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Research Paper

Review of the Opinions of Vocational High School Teachers, Students, and Administrators on the Interactive Whiteboard[1]

Şükrü Aykat [2], Selim Günüç [3]

Abstract

The primary aim of this study is to determine whether there was a difference in teachers' levels of interactive whiteboard usage, their self-efficacy, and opinions before and after the Use of Technology in Education Course (UTEC) in vocational high schools where FATIH project was implemented. Research participants constituted of teachers and school administrators, and students attending Telkari Vocational and Technical Anatolian High School in which interactive whiteboard installation was made within the framework of FATIH project in Midyat district of Mardin province and who attended UTEC training in the 2015-2016 academic year. In this study, a mixed research method model was used. Data were collected through scale, survey and semi-structured interview forms. Quantitative data were analyzed by mean and t-test, and qualitative data were analyzed by content analysis. In conclusion of the study, it was observed that there was no significant change in the self-efficacy of teachers using interactive whiteboard and their level of using interactive whiteboard after UTEC training. Furthermore, it was observed that teachers were unable to develop materials for the interactive whiteboard before UTEC training, and after the UTEC training, they were able to prepare materials in part. This fact has revealed that the UTEC training content was not sufficient in material development for the interactive whiteboard. The students, on the other hand, indicated that they preferred the courses used on the interactive whiteboard and asked the teachers to continue using the interactive whiteboard. Participant students indicated that interactive whiteboard failures also adversely affected the lesson. Teachers, students, and school administrators reported that use an interactive whiteboard in the course increased student success and positively affected interest and participation in the course.

Keywords: *Interactive whiteboard, self-efficacy, vocational high school, FATIH Project.*

[1] This study was conducted by the first author and produced from the master's thesis titled "Review of Opinions of Vocational High School Teachers, Students and Administrators regarding the Interactive Whiteboard before and after in-Service Training" conducted under the supervision of the second author at the Institute of Educational Sciences of Van Yüzüncü Yıl University.

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Meslek Lisesi Öğretmenlerinin, Öğrencilerinin ve Okul İdarecilerinin Etkileşimli Tahta Hakkındaki Görüşlerinin İncelenmesi

Öz

Bu çalışmanın öncelikli amacı; FATİH Projesi uygulanan mesleki liselerdeki öğretmenlerin Eğitimde Teknoloji Kullanımı Kursu (ETEKUK) eğitimi öncesi ve sonrası etkileşimli tahtayı kullanma düzeylerinde, öz yeterliliklerinde ve görüşlerinde farklılık olup olmadığını belirlemektir. Araştırmanın katılımcıları, 2015-2016 eğitim öğretim yılında Mardin ili Midyat ilçesinde FATİH Projesi çerçevesinde etkileşimli tahta kurulumu yapılmış Telkari Mesleki ve Teknik Anadolu Lisesi'nde görev yapan ETEKUK eğitimine katılan öğretmenler ve okul idarecileri ile okulda eğitim gören öğrencilerden oluşmaktadır. Bu çalışmada karma yöntem modeli kullanılmıştır. Veriler ölçek, anket ve yarı yapılandırılmış görüşme formları ile toplanmıştır. Nicel veriler ortalama ve t-testi, nitel veriler ise içerik analizi ile çözümlenmiştir. Araştırma sonunda öğretmenlerin ETEKUK eğitimi sonrasında etkileşimli tahta kullanma öz yeterliliklerinde ve etkileşimli tahta kullanma düzeylerinde anlamlı bir değişimin olmadığı görülmüştür. Ayrıca öğretmenlerin ETEKUK eğitiminden önce etkileşimli tahta için materyal geliştiremedikleri ETEKUK eğitiminden sonra ise kısmen materyal hazırlayabildikleri görülmüştür. Bu da ETEKUK eğitim içeriğinin etkileşimli tahta için materyal geliştirmede yeterli olmadığını göstermektedir. Öğrenciler ise; etkileşimli tahta kullanılan dersleri tercih ettiklerini, öğretmenlerin etkileşimli tahtayı kullanmaya devam etmelerini istediklerini belirtmişlerdir. Etkileşimli tahta arızaları dersi olumsuz yönde etkilediğini de belirtmişlerdir. Öğretmenler, öğrenciler ve okul idarecileri derste etkileşimli tahta kullanılmasıyla; öğrenci başarısının arttığını, derse ilgi ve katılımı olumlu yönde etkilediğini belirtmişlerdir.

Anahtar Sözcükler: *Etkileşimli tahta, öz yeterlilik, meslek lisesi, FATİH Projesi.*

Introduction

Recently, the use of interactive whiteboards, which is a new technology in education, has attracted the attention of educators. It can be seen that many countries invested heavily in interactive whiteboard (Holmes, 2009; Lai, 2010; Torff & Tirotta, 2010). Interactive whiteboards are tools that resemble classic boards in form but differ from conventional wood with a touchscreen and increase user interaction (Adıgüzel, Gürbulak, & Sarıçayır, 2011; Turel & Demirli, 2010). The most important features of the interactive whiteboard can be listed as being able to capture images from pictures, highlighting the importance of a text through underlining it and changing its color and providing a link to a screen or website (Beauchamp & Parkinson, 2005). The differrence between the interactive whiteboard from the use of computers and projection devices is that teachers can make any desired interventions on the whiteboard, these boards can include in disabled students to course without getting up, allow the teachers to record what is drawn on the whiteboard, and then use it or share it with their students (Kayaduman, Sarıkaya, & Seferoğlu., 2011).

