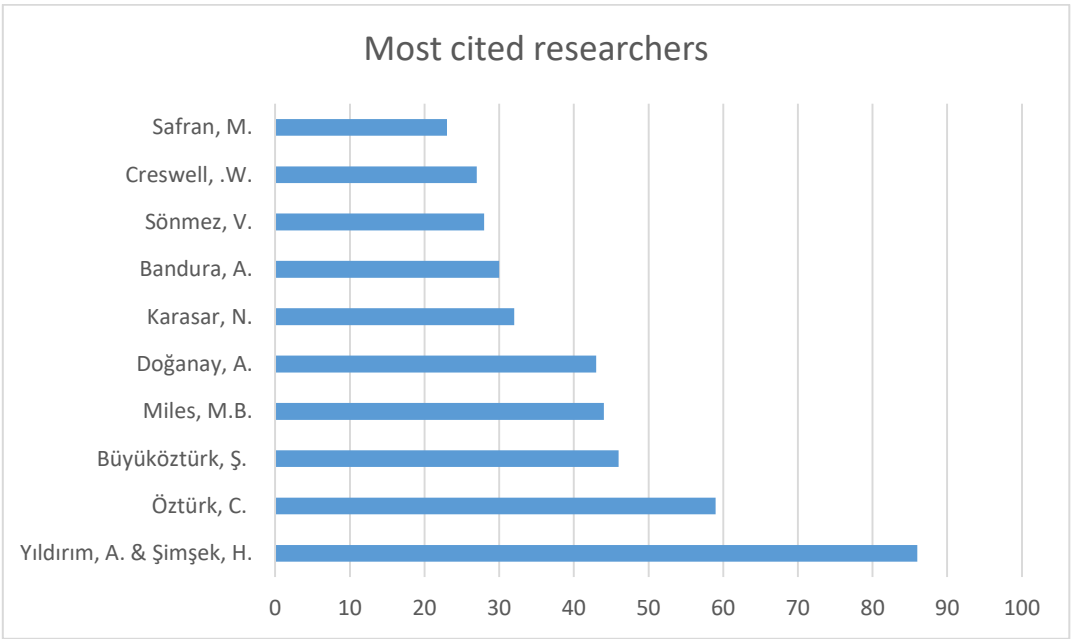

Figure 5. Most cited researchers

When Figure 5 is examined, it is seen that the most cited researchers in the field of social studies education are Ali Yıldırım and Hasan Şimşek, who are the authors of the book "Qualitative Research Methods in Social Sciences", which is also one of the top 10 most cited sources as shown in the Figure 4. It was also found that Cemil Öztürk ranked second and Şener Büyüköztürk ranked third among most cited researchers in publications

about social studies education. It is considerable that nearly half of the most cited researchers are authors of research method books and other researchers mostly have publications about social studies education among most cited researchers. In addition, it was also found that only two of most cited researchers are from another countries and others are from Turkey.

An another result of the study is about the most relevant affiliations in the field of social studies education in Turkey. Information about the most relevant affiliations who are most productive universities in the field of social studies education in Turkey are presented in Figure 6.

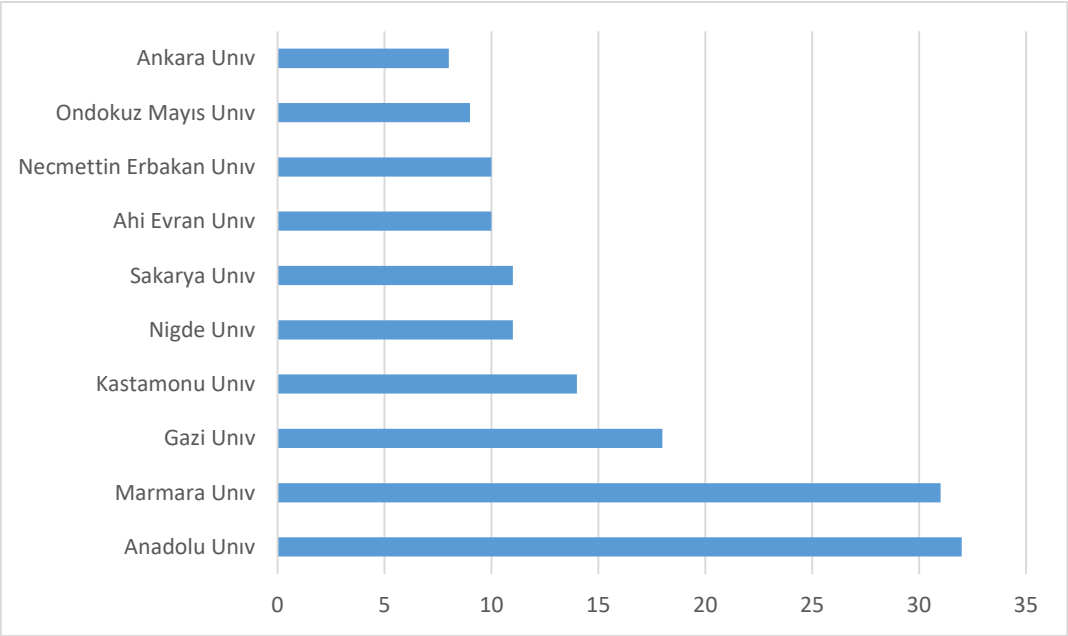

Figure 6. Most relevant affiliations

As it is shown in the Figure 6, Anadolu University and Marmara University are the most productive universities in terms of publication which are published in the journals that indexed WoS database. These universities are respectively followed by Gazi University, Kastamonu University, Niğde University, and Sakarya University. When Figure 3 is examined, it is seen that all other universities, except Kastamonu University and Ahi Evran University, were established before 2006. In this respect, it can be said that the performance of Kastamonu University in terms of its publications on social studies education is remarkable.

Findings regarding globally most cited articles published in journals scanned in WoS were obtained in the research. Information on the globally most cited articles is shown in Table 2.

Table 2. Globally most cited articles in WoS

Articles	**Total of citations**	**Annual avarage rate of citations**
Gülbahar, Y. & Güven, İ. (2008). A survey on ICT usage and the perceptions of social studies teachers in Turkey. *Journal of Educational Technology & Society,* 11 (3), 37-51.	40	2,86
Ersoy, A. F. (2010). Social studies teacher candidates' view on the controversial issues incorporated into their courses in Turkey. *Teaching and Teacher Education*, 26 (2), 323-334.	16	1,33
Yılmaz, K. (2008). Social studies teachers' conceptions of history: Calling on historiography. *The Journal of Educational Research*, 101 (3), 158-176.	16	1,14
Yılmaz, K. (2008). Social studies teachers' views on learner-centered instruction. *European Journal of Teacher Education*, 31 (1), 35-53.	12	0,86
Sarıtepeci, M. (2015). The effect of blended learning environments on student's academic achievement and student engagement: A study on social studies course. *Education and Science*, 40, 203-216	10	1,43

Ersoy, A. F. & Türkkan, B. (2010). İlköğretim öğrencilerinin çizdikleri karikatürlere yansıttıkları sosyal ve çevresel sorunların incelenmesi. *Eğitim ve Bilim*, 35 (156), 96-109.	9	0,75
Çalışkan, H. & Kaşıkçı, Y. (2010). The application of traditional and alternative assessment and evaluation tools by teachers in social studies. *Procedia Social and Behavioral Sciences* 2 (2), 4152-4156.	9	0,75
Yazıcı, K. (2011). Sosyal bilgiler öğretmen adaylarının, demokratik değerlerinin çeşitli değişkenler açısından incelenmesi. *Education and Science*, 36 (159), 165-178.	8	0,73
Çengelci, T. (2013). Social studies teachers' views on learning outside the classroom. *Educational Sciences: Theory & Practice*, 13 (3), 1836-1841.	7	0,78
Çalışkan, H. & Kılınç, G. (2012). The relationship between the learning styles of students and their attitudes towards social studies course. *Procedia-Social and Behavioral Sciences,* 55, 47-56.	7	0,70

When Table 3 is examined, it is seen that the most globally cited article has 40 citations from 2008 to 2019 in the WoS and its annual citation average rate was found 2.86. Apart from this, it is seen that the citation average of only two publications is more than one, and the global citation averages of other publications are quite low. These resulst show that the articles conducted by researchers who works in Turkish universities have quite limited visibility or influence of publications published in reputable international indices.

One of the result of study is about most studied topics in the field of social studies education. Information of the most 10 studied subjects regarding social studies education by years is shown in Figure 7.

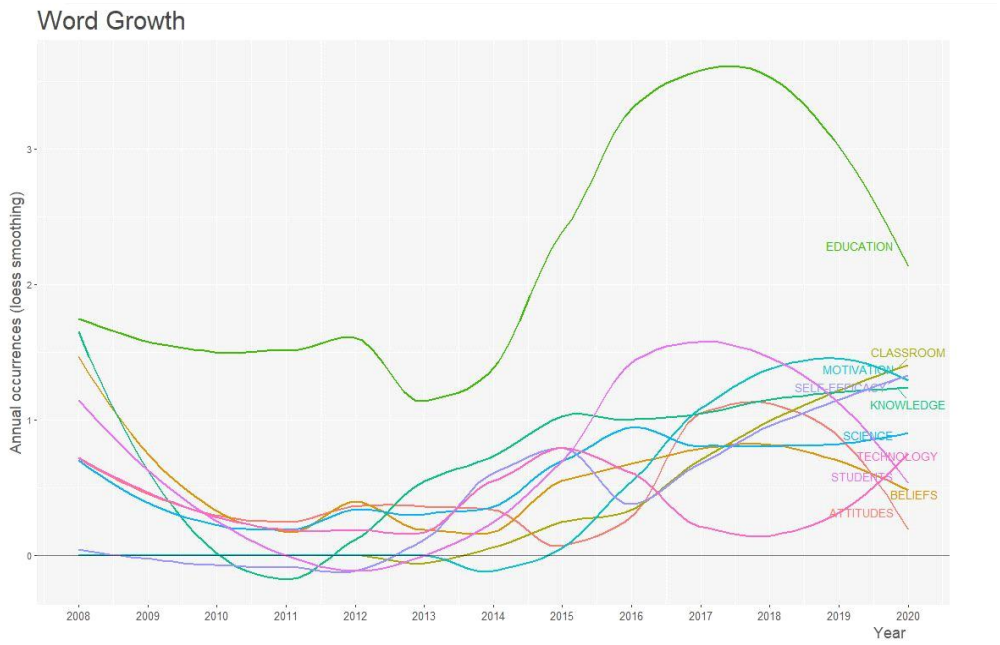

Figure 7. Most studied subjects by years

When Figure 7 is examined, "education" as a subject was found the most studied subject in the field of social studies education in all years. Beside, "classroom" as a subject was found one of the most studied subject in the field of social studies education in Turkey. More over. "Science" as a subject has emerged as a concept that has somehow found itself a place in social studies education since 2012. Apart from these, the most studied subjects such as "motivation", "self-efficacy", "students", "knowledge", "attitudes", "technology" and "beliefs" have increased rapidly after 2012, although their pace has decreased over time to time. When the 10 most studied subjects are examined, it is remarkable that there are subjects related to the cognitive and affective characteristics of individuals rather than the disciplines included in the subject area of social studies education.

Another result of the studies is about the keywords network in the field of social studies education. Information on the findings regarding the keywords network together is shown in Figure 8.

Figure 8.Keywords network

As it is shown in Figure 8, "education", "knowledge", "motivation" and "self-efficacy" are the most intense network centers in the field of social studies education reseach. On the other hand. it is observed that subjects such as "Gender", "instruction", "decision-making", "mathematics" are generally studied alone. It is also found that the concepts of "Democracy" and "Turkey", "feedback" and "organizations", "classroom" and "strategies" are studied together in the publications.

The last results of the study is about institutional collaborations in the field of social studies education. The universities cooperating in at least two researches on social studies education are shown in Figure 9.

Figure 9. Collaborative affiliations

As it is shown in Figure 9, it is observed that only a few universities made collaboration in the field of social studies educatioan research in Turkey. It was found that researchers from Hacettepe University, Niğde University, Necmettin Erbakan University, Ankara University, and Sakarya University have not cooperated with different universities or have cooperated within only one study. On the other hand, it was observed that there are at least 2 articles which were conducted by collaboration between Marmara University and Anadolu University in the field of social studies education. Besides, it is seen that there are also some research that carried out in cooperation between "Gazi University", "Kastamonu University" and "Ahi Evran University".

Conclusion

Although there is an increase of approximately 14% in terms of the year of publication in relation to the distribution of the studies by years, the resarch shows that there are some fluctuations in 2013, 2017, and finally 2020. Dilek, Baysan and Öztürk (2018) have concluded their research that there is a decrease in the number of master's and doctoral thesis carried out in Turkey in the years of 2012-2013 and 2017. In this sense, it can be said that thesis publication in the WoS database and the production of publications in the areas of social studies education have similar trends in terms of production. Finally, in 2020, it was seen that there was a significant decrease in the number of publications in the studies. It is stated in the literature that this decline, which is also associated with the Covid-19 epidemic process, is also experienced by some fields and researchers (Chapman & Thamrin, 2020; Hobday, Browman, & Bograd, 2020).

In the present study, it was seen that the studies conducted in the field of social studies education were mostly published in local journals. The findings obtained in the study conducted by Sönmez (2020) also support this result of this study. It has also been observed that there is a similar situation in educational sciences, teacher training (Çiftçi et al., 2016), educational leadership and management (Gümüş et al., 2020). In this sense, it is stated that culture and scientific tradition are related to publication production (İnönü, 2003) and that a "center" and a "periphery" outside this center are formed as a natural result in scientific researches (Hsiung, 2012; Salager-Meyer, 2014). In this sense, it can be said that the center-periphery concept by the impact of culture in social science research and publishing production is confirmed in educational researches in Turkey. Indeed, the studies conducted by Gülmez Özteke and Gümüş (2021), which are Turkey-based educational research published in international journals are also published in Turkish-originated journals.

In the present study, it was seen that the most cited studies were the theses made in the field of social studies education. In the research carried out by Geçit and Kartal (2010), it was seen that while 414 graduate theses were produced between 2000 and 2010, 110 articles were produced in the same years. In this sense, when we consider that social studies were developed in the last 20 years in Turkey as an independent field from disciplines such as history and geography, and the Turkey-based publications in the WoS database in this investigation started in 2007, it can be said that citations made to the thesis may be related with the production of publications in the social studies education and the development in this field. Besides, it can be stated that the comprehensive and systematic literature reviews in the theses and the in-depth explanation of the subjects covered in the theses are among the factors that direct the researchers to benefit from theses.

In the research of Oğuz Haçat and Demir (2018), it was stated that most of the master's and doctoral theses between 2002-2018 were made in Gazi, Marmara, and Atatürk universities. In this sense, it can be said that the publications in the WoS database largely the same in terms of the affiliated organizations. Also, these mentioned universities of the results in Turkey seem to be rooted universities in this field. It can be said that these universities provide postgraduate education not only in the departments of social studies education, but also in areas such as classroom education, educational programs, measurement and evaluation, and scientific studies on social studies education, and this is also related to this result.

In the research conducted by Geçit and Kartal (2010), it was stated that various methods and techniques, knowledge and proficiency levels were measured in these theses extensively, technology and attitudes towards the lesson were studied very few in the theses in Turkey. In this sense, although it is parallel to this research in terms of the concepts related to measurement-evaluation, it differs from the research of Geçit and Kartal (2010) in terms of technology and attitude concepts.

Finally, social studies carried out in Turkey are mostly postgraduate thesis focused on the review studies on education (Geçit ve Kartal, 2010; Oğuz Haçat & Demir, 2018; Tarhan, 2010). In this sense, social science in Turkey based on the data in the database WoS have been raised at the trend in education It is important in terms of offering a different perspective of this research because this research revealed the trend in social studies education in Turkey which are based on the data of WoS database.

Recommendations

The recommendations developed based on the results and discussions obtained in the research can be listed as follows:

- Various training can be organized related to publishing publications not only in Turkey-based journals but also in prestigious journals abroad, especially in Q1 and Q2 journals in SSCI and researchers may be encouraged to make more publications in these journals.
- Training can be organized to develop academic language competencies for researchers who have problems in writing in a foreign language.
- Studies can be conducted to further collaborate with universities abroad. Besides, various inter-university protocols can be signed for bilateral collaboration.
- Some topics that are not displayed in the trend topics such as various literacy and various skills could be studied more.
- Besides local sources, Turkish researchers should also be aware of and benefit from sources that are written in English by researchers from worldwide.
- For researchers, researches similar to this research can be designed regarding studies on social studies education displayed in Scopus or Google Scholar databases. Besides, these researches can be carried out using different programs such as VosViewer or CiteSpace.