In a study conducted in 2008 in the United Kingdom, which was the first country to use the interactive whiteboard, it was determined that all primary schools and 98% of secondary schools used the interactive whiteboard (Holmes, 2009; Lai, 2010; Torff & Tirotta, 2010). In Turkey, in 2012, interactive whiteboards began to be used in school with the Movement to Increase Opportunities and Improve Technology (FATIH). The FATIH Project is a project put forward jointly by the Ministry of National Education (MNE) and the Ministry of Transport in November 2010. The project aimed to install touch interactive whiteboards for all classes, tablets for students and multifunction printer devices. The FATIH project aims to help teachers and students spend more time in education, to benefit from technological developments in education and to use the Internet in education (Çiçekli, 2014). Besides, with the FATIH Project, it was planned to introduce students to IT (Information Technologies) at an early age and to increase the IT literacy of communities (Hörgüç, 2014).

The aspects missing from the computer-aided teaching projects carried out so far have been tried to be solved through elements such as providing the hardware and software infrastructure in the FATIH Project, providing and managing educational e-content, effective IT use in

curriculum, in-service training of teachers, conscious, safe, manageable and measurable IT use (Ekici & Yılmaz, 2013).

Monitoring and examining the use of interactive whiteboards or other IT tools for the application and development of similar technological tools in education is important for the development of educational activities (Bağcı, 2013). So far, many studies have been conducted on the use, benefits, and limitations of interactive whiteboards in different learning environments. The basic idea is that interactive whiteboards can provide students and teachers with opportunities to learn convenience and impact in learning environments. It is one of the known conveniences of saving teachers time in presenting the content in courses, increasing the size of feedback to be received from the content and other students, and increasing the motivation to learn (Çelik & Atak, 2012).

At the end of the literature review, it was found that studies were conducted on the use of interactive whiteboards, but there were no existing studies in which vocational high school teachers' levels of interactive whiteboard usage, their self-efficacy, and opinions before and after receiving "Use of Technology in Education Course" (UTEC) training under the FATIH Project. This study is significant in terms of contributing to the functioning of the FATIH Project, seeing the differences between teacher opinions before and after receiving the UTEC training, revealing the general problems of UTEC training through opinions of teachers from different branches, and in terms of providing experience and feedback to schools that have not yet been implemented with FATIH Project. In the study, the answer was sought to the question, "What are the differences between levels of using the interactive whiteboard, self-efficacy and opinions of teachers in vocational high schools with interactive whiteboard installation within the framework of FATIH Project before and after the UTEC training?". Besides, the opinions of the administrators and students regarding the interactive whiteboard were consulted. In line with these basic questions, the problems of the research were determined as follows:

1. Do the self-efficacy levels of vocational high school teachers for the interactive whiteboard before and after the UTEC training differ significantly?
2. Do vocation high school teachers' levels of using interactive whiteboards before and after UTEC training differ significantly?
3. What are the views of vocational high school teachers on the use of interactive whiteboards before and after UTEC education?

4. What are the views of vocational high school administrators on the use of interactive whiteboards before and after UTEC training?
5. What are the opinions of the students before and after the UTEC education of vocational high school administrators and teachers?

Method

Design

Since both quantitative and qualitative data collection techniques were used in this research, the study was patterned as mixed-method. Since the research was conducted in the same time frames, a simultaneous mixed-method was used from mixed research patterns. Johnson and Turner (2003) have indicated the basic principle of mixed research as "the researcher must collect multiple data using different strategies, methods, and approaches." Creswell (2006) gives the basic proposition of the mixed approach that "using quantitative and qualitative approaches together allows us to better understand research problems than using both approaches alone."

In the study;
• Since data collection techniques with both quantitative and qualitative methods were used to learn emotions and thoughts of teachers, administrators and students before and after UTEC,
• As the findings obtained by the quantitative method are to be supported by qualitative findings,
• As it was preferred to obtain the findings that were not revealed by the quantitative method with qualitative findings,
the mixed method was used.

Participants

Research participants constituted of teachers and school administrators, and students attending Telkari Vocational and Technical Anatolian High School in which interactive whiteboard installation was made within the framework of FATIH project in Midyat district of Mardin province and who attended UTEC training in the 2015-2016 academic year.

In the qualitative research group, teachers were selected with purposeful sampling from each gender, in equal number and according to their levels of using interactive whiteboard. In this context, a total of 10 teachers, 5 of whom were men and 5 women, also 3 school administrators were interviewed with the semi-structured interview for the qualitative research. Besides, a total of 20 students, including 5 students, were selected with stratified sampling from each class level.

Research group for quantitative research constituted a total of 32 teachers including 19 men and 13 women working in the school before the UTEC training, and a total of 30 teachers including 19 men and 11 women after the UTEC training. These teachers were applied with scale and questionnaire. The reason for the decrease in the number of teachers was that two female teachers were assigned to other schools.

There was no difference in the distribution of teachers according to their gender before and after UTEC training. It was revealed that the highest participation was among teachers of vocational courses, the least participation was among teachers of the general talent and philosophy, but there was not much change in the distribution of teachers' branches. Besides, it was observed that the professional experience of the teachers included in the research was generally between 1-6 years, and their ages varied between 26 and 30. This fact indicated that teachers were young and new in their profession.

Besides, it was observed that all teachers who participated in the study used a smartphone and owned a computer. Besides, 54 of the teachers stated that they graduated from undergraduate degrees, and 28 of them indicated that the use of technology in education in universities was moderate.

Data Collection Tools

To collect quantitative data; scales and questionnaires were applied to 32 teachers before UTEC training, and to 30 teachers after UTEC training. Scale and questionnaires were copied and distributed to everyone in the sample, requesting that the appropriate options be marked with the pen. In the information form, a personal information form was applied to determine the characteristics of teachers before and after the UTEC training. This form consisted of eleven

questions questioning gender, branch, professional experience, age, learning status, computer and Internet connection, computer and smartphone ownership, frequency of computer and tablet use, and finally whether university/teacher education the teacher received had prepared them for the use of educational technology.