Limitations

This research is limited by the publications which were obtained from WoS database. There are some reasons about why only publications which were scanned in WoS database. First, considering the method of the study and the software that we used to analyze data, it was needed that information about all related documents should be downloaded in particular software format, So we preferred to obtain data from the WoS database. Because users can download the needed information for the software through WoS database. Second, WoS database is recognized as most valuable database by Inter-University Council that is the authority for the evaluating applications of associate professorship in Turkey. We believe that this study could give some considerable insights about the Turkish social studies literature even though it has limitation.

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International Journal of Contemporary Educational Research (IJCER)

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EFL Learners' Foreign Language Learning Anxiety and Language Performance: A Meta-Analysis Study

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Article History
Received: 01.04.2021
Received in revised form: 11.05.2021
Accepted: 11.06.2021
Available online: 03.09.2021

To cite this article:

Dikmen, M. (2021). EFL learners' foreign language learning anxiety and language performance: A meta-analysis study. *International Journal of Contemporary Educational Research, 8*(3), 206-222. DOI: https://doi.org/10.33200/ijcer.908048

International Journal of Contemporary Educational Research
Volume 8, Number 3, September 2021, 206-222 ISSN: 2148-3868

EFL Learners' Foreign Language Learning Anxiety and Language Performance: A Meta-Analysis Study

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Abstract

The relationship between foreign language anxiety (FLA) and English as a foreign language (EFL) learners' performance is constantly being examined through experimental and theoretical studies. The aim of this study is to examine the association between FLA and EFL performance through meta-analysis. As a result of an extensive literature review, 69 studies from fourteen countries (N= 23.150) were identified as eligible to be included in the analysis process. The overall correlation between FLA and EFL performance was calculated as -.61. In terms of moderator variables, the results revealed that while grade level and country in which studies were conducted did not have an effect on the association between FLA and EFL performance, type of anxiety was found to have a moderator effect. It was observed that listening, test, speaking, reading, and writing anxiety affected EFL learning performance respectively from the most to the least. Finally, publication year and sample size were found to have a significant effect on the association between FLA and EFL performance through meta-regression analysis. Based on the findings, it is concluded that in order to increase EFL learners' performances, their foreign language anxiety should be decreased.

Key words: EFL, Foreign language learning anxiety, Language performance, Meta-analysis

Introduction

Today, many people spend time to learn English as a foreign language (EFL). Due to the complex and multi-dimensional nature of learning foreign language, people may experience some difficulties in the learning process. In the last decade, many studies were conducted in order to determine the factors that negatively influence language learning process (Çakıcı, 2016). Anxiety is one of the affective variables that researchers mainly examined in foreign language learning (Teimouri, Goetze & Plonsky, 2019). Anxiety is defined as a state of arousal that an individual experiences when faced with a stimulus that causes physical, emotional and/or mental changes (Cüceloğlu, 2005). Foreign language anxiety is observed in situations in which formal learning of foreign language occurs, especially when an individual has low communication abilities in that language (Rodríguez & Abreu, 2003). Yoshida (2010) reported that students attend foreign language classes with anxiety.

The fact that the etiology of FLA is not fully known has increased the number of studies on this subject. In one of the first studies, Cattell and Scheier (1961) stated that second language (L2) learning anxiety could be caused by personality traits or a temporary emotional state manifested at a certain time. However, these early studies were defined as the confounded approach by MacIntyre (2017) since those studies revealed inconsistent results due to the limitations in considering the meaning of anxiety for language learners in detail. On the other hand, Tsiplakides and Keramida (2009) found that students with anxiety avoid participating in-class activities since they believe that they have ineffective speaking skills and they are concerned that their classmates may criticize them due to their speaking skills. Moreover, anxiety is observed when students are lack of self-confidence, compare themselves with others, and have negative thoughts about foreign languages (Öztürk, 2003). MacIntyre (2017) argued that FLA is affected by internal physiological processes, cognitive and emotional states, and the presence of other people. Besides, one of the main triggers of FLA is the fear of other's negative evaluation (Aydın, 2008). In addition, studies indicate that FLA may be caused by many internal (Cheng, 2002; Liu & Jackson, 2008; Mak, 2011; Dewaele, 2017) and external (Liu, 2006; Mak, 2011; Oxford, 2017) factors.

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FLA can be extremely harmful to the language learning process (MacIntyre, 2017). FLA is negatively related to students' cognitive learning process and their interaction and communication skills. In addition, FLA causes student difficulty in focusing on course content during lessons (Aguila & Harjanto, 2016). Also, students with anxiety experience a mental block when performing an in-class activity (Chen & Chang, 2004). It was also reported that the higher the FLA level of the students, the lower their verbal performance scores (Azizifar, Faryadian & Gowhary, 2014). FLA negatively affects learners' EFL performance by interfering with the EFL learning process (Liu & Xiangming, 2019; Kabigting & Nanud, 2020). In addition, studies revealed that unlike other types of anxiety, FLA causes students to develop the fear of being evaluated negatively, which, in turn, negatively affects the language learning process (Cheng, Horwitz & Schallert, 1999).

Many studies uncovered the negative association between FLA and EFL performance (Horwitz, 2001; Elkhafaifi, 2005; Birjandi & Alemi, 2010; Ghorbandordinejad & Ahmadabad, 2016; Liu & Xiangming, 2019; Kabigting & Nanud, 2020). More specifically, some studies argued that a higher FLA level negatively affects EFL performance (Hewitt & Stephenson, 2011; Rezaabadi, 2016; Elmalı-Özsaray & Eren, 2018; Yurtseven & Akpur, 2018). However, little is known about how FLA is affected by and relates to other learner traits (Dörnyei, 2005; Dewaele, 2013; Dewaele & Ip, 2013). Despite of the discussions about FLA, some researchers rejected the concept of FLA (Javanbakht & Hadian, 2014; Lian & Budin, 2014; Sparks, Ganschow & Javorsky, 2000; Tridinanti, 2018). Specifically, Sparks and colleagues (2000) stated that the anxiety experienced by language learners is due to potential learning difficulties and even limitations in their first language.

No meta-analysis study was found in the literature to explain the contradictory findings regarding the relationship between FLA and EFL performance and to examine the variables that may be effective in the relationship between FLA and EFL. However, there are meta-analyses studies on the relationship between L2 learning and FLA (Teimouri, Goetze & Plonsky, 2019; Zhang, 2019). Teimouri, Goetze, and Plonsky (2019) reported that the overall correlation between FLA and L2 learning was −.36 (95% CI [.39, −.33]). In the same study, although moderating effects of education level, target language, and anxiety were examined, the exact effects of the moderators were not reported. Therefore, no general conclusion can be drawn about the significance of the moderators. Zhang (2019) also conducted a meta-analysis on the relationship between L2 learning and FLA. Unlike Teimouri, Goetze, and Plonsky's (2019) meta-analysis study, Zhang did not include the grade point averages (GPA) reported by the students in the meta-analysis. The rationale for this exclusion was the reliability issues in the reported GPAs by students. Also, Zhang (2019) included Chinese, English, Persian, Arabic, and Spanish languages and examined the effect of some moderator variables (anxiety type, age, proficiency, lexical similarity, language family, and publication year) on the relationship between L2 learning and FLA. The results revealed that anxiety type, lexical similarity, age, and publication year had an effect on the anxiety-L2 learning relationship. Also, it was found that proficiency, language family, and publication type do not have a significant modulating effect.