Interactive Whiteboard Use Self-Proficiency Scale

In this study, the Self-efficacy Scale for Using the Interactive Whiteboard developed by Yalçınkaya (2013) was used. Those who answered the scale indicated their opinions and assessments by selecting one of the criteria such as “Completely Disagree”, “Disagree”, “Neither Disagree nor Agree”, “Agree”, and “Completely Disagree”. Likert type scale was used in the analysis of scale questions. In the Likert type measurement method, options were rated as 1, 2, 3, 4, 5-point depending on the level of importance.

Interactive Whiteboard Usage Frequency Scale

In this study, the Frequency Scale of Use of Interactive Whiteboard developed by Yalçınkaya (2013) was used. The scale was developed to determine teachers' level of using the interactive whiteboard in their lessons, how teachers used materials that were prepared related to other technological tools and subjects to which they are connected, such as the Internet and printer. The 16-item scale is in a 5-item Likert type, and the evaluation of the item in the survey was made in the form of Very Good (5), Good (4), Moderate (3), Low (2) and None (1) points.

Interview Form

In this study, semi-structured interviews were conducted with 10 teachers, 3 administrators and 20 students before and after the UTEC training to obtain data that cannot be revealed by a quantitative method. Interview questions prepared by the researchers were directed face-to-face participants by taking an appointment from teachers and administrators at the appropriate time and in the Department Head of The Information Technologies Department of Telkari Vocational and Technical Anatolian High School. Interviews were recorded using a voice recorder.

The Process of Research

In Telkari Vocational and Technical Anatolian High School, correspondence was made for the necessary permits from the school administration and the district's Directorate of National Education to apply the scale, survey and interview forms. Scale and questionnaires were applied to teachers for a week before UTEC training. Besides, interviews were conducted with teachers, students, and administrators for one month before UTEC education. One month after these studies, teachers, and administrators were given 30 hours of UTEC training in eight days by the district's national education. After teachers and administrators who received UTEC training used the interactive whiteboard for four months, the teachers were given scale and questionnaires for the second time for a week. Besides, four months after the UTEC training, interviews were made with teachers, students, and administrators for the second time for 10 days. The steps for the entire process of the research are given in Figure 1.

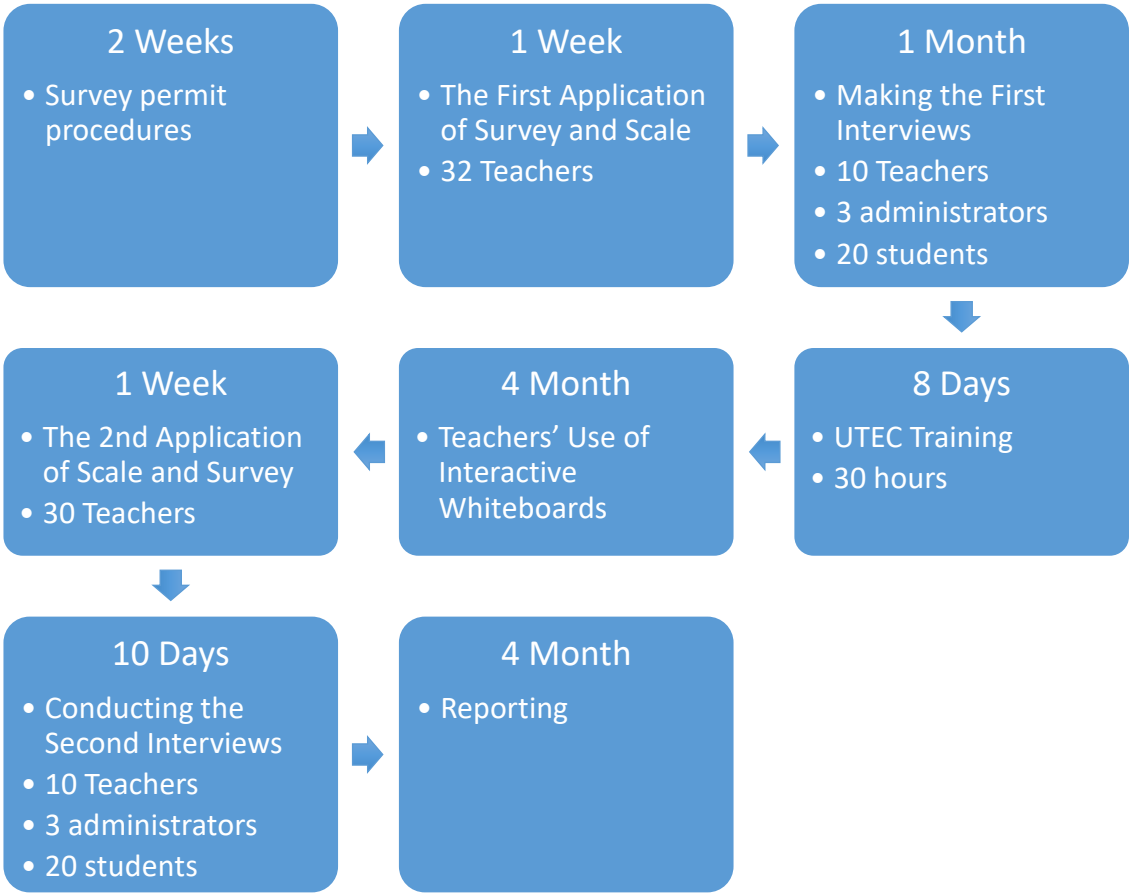

Figure 1. The Process of Research

Data Analysis

Quantitative data obtained by scales were analyzed by SPSS 17.0 statistical software. Descriptive statistics were applied in the demographic information of the teachers in the study group (gender, age, education level, duration of service, branch), in self-efficacy to use the interactive whiteboard, and levels of use of the interactive whiteboard. On observing the normality of the distribution of scales; *t-test for dependent samples*, which was one of the parametric tests, was used for dependent samples to determine whether there was a difference between teachers' levels and self-efficacy of using the interactive whiteboard before and after UTEC training. The level of significance was taken as 0.05 in the analysis of data.

In the analysis of qualitative data, semi-structured interviews were conducted with the permission taken from participants, the audio recordings were then transferred to the text and checked again by the participants, the obtained interview data was analyzed by the researcher through content analysis. Common aspects of these analyses were found, and general themes and codes were created. The responses from the analysis of interview data were placed under these general themes. The frequency of expressions placed under the themes was determined and turned into tables.

Findings

In this section, the findings on teachers' self-efficacy and levels of interactive whiteboard use and their opinions on UTEC training given within the scope of FATIH Project, and findings on opinions of students and administrators were included.

Examining Teachers' Self-efficacy in Using Interactive Whiteboard

Teachers' self-efficacy scores for using interactive whiteboards before and after UTEC training are given in Table 1.

Table 1

Teachers' Self-efficacy Scores in Using Interactive Whiteboard

Before UTEC Training					After UTEC Training				
n	Min	Max	Range	$\overline{X}$	n	Min	Max	Range	$\overline{X}$
32	2.74	4.96	2.22	3.93	30	3.35	4.96	1.61	3.98

When Table 1 is examined; it is observed that the value range before UTEC training was greater than the value range after UTEC training. This shows that UTEC education brings teachers' self-efficacy scores closer together. Besides, it can be seen that the vast majority of teachers give positive feedback to self-efficacy questions about using the interactive whiteboard. When the overall average of all the substances is examined, the average of $\overline{X}$=3.93 was obtained before the training, and the average of $\overline{X}$=3.98 was obtained after the training. According to this conclusion, it is seen that, although teachers generally have the self-efficacy to use interactive whiteboards in classes before UTEC training, there is an increase in the self-proficiency levels of teachers using interactive whiteboards after UTEC training. It is also revealed that teachers' self-efficacy levels for interactive whiteboard use are at the level of "Agree" and that teachers are confident in themselves.

However, as a result of the t-test, no significant difference was found between teachers' self-efficacy scores for using the interactive whiteboard before and after UTEC training ($t(29)= -0.137$, $p=0.892$). It can be said that UTEC education does not make any significant changes to teachers' self-efficacy status to use the interactive whiteboard. The reason for this can be attributed to the insufficient increase before and after training.

Analysis of Teachers' Levels of Using Interactive Whiteboard

Teachers' levels of using interactive whiteboards before and after UTEC training are given in Table 2. The average of each survey item is given because a survey was used to determine levels of using interactive whiteboards.

Table 2

Teachers' State of Using Interactive Whiteboard

	ITEMS	Before UTEC Training		After UTEC Training	
		n	$\overline{X}$	n	$\overline{X}$
1	Writing	32	3.13	30	3.53
2	Saving lesson notes on the whiteboard	32	3.47	30	3.83
3	Printing and distributing course notes to students after class	32	2.81	30	3.27
4	Connecting to the Internet using an interactive whiteboard	32	2.97	30	3.37
5	Using slideshows on teaching topics on the interactive whiteboard	32	3.84	30	4.20
6	Use other people's or your slideshows on the interactive whiteboard	32	3.94	30	4.27
7	Preparing and using worksheets on interactive whiteboard for lessons	32	3.50	30	3.87
8	Showing movies about topics	32	3.78	30	4.17
9	Sharing course notes with students simultaneously on the web	32	2.72	30	2.77
10	Drawing using the background feature	32	2.72	30	3.47
11	Downloading material from the Internet about topics	32	3.19	30	3.53
12	Drawing geometric shapes	32	2.78	30	3.67
13	Highlighting content highlights with spotlight	32	2.84	29	3.72
14	Printing notes written on an interactive whiteboard from the printer	32	2.84	30	3.30
15	Using relevant audio files and materials	32	3.44	30	3.90
16	Making changes to map, diagram, shape, and photos on the subject thanks to the interactive whiteboard's drawing feature	32	2.94	30	3.57
	General $\overline{X}$	-	2.78	-	3.67

Examining Table 2, it is observed that the vast majority of teachers gave positive answers to questions towards levels of using interactive whiteboards. Analyzing the general mean of all items, while $\overline{X}$=3.18 average was obtained before training, $\overline{X}$=3.65 average was obtained after the training. This finding indicates that, in this research, teachers' levels of using the interactive whiteboard increased from intermediate level ($\overline{X}$=3.18) to higher level ($\overline{X}$=3.65) thanks to UTEC training. According to this finding, it can be seen that, although teachers had a general level of using interactive whiteboard in courses before UTEC training, there was an increase in their levels of using interactive whiteboard after UTEC training.

Teachers agreed mostly on the statement of "Use other people's or your slideshows on the interactive whiteboard" in Item 6 of Table 2 before UTEC training ($\overline{X}$=3.94) and after UTEC training ($\overline{X}$=4.27).

When table 2 is further examined, teachers agreed least on the statement of “Sharing course notes with students simultaneously on the web” in Item 9 and the statement of “Drawing using the background feature” in Item 10 ($\overline{X}$=2.72). After UTEC training, again teachers least agreed on the statement of “Sharing course notes with students simultaneously on the web” in Item 9 ($\overline{X}$=2.77). The greatest change was achieved in the statement of “Drawing geometric shapes” in Item 12 with an average of $\overline{X}$=2.78 before UTEC training and $\overline{X}$ =3.67 average after UTEC training.

However, as a result of the T-test, no significant difference was found between teachers' level of interactive whiteboard use before and after UTEC training (t(29)= -1.923, p=0.064). It can be said that UTEC education did not make any significant changes to teachers’ levels of using the interactive whiteboard.

Teachers’ Opinions on the Use of Interactive Whiteboard before and after UTEC training

Content analysis findings of the data collected in the interviews to determine teachers’ opinions on the use of interactive whiteboards before UTEC training are given. The analysis findings of the data obtained from the 15-item interview form are given in Table 3.