The fact that English is a common language used for communication in various fields in the world has increased the importance of examining the factors that affect the performance of EFL learners. The meta-analysis studies on EFL in the literature were unable to provide satisfactory findings about the relationship between EFL and FLA. Also, in addition to the moderators (education level and publication year) examined in the previous meta-analysis studies, a number of additional moderators including country, type of anxiety, and sample size may be critical to examine the relationship between L2 learning and FLA. A number of criteria were taken into account in determining the moderators of the current study. The rationale for the inclusion of those variables is provided below:

- The previous meta-analysis studies (Teimouri, Goetze & Plonsky, 2019) reached a limited number of studies in terms of elementary and middle school levels. Also, it was suggested that future studies should consider inclusion of various education levels. Thus, the education level was included as a moderator variable in the present study.
- For EFL learners, it may be important to determine how language anxiety relates to language learning performance by time. For this reason, publication year was included as a moderator variable in the present study.
- In the previous studies (Zhang, 2019), language family was considered as a moderator variable on the relationship between L2 learning and FLA and its non-significant effect was reported. On the other hand, Yoğurtçu and Yoğurtçu (2013) stated that culture has a critical role on anxiety. Thus, country where studies were conducted was included as a moderator variable in the present study.
- Language learning includes reading, writing, listening, and speaking skills. Melchor-Couto (2017) stated that these skills in language learning may trigger FLA. Thus, type of anxiety (reading, writing, listening, speaking, and test anxiety) was included as a moderator variable in the present study.

- Tuncer and Dikmen (2017) discussed the dilemma about whether the standard error increases in line with the sample size. Thus, the sample size was included as a moderator variable in the present study.

The Current Study

This study aimed to examine the direction (positive or negative) and magnitude of the relationship between FLA and EFL performance. Beyond the results of the meta-analysis in the literature, this study also aimed to determine some variables' moderating effects on the relationship between FLA and EFL performance. Thus, the following research questions were addressed:

1. What is the direction and magnitude of the relationship between FLA and EFL performance?
2. Do grade level, country, type of anxiety, publication year, and sample size have a significant moderating effect on the relationship between FLA and EFL performance?

Method

The goal of the present meta-analysis is to systematically examine the relationship between FLA and EFL performance and to gather the findings of the previous studies to provide a holistic perspective. Meta-analysis enables researchers to combine findings of the studies, to synthesize, and to calculate the overall effect size (Lipsey & Wilson, 2000; Card, 2012). In addition, several analyses were conducted for certain variables that may have a potential to influence EFL performance.

Moderating Variables in the Study

The moderating variables are the variables that may influence the observed effect size. In this particular study, the following variables are considered as the moderating variables: publication year (between 2010 and 2020), grade level (middle school, high school, and higher education level), country (Turkey, China, Iran, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Poland, Saudi Arabia, Spain, Taiwan and Yemen), and type of anxiety (reading, writing, listening, speaking, and test anxiety).

Data Sources and Search Strategies

In order to identify eligible studies, ten electronic databases were searched, including Web of Science, ERIC (EBSCO), Scopus (A&I), ULAKBIM, Taylor & Francis Online, Science Direct, Springer LINK, Wiley Online Library Full Collection, Google Scholar, ProQuest Dissertation, and Turkey Council of Higher Education Thesis Center. In order to conduct the search, the following keywords were used: (i) foreign language anxiety, (ii) foreign language anxiety and academic achievement, (iii) foreign language anxiety and academic performance. The search was conducted on December 30, 2020 by using the keywords through the databases and only the studies written in English or Turkish were selected.

Inclusion and Exclusion Criteria

The following criteria were followed in order to determine eligible studies: (i) studies must be published between 2010 and 2020, (ii) studies must be published in either Higher Education Thesis Center or peer-reviewed journals, (iii) studies must include sufficient amount of statistical information (sample size and correlation values), (iv) full-text documents must be reached, and (v) studies must be written in either Turkish or English. Excluded studies usually were out of scope, included qualitative data, did not have full-text documents, and/or did not have sufficient statistical information. Also, if an author had a thesis and an article derived from the thesis, only one of them was included in the analysis process.

After the search in the databases, the titles and abstracts were examined to ensure they were within the scope of this particular study. Then, full-text documents were retrieved. The PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & Prisma Group, 2009) showing the acquisition process of the eligible studies is given in Figure 1.

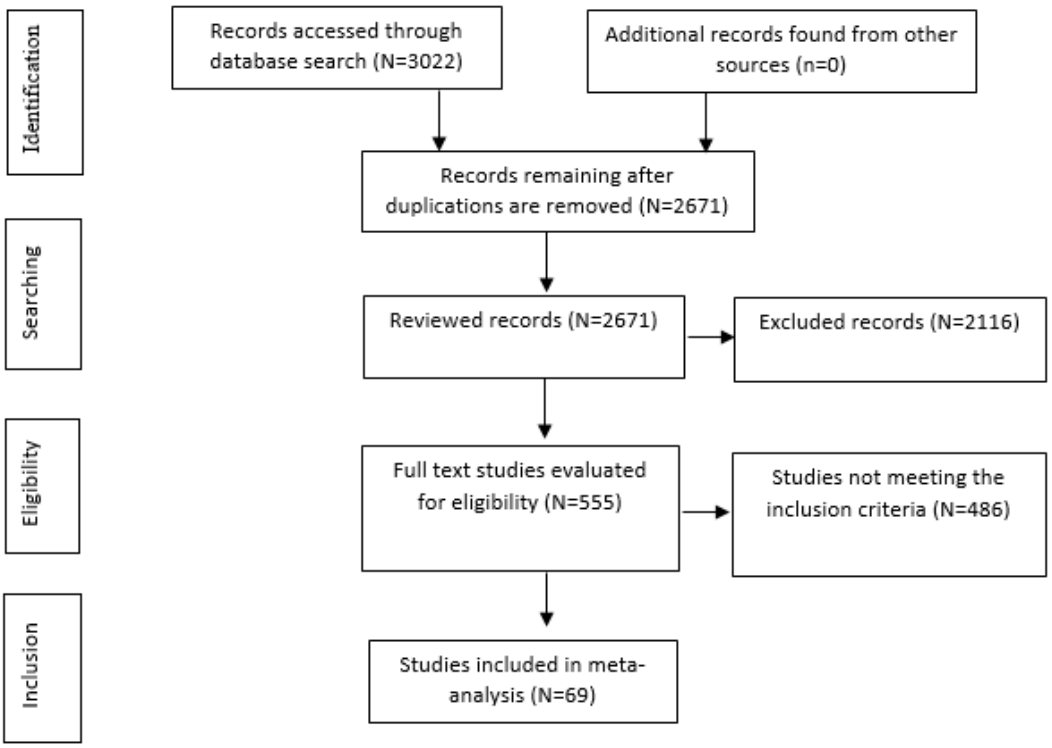

Figure 1. Flow diagram for the study selection process

As seen in Figure 1, a total of 3022 studies were identified. After reviewing those studies, 351 studies were excluded due to duplication. Also, 2116 studies were also excluded because of their scope, which left a total of 755 studies. Based on the inclusion criteria, 690 studies were omitted. As a result, 69 studies were included in the meta-analysis process. There were 13 studies from Turkey, 20 studies from China, 18 studies from Iran, 2 studies from Yemen, 3 studies from Indonesia, Malaysia and Saudi Arabia, and 1 from India, Korea, Pakistan, Poland, Philippines, Spain and Taiwan.

Coding Method

One of the critical steps in meta-analysis is data coding in order to combine or compare the results of the eligible studies. Therefore, an appropriate coding form was designed to compare the studies. The coding form is provided in Table 1.

Table 1. Sections and content of the coding form

Study ID	**Content of the Study**	**Data of the Study**
Title	Country where conducted	Sample size (*N*)
Author(s)	Grade level	Correlation (r)
Publication year	Type of anxiety	
Publication type		

In order to increase the reliability of the present study, each eligible study was independently coded by two researchers. The coders had doctorate degree and had expertise in the field of qualitative research. After individual coding, the experts discussed about the differences in their coding and disagreements were solved with consensus. The inter-observer agreement value was calculated as .92. This value shows that there is a perfect match between the coders (Viera & Garreth, 2005).