Table 3

Teachers’ Opinions on Interactive Whiteboard before UTEC Training

Themes	Codes	f
How to receive interactive whiteboard training	An applied training	5
	Accompanied by an expert instructor	2
	Visually	1
	Technical training	1
	Face-to-face training	1
Interactive Whiteboard readiness	Owning a computer, smartphone, and tablet	7
	Using other technological tools in education	6

Table 3

Teachers' Opinions on Interactive Whiteboard before UTEC Training (Continued)

Themes	Codes	f
Interactive Whiteboard using skill	Using a computer	6
	Understanding technology	5
	Developing material	2
	Keeping up with current topics	1
Positive Effects	Understanding technology	5
	Allowing time-saving	3
	Developing material	2
	Motivating with visual materials	2
	Keeping up with current topics	1
	Addressing multiple senses	1
	Maintaining class dominance	1
Adverse effects	Time losses	2
	Technical problems	1
	Making students passive	1
	Pushing the student into laziness	1
	Discrediting the teacher	1
Interactive Whiteboard self-efficacy	Ease of use	4
	Ability to prepare material	2
Total		64

In Table 3, teachers' views on the interactive whiteboard before UTEC training were grouped under six themes. Considering the first theme, "How to receive interactive whiteboard training", it was observed that teachers wanted to receive interactive whiteboard training in the form of an applied training. This choice was followed by "accompanied by an expert instructor", "visually", "technical training" and "face-to-face training" choices respectively. Here are a few of the teacher's opinions on this subject:

> *"... I'd like to take it on a technical slope. Because I don't want to ask anyone else every time. I should be able to handle it." (P6)*

> *"I would like to receive face-to-face and hands-on one-on-one training." (P10)*

Considering the second theme, "interactive whiteboard readiness"; it can be seen that teachers use computers, smartphones, and tablets, as well as other technological tools in education.

Therefore, it can be said that teachers can use the interactive whiteboard even before receiving UTEC training. Here are a few of the teacher's opinions on this subject:

> *"I use smartphones, computers, tablet-style electronic devices." (P8)*
>
> *"I use a smartphone as a mobile phone, I use a laptop at home. I don't use a tablet because the smartphone does the tablet's job." (P9)*

Regarding the third theme, which is "the ability to use interactive whiteboards", teachers should be able to use the computer, understand technology, develop materials and follow current topics to use the interactive whiteboard. According to these findings, it can be said that teachers who can use the technology will have no trouble using the interactive whiteboard. Here are a few of the teacher's opinions on this subject:

> *"A teacher needs to know how to use a computer, and needs to be prepared in advance." (P5)*
>
> *"A teacher needs to be somewhat competent in current technology. So he needs to use a computer. He should be able to use a tablet." (P7)*

As the fourth theme of "the positive effects of interactive whiteboard"; this theme includes factors such as facilitating teaching, increasing attendance and increasing students' attention to the course. Besides, it is also seen that the interactive whiteboard has positive effects such as saving time, motivating with visual materials, addressing multiple senses and maintaining class dominance. Here are a few of the teacher's opinions on this subject:

> *"The interactive whiteboard allows students to participate more in the class..." (P3)*
>
> *"It makes it easier for the teacher. It draws students' attention to the lesson. It saves time." (P6)*
>
> *"... We think it will be much more effective for students." (P9)*
>
> *"I think it's going to be positive. Because I think the interactive whiteboard will visually attract the student's attention..." (P10)*

In the fifth theme, it can be seen that negative effects of interactive whiteboards are reported such as a waste of time in the course, discrediting the teacher, passively pacifying students and pushing students into laziness. Here are a few of the teacher's opinions on this subject:

"If the teacher is incapable of using the interactive whiteboard, it may be a waste of time." (P1)

"When used constantly, the student can turn it into laziness." (P5)

"I think there may be a glitch in the event of a malfunction. The teacher's adherence to fully interactive whiteboard can cause students to be pacified." (P8)

Considering the sixth theme, self-efficacy in interactive whiteboards, teachers reported that they can prepare materials and it is easy to use interactive whiteboards. Here are a few of the teacher's opinions on this subject:

"Yes, I think I can use it. Because I hope to use it because we use tablets and computers in everyday life." (P6)

"... I can develop materials after developing myself in the profession." (P8)

The prominent themes according to Table 3 are shown in the diagram below.