Data Analysis and Interpretation

In meta-analysis studies, the effect size constitutes the basis of the research. There are three different models in the literature: fixed effect, random effect, and mixed effect. The fixed effect model accepts that the studies included in the analysis are homogeneous and that the differences in effect size are caused by sampling errors. The random effect model also agrees that the studies included in the analysis are homogeneous and that the differences in effect size are caused by sampling errors and the characteristics of the studies examined (Cooper, 2010). On the other hand, in the mixed effect model, it is assumed that the determined differences in effect size may be due to sampling errors, differences between studies and random factors (Borenstein, Hedges, Higgins, & Rothstein, 2010). In meta-analysis studies, researchers should examine the heterogeneity when deciding which model to adapt (Borenstein, Hedges, Higgins, & Rothstein, 2010). Borenstein and colleagues (2013) suggest use of chi-square or similar tests in order to determine the heterogeneity. If the Q value obtained from the heterogeneity test is less than the Q value shown in the $\chi 2$ table, the homogeneity status met, and if it is greater, the heterogeneity status is fulfilled (Dinçer, 2014). The significance of the Q statistics calculated in this test ($p < .05$) suggests that the studies are heterogeneous. In addition, considering that the studies included in the present study were conducted in different countries and with different sample sizes may cause a difference in the calculated effect sizes, the findings in this study were interpreted according to the random effect model. In order to calculate the effect size, Cohen's d was used. Cohen's d is an effect size used to indicate the standardized difference between two means. In addition, the following variables were used as moderator variable in analysis: grade level, anxiety type, country, sample size, and publication year. In meta-analysis studies, categorical moderators are examined through ANOVA and continuous moderators are examined through meta-regression analysis. Meta-regression is an extension to subgroup analyses that allows the effect of continuous characteristics to be investigated, and in principle allows the effects of multiple factors to be investigated simultaneously.

There exist some classifications in interpretation of the calculated effect sizes. The most widely used ones are Cohen's (1977), Lipsey and Wilson's (2001), and Thalheimer and Cook's (2002) classifications. According to Cohen (1977), the effect size can be small if it is between .20 and .49, medium if it is between .50 and .79, and large if it is over .80. According to Lipsey and Wilson (2001), it is suggested that effect sizes of .15 are small, .45 are medium, and .90 are high. On the other hand, Thalheimer and Cook (2002) consider the effect size as negligible if $-0.15 < d < 0.15$, small if $0.15 < d < 0.40$, medium if $0.40 < d < 0.75$, large if $0.75 < d < 1.10$, very large if $1.10 < d < 1.45$, and huge if $1.45 < d$. Interpretation of the effect sizes of the studies that were analyzed was conducted according to the classification of Cohen (1977).

Another critical aspect to be considered in meta-analysis studies is publication bias. Publication bias refers to situations in which studies with significant results are less likely to be published compared with studies with insignificant results. Therefore, it is highly possible to obtain high effect size (Borenstein, Cooper, Hedges & Valentine, 2009). In order to evaluate the presence of possible publication bias, funnel plots were drawn and Begg and Mazumdar rank correlation test was performed.

In order to combine the effect sizes obtained from the studies, the normal distribution of the effect sizes was tested. In this particular study, normal Q-Q plot and kurtosis and skewness coefficients were used to determine whether the effect sizes of the eligible studies had normal distribution. Normal Q-Q plot shows the association between the observed and expected values. When the observed values and expected values overlap, a 45-degree line emerges. The Q-Q graph regarding the distribution of the effect sizes of the 69 studies is given in Figure 2.

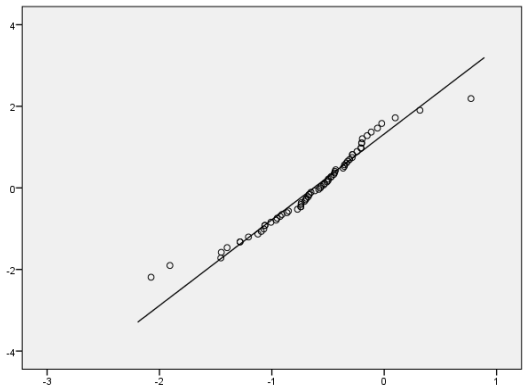

Figure 2. Normal distribution plot of effect sizes

As seen in the figure, the effect sizes of the 69 studies cumulated along a line. However, this is not sufficient to decide whether the data is normally distributed (Can, 2013). Additionally, kurtosis and skewness values were calculated. The skewness (-.39) and kurtosis (1.47) values of the effect sizes were in the normal distribution range (-1.96 and +1.96) (Tabachnick & Fidell, 2007).

In this study, the Comprehensive Meta-Analysis v.2 (CMA v. 2.0) statistics package was used for effect sizes, heterogeneity test, moderator, meta-regression, and publication bias. Also, in order to calculate the inter-observer agreement value, the IBM SPSS 22.0 statistics package was used. A value of $p < .05$ was accepted as statistically significant.

Results

In this section, the findings related to the descriptive results, the calculated effect sizes, and the changes in sub-categories are provided.

Descriptive Results of the Studies

The eligible studies were examined in terms of publication year, type of publication, country where conducted, grade level, and type of anxiety. Descriptive results are provided in Table 2.

Table 2. Descriptive results of the eligible studies

Variables	Frequency (f)	Percentage (%)
Publication Year		
2010/2011	5/7	7.25/10.14
2012/2013	2/10	2.90/14.49
2014/2015	9/6	13.04/8.70
2016/2017	6/8	8.70/11.59
2018/2019	7/5	10.14/7.25
2020	4	5.80
Country		
Turkey	13	20.97
China	20	32.26
Iran	18	29.03
Indonesia	3	4.84
Malaysia	3	4.84
Saudi Arabia	3	4.84
Yemen	2	3.23
Grade level		
High school	13	19.12
Higher education	55	80.88
Type of anxiety		
Speaking anxiety	12	17.39
Writing anxiety	3	4.35
Listening anxiety	10	14.49
Reading anxiety	5	7.25
Test anxiety	39	56.52

According to the results, it was observed that the studies included in the meta-analysis were conducted in 2013 at the most, while at least in 2020. In addition, the sample group was mainly higher education students. The studies were mainly conducted in China, Iran, and Turkey. In terms of type of anxiety, the studies generally focused on test anxiety. It was determined that the number of samples reached within the scope of 69 studies was 23.150.

Publication Bias Results

In order to determine possible publication bias, funnel plot was drawn and Begg and Mazumdar rank correlation test was performed. The funnel plot was provided in Figure 3.

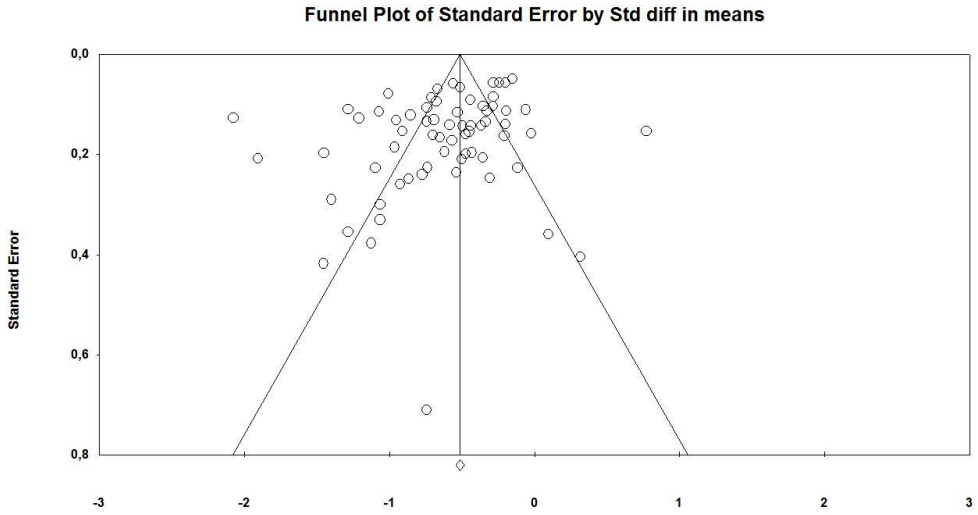

Figure 3. The funnel plot

As seen in the figure, the funnel plot does not present an asymmetric funnel, revealing that the eligible studies do not have publication bias. In order to ensure the absence of publication bias, Begg and Mazumdar rank correlation test was performed. The results are provided in Table 3.

Table 3. Begg and Mazumdar rank correlation results

Kendall's S Statistics (P-Q)	-290.00000
Kendall's tau value before the correction of continuity	
Tau	-.12372
z value for Tau	1.50206
p (one-tailed)	.06654
p (two-tailed)	.13308
Kendall's tau value after the correction of continuity	
Tau	-.12329
z value for Tau	1.49688
p (one-tailed)	.06721
p (two-tailed)	.13442

According to the findings, Begg and Mazumdar rank correlation test did not produce significant result (tau b = -.12, p > .05). In other wods, there was no publication bias in the study selection. Therefore, the analysis results were reliable.

Findings of General Effect Size

The studies examining the effect of FLA on language learning performance were gathered by using the random effect model. The results are provided in Table 4.

Table 4. Overall effect size, heterogeneity, and confidence intervals

					% 95 confidence interval		**Null Test**		**Heterogeneity**	
Model	**N**	**Effect Size**	**Standard Error**	**Variance**	**Lower Limit**	**Upper Limit**	**Z Value**	**P Value**	**Q Value**	**p**
Random	69	-.611	.049	.002	-.707	-.515	-12.473	.000	743.114	.000

The heterogeneity test produced a signifincant result (Qmodel=196.609, p= .000). The overall effect size was found to be -.61, which is a medium effect size as suggested by Cohen (1977). Therefore, it may be concluded that there was a medium and negative association between FLA and language learning performance. In addition, FLA explians 37% of the total variance of language learning performance. The forest plow showing the studies' effect sizes and confidence intervals is provided in Figure 4.

Study name	Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
Akpur (2017)	-0,201	0,139	0,019	-0,474	0,072	-1,442	0,149
Ali & Fei (2017)	-1,062	0,330	0,109	-1,709	-0,415	-3,215	0,001
Al-Khotaba at. al. (2020)	-0,499	0,209	0,044	-0,909	-0,089	-2,383	0,017
Alshahrani (2016)	-0,926	0,260	0,067	-1,435	-0,417	-3,564	0,000
Amiri & Ghonsooly (2015)	-0,742	0,134	0,018	-1,004	-0,481	-5,557	0,000
Atasheneh & Izadi (2012)	-1,062	0,300	0,090	-1,650	-0,474	-3,541	0,000
Atef-Vahid & Kashani (2011)	-1,454	0,418	0,175	-2,273	-0,635	-3,479	0,001
Awan, Azher, Nadeem & Naz (2010)	-0,568	0,172	0,030	-0,905	-0,230	-3,299	0,001
Aydýn (2016)	-0,283	0,085	0,007	-0,449	-0,117	-3,334	0,001
Azizifar & Fariadian (2015)	-0,355	0,206	0,043	-0,760	0,049	-1,724	0,085
Birjandi & Alami (2010)	-0,022	0,158	0,025	-0,331	0,287	-0,140	0,889
Cheng at. al. (2014)	-0,283	0,057	0,003	-0,394	-0,172	-5,005	0,000
Cheng at. al. (2014a)	-0,561	0,058	0,003	-0,675	-0,447	-9,652	0,000
Cheng at. al. (2014b)	-0,201	0,056	0,003	-0,311	-0,091	-3,575	0,000
Cheng at. al. (2014c)	-0,242	0,056	0,003	-0,352	-0,131	-4,290	0,000
Cui (2011)	-0,473	0,199	0,039	-0,862	-0,083	-2,379	0,017
Demirdaþ & Bozdoðan (2013)	-0,060	0,110	0,012	-0,277	0,157	-0,543	0,587
Deniz & Ilýcalý-Koca (2018)	-0,699	0,161	0,026	-1,014	-0,384	-4,353	0,000
Elmalý-Özsaray & Eren (2018)	-1,283	0,109	0,012	-1,498	-1,069	-11,732	0,000
Ghorbandordinejad at. al. (2015)	-1,071	0,114	0,013	-1,294	-0,848	-9,405	0,000
Hadinata (2020)	-0,116	0,227	0,051	-0,561	0,328	-0,512	0,608
Halder (2018)	-0,692	0,130	0,017	-0,948	-0,436	-5,303	0,000
Hamzavi & Soodmand-Afshar (2014)	-0,865	0,248	0,062	-1,352	-0,378	-3,484	0,000
Hewitt & Stephenson (2011)	-1,124	0,377	0,142	-1,863	-0,385	-2,981	0,003
Huang & Hung (2013a)	-0,652	0,165	0,027	-0,976	-0,328	-3,946	0,000
Huang & Hung (2013b)	-0,473	0,160	0,025	-0,785	-0,160	-2,963	0,003
Huang (2018)	-0,583	0,141	0,020	-0,860	-0,307	-4,134	0,000
Jafarigohar (2012)	-0,432	0,196	0,038	-0,816	-0,048	-2,203	0,028
Javanbakht & Hadian (2014)	0,098	0,360	0,129	-0,607	0,803	0,273	0,785
Kabigting and Nanud (2020)	-0,742	0,711	0,506	-2,136	0,651	-1,044	0,296
Kamarulzaman at. al. (2013)	-0,617	0,194	0,038	-0,998	-0,237	-3,177	0,001
Karagöl & Baþbay (2018)	-0,442	0,090	0,008	-0,619	-0,266	-4,902	0,000
Lan (2010)	-0,152	0,049	0,002	-0,248	-0,057	-3,133	0,002
Lian & Budin (2014)	0,772	0,153	0,023	0,472	1,071	5,053	0,000
Liu & Huang (2011)	-0,510	0,066	0,004	-0,639	-0,380	-7,720	0,000
Liu & Xiangming (2019)	-0,852	0,121	0,015	-1,090	-0,614	-7,023	0,000
Liu & Xiangming (2019)a	-0,530	0,115	0,013	-0,756	-0,303	-4,587	0,000
Liu & Xiangming (2019)b	-0,195	0,112	0,013	-0,415	0,025	-1,738	0,082
Liu & Xiangming (2019)c	-0,326	0,113	0,013	-0,548	-0,105	-2,885	0,004
Lu & Liu (2011)	-0,668	0,069	0,005	-0,804	-0,533	-9,672	0,000
Lu & Liu (2015)	-0,152	0,049	0,002	-0,248	-0,057	-3,133	0,002
Oruç (2020)	-0,709	0,086	0,007	-0,878	-0,539	-8,195	0,000
Ozkan (2019)	-0,963	0,185	0,034	-1,326	-0,601	-5,208	0,000
Pyun, Kim, Cho & Lee (2014)	-1,094	0,227	0,051	-1,539	-0,650	-4,824	0,000
Rastegar & Karami (2015)	-1,398	0,290	0,084	-1,966	-0,831	-4,828	0,000
Razak, Yassin & Maasum (2016)	-0,207	0,163	0,027	-0,527	0,113	-1,270	0,204
Razak, Yassin & Maasum (2017)	-0,207	0,163	0,027	-0,527	0,113	-1,270	0,204
Rezaabadi (2016)	-1,907	0,208	0,043	-2,315	-1,498	-9,154	0,000
Salehi & Marefat (2014)	-0,366	0,142	0,020	-0,645	-0,087	-2,571	0,010
Serraj & Noordin (2013)	-0,497	0,143	0,021	-0,777	-0,216	-3,467	0,001
Serraj & Noordin (2013)a	-0,910	0,153	0,023	-1,209	-0,610	-5,956	0,000
Serraj & Noordin (2013)b	-0,438	0,142	0,020	-0,717	-0,159	-3,079	0,002
Shao, Yu & Ji (2013)	-0,676	0,094	0,009	-0,859	-0,492	-7,205	0,000
Szyszka (2011)	-1,283	0,354	0,125	-1,977	-0,589	-3,622	0,000
Tabrizi & Ranjbar (2017)	-0,539	0,236	0,056	-1,001	-0,076	-2,281	0,023
Tanielian (2017)	-0,953	0,131	0,017	-1,210	-0,695	-7,246	0,000
Tridinanti (2018)	0,318	0,405	0,164	-0,476	1,112	0,785	0,432
Tugan (2015)	-0,740	0,106	0,011	-0,948	-0,532	-6,966	0,000
Tuncer & Temur (2017)	-0,353	0,104	0,011	-0,556	-0,151	-3,414	0,001
Tuncer & Temur (2017a)	-0,285	0,103	0,011	-0,487	-0,083	-2,767	0,006
Valizadeh & Alavinia (2013)	-1,450	0,197	0,039	-1,837	-1,064	-7,355	0,000
Varasteh, Ghanizadeh & Akbari (2016)	-0,449	0,154	0,024	-0,751	-0,147	-2,914	0,004
Wang & Li (2011)	-0,738	0,226	0,051	-1,180	-0,295	-3,264	0,001
Widiana (2017)	-0,308	0,247	0,061	-0,792	0,177	-1,244	0,213
Yang (2010)	-0,772	0,240	0,057	-1,242	-0,302	-3,220	0,001
Yanxia (2016)	-0,337	0,135	0,018	-0,601	-0,072	-2,496	0,013
Yoðurtçu & Yoðurtçu (2013)	-1,208	0,128	0,016	-1,458	-0,958	-9,463	0,000
Yurtseven & Akpur (2018)	-2,075	0,127	0,016	-2,323	-1,827	-16,403	0,000
Zheng (2010)	-1,008	0,078	0,006	-1,160	-0,855	-12,941	0,000
	-0,478	0,014	0,000	-0,504	-0,451	-35,166	0,000