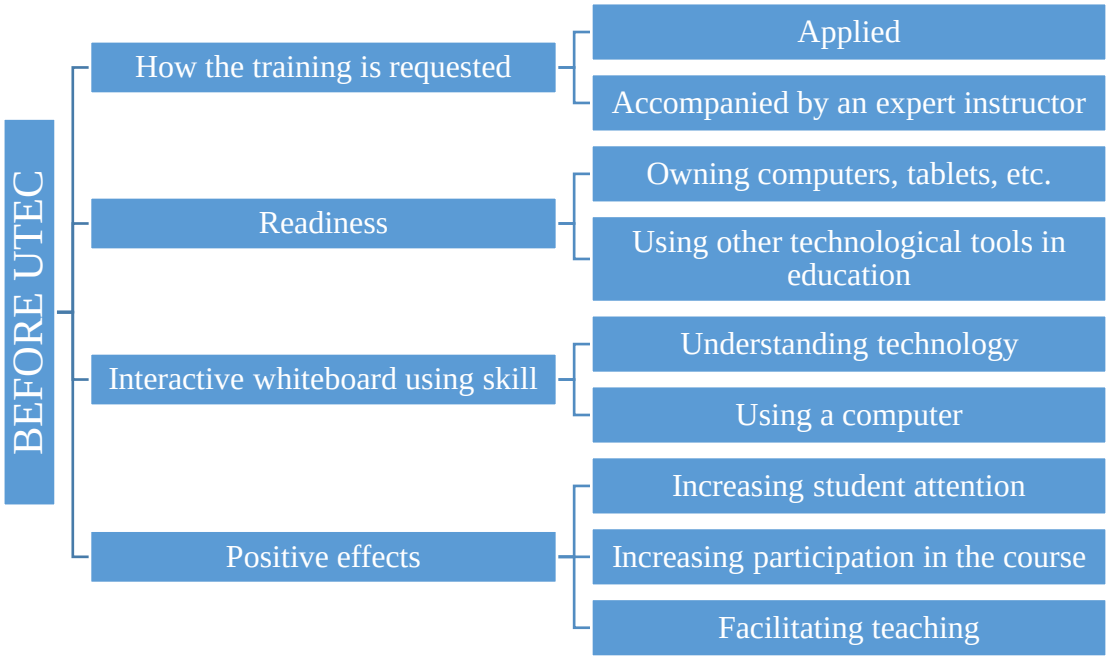

Figure 2. Teachers' Opinions on Interactive Whiteboard before UTEC Training

Content analysis findings of the data collected in the interviews to determine teachers' opinions on the use of interactive whiteboards after UTEC training are given. The analysis findings of the data obtained from the 3-item interview form are given in Table 4.

Table 4

Teachers' Opinions on Interactive Boards after UTEC Training

Themes	Codes	f
Positive Effects	Interest in the course has increased	7
	It drew attention to the lesson.	5
	It provided visualization	3
	Course participation increased	3
	Simplifies time management	2
	Effective classroom management provided	1
	Facilitated teacher's work	1
	Increased success in education	1
	Ensured the permanence of the information	1
Frequency of interactive whiteboard usage	At the beginning of the lesson	5
	Continuously	3
	At the end of the lesson	2
	Once or twice a week	1
The objective of interactive whiteboard usage	Narrative	4
	Watching a video	3
	Reinforcement	2
	For attracting attention	2
	For a summary of the course	1
	Solving questions	1
Interactive Whiteboard self-efficacy	Ease of use	10
	Ability to prepare material	7
Total		65

In Table 4, teachers' views on the interactive whiteboard after UTEC training were grouped under four themes. The first theme is based on the positive effects of the interactive whiteboard; including the increase in interest and participation in the course. Besides, it is observed that there was an increase in course participation as the whiteboard added visualization to course. Besides, the interactive whiteboard is shown to facilitate time management, provide effective classroom management, facilitate the work of the teacher, increase success in education and ensure the permanence of knowledge. Here are a few of the teacher's opinions on this subject:

"... The simplest thing is, when I let my students watch the Dardanelles documentary, I didn't think that a lot of students weren't interested. But then I did a little test on them, even two or three weeks later. They all told about two or three events to describe the event you were most impressed by the documentary. Even if they did not want to watch it, even if they talked with each other, they had it in their minds. I am sure if I were a historian and told them about the Gallipoli victory for an hour, they would not have that many events and memories left in mind. That is when I realized how effective the interactive whiteboard was." (P1)

"... I think the use of the interactive whiteboard in training is positive. It provides visuals..." (P6)

"... When it was a blackboard, there was a distraction. There was a positive development because visual things happened when there was a smartboard." (P10)

Considering the second theme, "the frequency of interactive whiteboard usage", it is observed that teachers often use the interactive whiteboard at the beginning of the lesson. This is followed by continuous use, at the end of the course and once or twice a week, respectively. Here are a few of the teacher's opinions on this subject:

"I have been using it all the time since I received the training... I mean, I use it at the beginning and the end of the course." (P3)

"When I started the lesson at the beginning, I sometimes use it to get attention..." (P6)

Considering the third theme, "objective of interactive whiteboard usage"; teachers have been found to use the interactive whiteboard to explain the subject and watch videos. These are followed by the use of the whiteboard to reinforce the subject, to draw attention, to summarize the subject of the course and to solve questions. Here are a few of the teacher's opinions on this subject:

"... I talk about the topic. I discuss it again with the videos." (P6)

"I use a summary of the course visually for children to see and to make a difference." (P7)

In the fourth theme, "the self-efficacy in interactive whiteboard", teachers reported that it was easy to use interactive whiteboard and they could prepare materials. Here are a few of the teacher's opinions on this subject:

"Yes... It is good at attracting attention and ensuring permanence." (P6)

"I can use it... With these, I influence both the visual and auditory aspects." (P8)

"When we trained for interactive whiteboard, I prepared it partly... But of course, this work has to be continuous (these seminars). (P9)

The prominent themes according to Table 4 are shown in the diagram below.