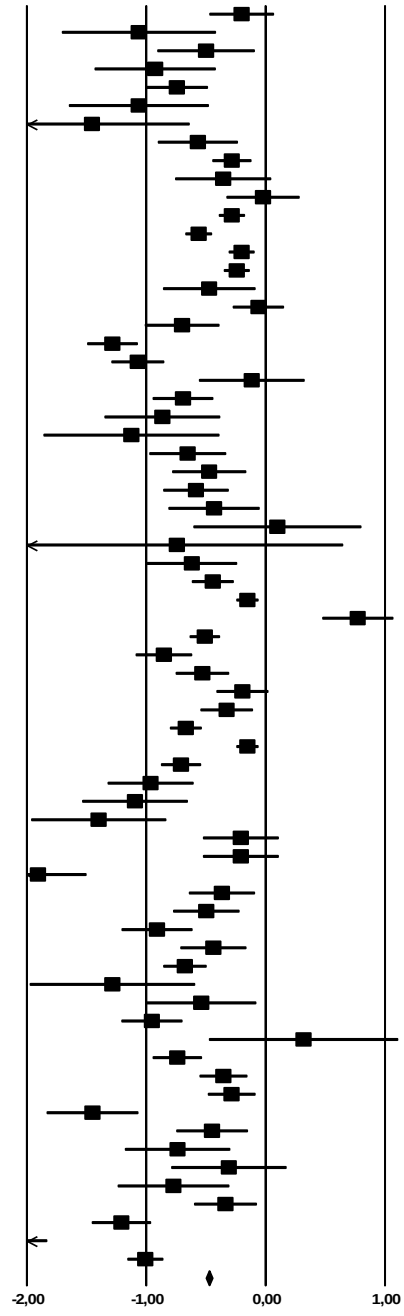

Figure 4. The forest plow of random effects estimates for the included studies

The black square in the plow represents the effect size of the related study. The vertical horizontal lines indicate the confidence interval of the effect size of the relevant study. According to the forest plow, it is seen that the study with the widest confidence interval and high weighted effect size belongs to Kabigting and Nanud (2020), while the smallest confidence interval and the lowest weighted effect size are in the study of Lan (2010). Also, the contribution of the other studies to the total effect size consists of weighted effect sizes close to each other.

Results of Moderator Analysis

There is a variation in the country, grade level, and type of anxiety variables among the studies. Thus, the effects of those variables on studies' effect sizes were examined in order to determine their moderating effects. Since there was only one study conducted for some country and education level in terms of country and education level moderators, they were not included in meta-analysis. The findings are presented in Table 5.

Table 5. The effect sizes of studies on including moderators in relation to EFL performance

	Variables	Number of studies	Effect Size	Standard error	95% Confidence Interval		Qb	sd	p
					Lower Limit	Upper Limit			
Grade level	High school	13	-.495	.120	-.729	-.261	.949	1	.330
	Higher education	55	-.623	.055	-.731	-.515			
	Total	68	-.601	.050	-.699	-.503			
Country	China	20	-.480	.083	-.642	-.318	15.240	6	.018*
	Indonesia	3	-.084	.261	-.595	.427			
	Iran	18	-.748	.096	-.936	-.560			
	Malaysia	3	-.180	.239	-.650	.289			
	Saudi Arabia	3	-.797	.233	-1.253	-.341			
	Turkey	13	-.708	.102	-.909	-.508			
	Yemeni	2	-.207	.273	-.742	.327			
	Total	62	-.581	.049	-.677	-.485			
Type of anxiety	Test anxiety	39	-.642	.066	-.771	-.513	9.513	4	.049*
	Listening anxiety	10	-.888	.132	-1,147	-.629			
	Reading anxiety	5	-.443	.177	-.791	-.095			
	Speaking anxiety	12	-.446	.122	-.685	-.206			
	Writing anxiety	3	-.286	.221	-.719	.146			
	Total	69	-.611	.049	-.708	-.514			

*p< .05

In terms of grade level, FLA's effects on EFL performance were -.495 for high schools, and -.623 for higher education. According to the findings, grade level did not have a significant moderating effect on the association between FLA and EFL performance (Qb = .949, p< .05).

According to the findings in Table 5, when considering the country as a moderator variable, the highest effect was observed in Saudi Arabia (d=-.797) and the lowest effect was observed in Indonesia (d= -.084). Indeed, country did have a significant moderating effect on the association between FLA and EFL performance (Qb = 15.240, p< .05).

In addition, type of anxiety was included in the analysis as a moderator variable. The results revealed that while listening anxiety had the highest effect (d= -.888) on EFL performance, writing anxiety had the smallest effect (d= -.286). Based on the findings, type of anxiety was a moderator variable that significantly influenced the association between FLA and EFL performance (Qb = 9.513, p< .05).

In meta-analysis studies, while categorical moderators are analyzed using the analog to the analysis of variance (ANOVA), continuous moderators are examined using multi-regression analysis. Since the year variable was a continuous variable, meta-regression analysis was performed. The findings are presented in Figure 5.

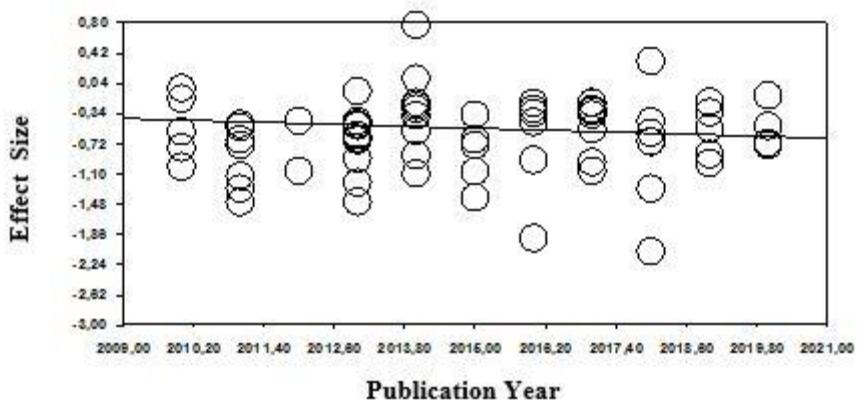

Figure 5. The associaiton between publication year and effect size

As seen in Figure 5, it is seen that there was a negative increase in the line slope as the publication year progressed from the past to the present. Table 6 provides the statistical results for this decrease.

Table 6. The statistical results for the publication year variable and the effect sizes

	Point Estimation	**Standard Error**	**Lower Limit**	**Upper Limit**	**Z value**	**p-value**
Slope	-0.02047	0.00488	-0.03004	-0.01090	-4.19383	0.00003*
Intercept	40.72116	9.83178	21.45122	138.44171		

The publication years of the studies from the past to the present caused a negative increase of 0.020 in the effect size, which is statistically significant (p<.05).

Another moderator variable in this study was the sample size of the studies. The meta-regression analysis results are presented in Figure 6.

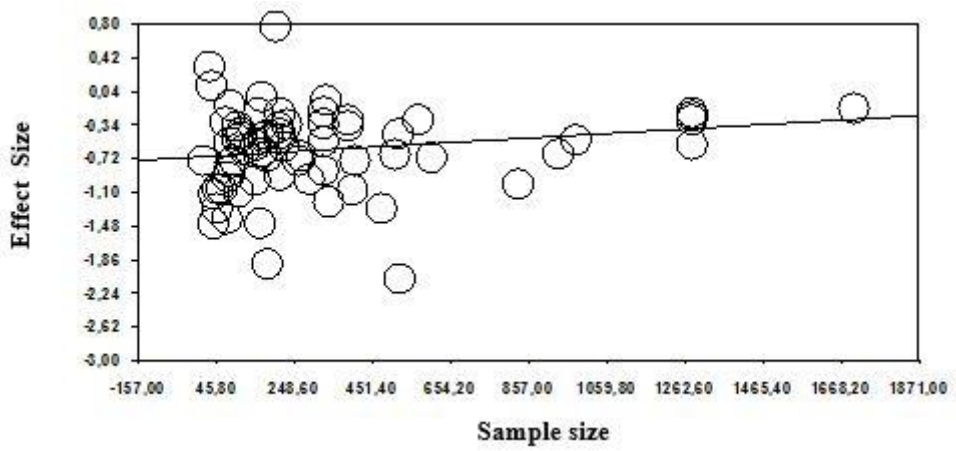

Figure 6. The correlation between sample size and effect size

It was observed that the slope of the line increased towards the positive direction with the increase in the sample size. The statistical results regarding the slope are given in Table 7.

Table 7. Statistical results for the sample size and the effect size

	Point Estimation	**Standard error**	**Lower Limit**	**Upper Limit**	**Z value**	**p-value**
Slope	0.00025	0.00003	0.00020	0.00030	9.13492	0.00000*
Intercept	-0.69905	0.02476	-0.74758	-0.65052		

According to the results, it was observed that the increase in the sample size caused an increase of .025 in the effect size and this increase was statistically significant (p<.05).

Discussion

In the last decade, many researchers examined the association between FLA and EFL performances. This particular study aimed to systematically synthesize the results of those studies through meta-analysis. The first research question was about the direction and the extent of the relationship between EFL students' FLA and their language performance. In this context, the first critical step was to identify the direction of the association between FLA and language performance. The results revealed a negative direction, which is parallel to the findings of the other studies in the literature (Horwitz, 2000; Gregersen, 2003; Batumlu & Erden, 2007; Tugan, 2015; Oruç, 2020). Al-Saraj (2014) posited that FLA negatively influences students' language learning achievement or performance, which was supported with this study. The second critical step was to identify the correlation between the FLA and language performance. According to the results, the correlation between the two structures was found to be -.61. This value was between -.52 and -.71 with 95% confidence interval. Considering Thalheimer and Cook's (2002) guidelines for interpreting effect sizes, it was considered as a medium effect. In addition, FLA explained 37% of the total variance of language performance. In order to better interpret the findings, the results were compared with the results of the other meta-analysis studies on the same subject. The effect size found in this study was higher than the ones in Horwitz's study (2000) ($r = -.50$), Teimouri, Goetze and Plonsky's study (2019) ($r = -.47$), and Zhang's study (2019) ($r = -.34$). Therefore, it is concluded that FLA significantly affects EFL learners' performances.

It is seen that the examined studies' contribution levels and weighted effect sizes to the overall effect size were different (see the forest plow). Specifically, while some studies reported a negative effect of FLA on EFL performance (Serraj & Noordin, 2013; Hamzavi & Afshar 2014; Lu & Li, 2015; Özkan, 2019), there exist other studies reported an opposite result (Demirdaş & Bozdoğan, 2013; Lian & Budin, 2014; Tridinanti, 2018; Hadinata, 2020). In regard to these conflicting results, the second research question was to examine the effect of FLA on EFL performance in terms of some moderators.

The first moderator was grade level and the results revealed its non-significant moderator effect on the association between FLA and EFL performance. In a study, Tuncer and Akmençe (2018) compared high school students with students in higher education programs and found no difference between the groups in terms of school level, which supports the findings of the current study. Can and Can (2014) argued that the issues in learning foreign language are due to the combination of many structures related to students, teachers/instructors, curriculum, administrators, and parents. The fact that the grade level was not a significant moderator between FLA and EFL performance points out similar issues at different grade levels. In the present study, it was determined that FLA has a medium level effect on students' EFL performance both in high school and higher education.

Due to the role of culture on the formation of anxiety (Yoğurtçu & Yoğurtçu, 2013), country in which studies were conducted was considered as a moderator variable in this particular study. The results revealed that country had significant moderator effect on the association between FLA and language performance. Cultural background influences individuals' feelings, experiences, and reflections. Therefore, culture is considered as a powerful variable that affects anxiety level (Hofmann & Hinton, 2014). The significant moderator effect of country on the association between FLA and EFL performance in the present study may be due to cultural differences.

Another moderator variable of the current study was the type of anxiety (speaking, listening, writing, reading, and test anxiety). The findings proved a significant moderator effect of type of anxiety on the association between FLA on EFL performance. Specifically, it was observed that listening, test, speaking, reading, and writing anxiety affected EFL learning performance respectively from the most to the least. Zhang (2019) reported a similar finding and stated that this may be related to the nature of listening. Listening is a cognitive task that involves various complex structures of linguistic, semantic, and pragmatic knowledge (Rost, 2011) that consist of a series of sequential audio inputs (Vandergrift, 2011). In addition, listening is among the skills that challenge cognitive processes the most (Goh, 2000). Due to the complex structure of listening, it may cause learners to be affected by anxiety at the highest level.

Publication year was considered as a moderator variable in this study. According to the results, publication year was a predictor of the negative association between FLA and EFL performance. On the other hand, Zhang (2019) found that publication year did not predict this negative association and concluded that the degree of the correlation was consistent over the past decades. Considering that the current study included more recent studies, it is concluded that the negative association between FLA and EFL performances has increased in recent years.

The last moderator variable in the study was the sample size. According to the results, an increase in sample size resulted in a decrease in anxiety level. Sadık and Nasırcı (2019) posited that teachers and students may have higher anxiety level in less crowded classrooms since in those classrooms, teachers' and students' every movement are followed up by the others easily. This may cause teachers and students not to act in a natural way, and as a result, to increase their anxiety levels. Therefore, parallel to the findings in other studies in the literature, the finding of this study revealed that higher sample size decreases the level of anxiety and increases EFL performance.

Limitations and Directions for Future Research

This study has some limitations. According to the inclusion criteria of this particular study, only studies written in English or Turkish were selected for analysis, which may prevent to be reached out the actual effect size. Therefore, it is suggested future meta-analysis studies include studies written in other languages as well. The second limitation of the study is that a limited number of studies were reached at middle school level. Therefore, it is critical to include grade level as a moderator variable in future studies in order to determine the effects of FLA on EFL performance. A similar limitation exists for the country variable. In addition, the types of scales used in the studies included in the present study were not examined as moderators. Scale types used in studies can be important in explaining the relationship between FLA and EFL performance. Therefore, future research may examine the scale type as a moderator. There might be studies that were not published in the databases that eligible studies were searched in this particular study. Future studies should consider accessing different databases to find out more studies in this topic. In addition to those limitations, it is also critical to examine the association between FLA and EFL performance in terms of different moderator variables. Considering the negative effect of FLA on EFL performance, future studies should focus on the reasons of anxiety and intervention programs to develop students' skills to manage anxiety in order to increase the effectiveness of language learning/teaching.

Conclusion

This meta-analysis study examined the association between FLA and EFL performance. Overall, the results revealed a medium level and negative effect between students' FLA and EFL performance. Also, FLA negatively predicted EFL performance. In addition, the association between FLA and EFL performance was investigated based on some moderators. According to the results, FLA was found to cause similar issues in terms of EFL performance in high school and higher education levels. On the other hand, the association between FLA and EFL performance significantly differs in terms of the country moderator. Also, according to the results, the listening anxiety decreased EFL performance the most. In addition, sample size was found to be a significant moderator in the analysis. It is determined that crowded classrooms may decrease students' FLA levels. As a result, the negative consequences of high FLA and low EFL performance for language learners are source of concern. Therefore, practitioners should create learning environments in which students feel comfortable and have less anxiety. It is also important to conduct extensive studies to identify pedagogical interventions that encourage students to alleviate their FLA. In addition, some measures can be taken to reduce listening anxiety in EFL learning in the classroom. Some of these measures can be applied in crowded classrooms, as demonstrated in the findings of the present study. Also, it is recommended to conduct studies patterned with qualitative research methods in order to examine the effects of culture on language learning.

Disclosure Statement

I wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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(* shows the studies included in the meta-analysis.)

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