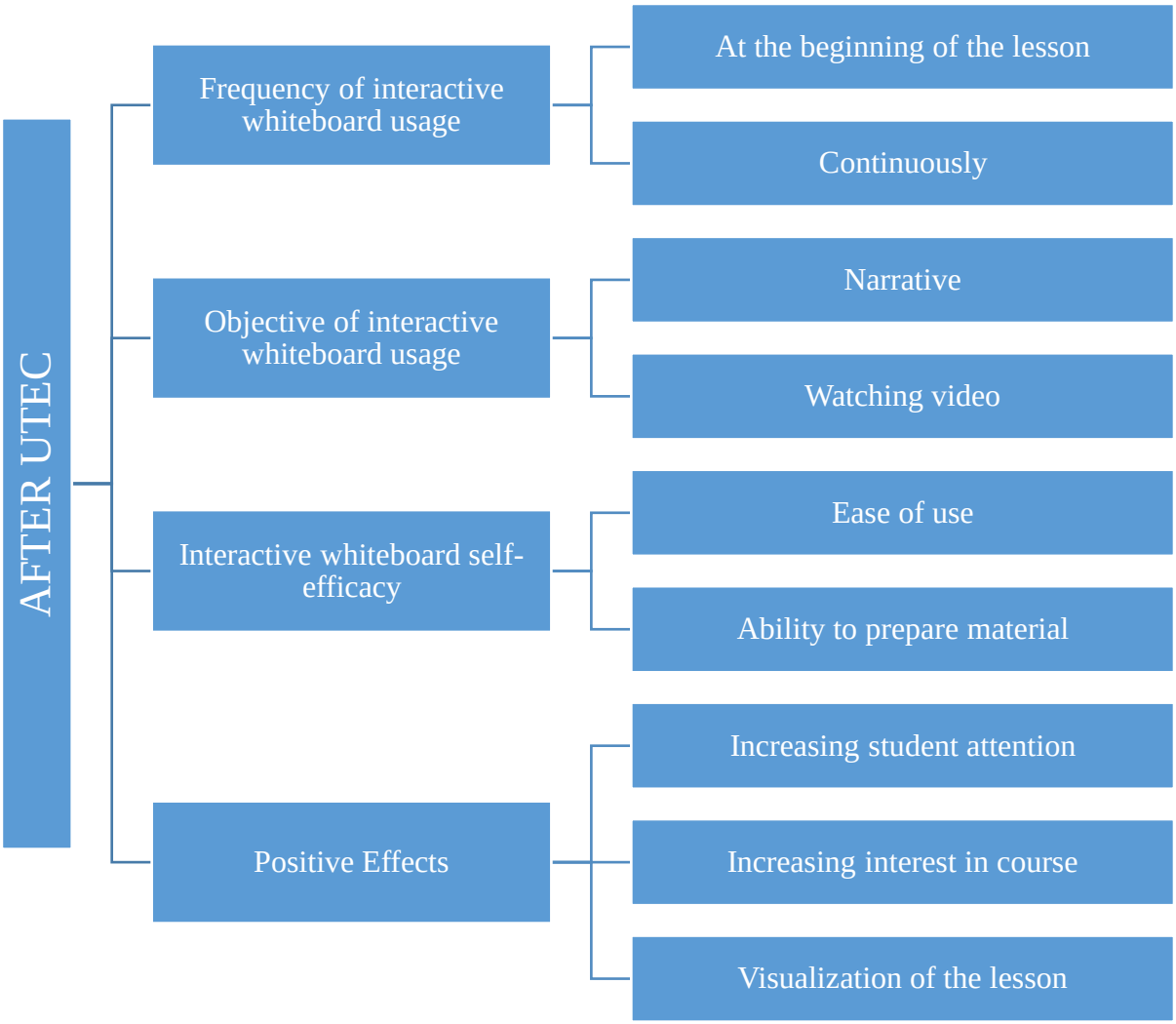

Figure 3. Teachers' Opinions on Interactive Whiteboard after UTEC Training

To determine participant teachers' opinions regarding UTEC training, the question "Did you find the interactive whiteboard training sufficient?" was asked, and the data obtained as a result of the analysis of the answers received were given in Table 5. A total of 22 opinions were taken from the 10 teachers who participated in the study.

Table 5

Teachers' Views on UTEC Training

Opinions	f
Insufficient in terms of content	7
Training time is low	6
Less number of applications	4
Sufficient in terms of content	4
The time for training is not appropriate	1
Total	22

When Table 5 is examined, it is observed that teachers found UTEC training inadequate in terms of content (31.8%) and duration (27.3%). These are followed by a small number of applications (18.2%), content sufficiency (18.2%) and inappropriate training time (4.5%). Some of the teachers' opinions regarding this question are given below:

> *"No ... It would have been better if there was an education that would allow for a longer period to have such a one-on-one practice." (P3)*
>
> *"Mostly I found it sufficient. Only, the training could focus more on exemplary applications. For sample applications, the time can be extended a little longer." (P8)*
>
> *"I did not find it enough. I wish there was more time. I wish more practices were made." (P10)*

General evaluation of teachers' opinions before and after UTEC training

Before the UTEC training, the teachers reported that they wanted to receive interactive whiteboard training in the form of hands-on training, accompanied by an expert instructor and face-to-face training. Although UTEC training was given by an expert instructor and given face-to-face, it was observed that teachers expressed generally negative opinions about education after the UTEC training. A few of these negative views indicated that UTEC education was insufficient in terms of content and duration, the number of applications was small, and the time of delivery of the training was not appropriate.

While a small number of teachers stated that they could use the interactive whiteboard before the UTEC training, it was observed that all teachers used the interactive whiteboard after the

UTEC training. Likewise, very few teachers stated that they could prepare material before the UTEC training, while it was observed that many teachers prepared material after the UTEC training. Therefore, it was determined that teachers who did not have the self-efficacy of using interactive whiteboards used the interactive whiteboard and prepared materials with UTEC training.

It was observed that the positive opinions of the teachers regarding the interactive whiteboard were realized after the UTEC training, but their negative views were not realized after the training. It was observed that teachers' negative opinions turned into positive opinions after UTEC training.

School Administrators' Opinions on Interactive Whiteboard Use before and after UTEC Training

Content analysis findings of the data collected in the interviews to determine school administrators' opinions on the use of interactive whiteboards before UTEC training are given. The analysis findings of the data obtained from the 15-item interview form are as follows.

In interviews, three school administrators reported that they used computers, smartphones and tablet PCs in their daily lives; interactive whiteboard was a technological educational tool that facilitated teachers' work and covered educational tools. One of the opinions supporting this by a school administrator is as follows:

> *"The interactive whiteboard is an important training tool. It is a material that can contribute to the lesson if it is used efficiently because it is visual." (A1)*

In the interview, two administrators stated that they did not receive interactive whiteboard training, and one administrator stated that he had received interactive whiteboard training. The administrator, who received interactive whiteboard training, stated that he had trouble using the interactive whiteboard because he did not use it. This administrator's opinion is given below:

> *"I am not comfortable with the whiteboard since I did not use it much. I have not used visual and auditory materials yet." (A2)*

Two managers who did not receive interactive whiteboard training indicated that they needed interactive whiteboard training, wanted to receive hands-on training with an expert and felt uncomfortable if they did not receive interactive whiteboard training adequately. One of the opinions of a school administrator is as follows:

> *"From what I have learned, I can use it. If training is not enough, I will feel uncomfortable." (A3)*

In the interview, administrators stated that the success of the students would increase and the whiteboard would facilitate the teacher when it was used in interactive whiteboard training. They also stated that it should not be used in every course. Here are some of the administrators' opinions:

> *"I do not think the whiteboard needs to be used in every field in every class." (A2)*

> *"I find it very useful. It will remove the book load, affect the speed of the lecture, and provide the convenience to help us in drawing issues. It will allow us to transfer some of the topics we cannot explain to the student with animations, which will make our job easier." (A3)*

Administrators reported that the teacher should know how to use the computer and understand technology to use the interactive whiteboard. They also expressed an opinion that in-service training would be sufficient to be able to use the interactive whiteboard. One of the opinions of a school administrator is as follows:

> *"I think an in-service trained person can use the whiteboard comfortably." (A3)*

In the interview, the administrators expressed the opinion that information technology devices were not guidance in the curriculum. One of the opinions of a school administrator is as follows:

> *"None. I find the training given within the scope of FATIH project sufficient." (A2)*

Administrators, after receiving training on the interactive whiteboard, indicated that the interactive whiteboard, which they would use in their lessons, was a useful tool for their branches. One of the opinions of a school administrator is as follows:

> *"I am thinking about using it. I think it will make my lesson easier whether it is drawing or animation or video." (A3)*

In the interview, the administrators indicated that using visual material on the interactive whiteboard would facilitate teaching. They also stated that when they use interactive whiteboard technology, there will be a waste of time in the course and there will be disruptions in education in case of interactive whiteboard failure. One of the opinions of a school administrator is as follows:

> *"Because of the interactive whiteboard and tablet, students may have a situation where they come to class without books. In the event of a malfunction of your interactive whiteboard and if this malfunction is fixed late, there may be a disruption in training." (A3)*

Administrators stated that the interactive whiteboard contains other technological tools, that students are ready to use the interactive whiteboard, and that the use of the interactive whiteboard will increase students' participation in the course. They also stated that, for the use of the interactive whiteboard, the district national education should provide interactive whiteboard training and that a technical staff should be present at the school.

During this meeting, the administrators stated that the EIN (Education Information Network) is a portal containing course topics and lesson videos and that they generally deem the course content sufficient but these contents were inadequate for vocational courses. They also stated that they could not develop e-content for the EIN.

Before UTEC training, school administrators generally indicated that the interactive whiteboard was a technological tool to help the teacher, that, to use the interactive whiteboard, the teacher must use a computer and understand technology, and that the interactive whiteboard was more useful since it contained other technological tools in education, and students were partially ready for interactive whiteboard technology. Also, most administrators stated that the use of interactive whiteboards in the course would increase the success of the students and

increase participation in the course. They also stated that there was no guidance on the use of information technology devices in the curriculum and that technical staff should be present at the school.

School Administrators' Opinions on Interactive Whiteboard Use after UTEC Training

Content analysis findings of the data collected in the interviews to determine school administrators' opinions on the use of interactive whiteboards after UTEC training are given. The analysis findings of the data obtained from the 3-item interview form are as follows.

During the interview, the administrators stated that they found the UTEC training sufficient in terms of content and duration. Besides, the two administrators stated that they did not use the interactive whiteboard in their classes. Administrators do not have time to prepare course material due to workload, so it may be a reason why they do not use the interactive whiteboard. Some of the administrators' opinions on this question are given below:

> *"I do not use it in my class because it is a physical education class, and I do not use it because the students are mostly out, because they are in the form of games, but sometimes the whiteboard is used." (A1)*

> *"I am trying to use it in my classes. I do not take too many classes because I am an administrator. I use it when I go to class." (A2)*

An administrator who used regularly the interactive whiteboard stated that it was easy to use an interactive whiteboard and that he could use visual and auditory materials on the interactive whiteboard, but he could not prepare the material. Also, the administrator indicated that he used the interactive whiteboard while describing and performing activities and that students were more interested in the lesson when using the interactive whiteboard. He also stated that he was able to solve some of the problems with the interactive whiteboard and that he was not afraid to lose the data by doing something wrong when using the interactive whiteboard.

Administrators stated that the interactive whiteboard provided visualization to the course and should be used in education. These views were followed by statements such as interactive whiteboard facilitates time management, it facilitates the teacher's work, it provides attention to the lesson. Besides, they also indicated that interactive whiteboards should be used in every branch. One of the administrators' opinions on this question is given below:

"For one thing, it is very useful. As I said, he is much more effective at focusing the student's attention, putting him in class. It also makes the teacher's job easier... I would recommend it." (A3)

In general, school administrators stated that, after UTEC training, students' attention to the course increased, and interactive whiteboard should be used in education because it added visualization to the courses, and that UTEC training is sufficient in terms of content with time. Also, the administrators stated that they used the interactive whiteboard in the lecture and course activities when they needed it, but they could not develop materials.

Students' Opinions on the Use of Interactive Whiteboard before and after UTEC Training

Content analysis findings of the data collected in the interviews to determine students' opinions on the use of interactive whiteboards after UTEC training provided to teachers and school administrators are given. The analysis findings of the data obtained from the 14-item interview form are given in Table 6.

Table 6

Opinions of Students on Interactive Whiteboard before UTEC Training

Themes	Codes	f
Teaching method in the course	Interactive whiteboard	16
	Classic lesson	4
Expectations from teachers	Interactive Whiteboard should be used	8
	Interactive Whiteboard use should be learned	4
	Interactive Whiteboard should be used when needed	2
	Preparation for class should be made	1
Positive Effects	Increasing success	16
	Increasing interest	15
	Making time savings	12
	Increases participation	11
Adverse effects	Reducing success	4
	Wasting time	3
	Reducing participation	1
Interactive Whiteboard self-efficacy	Easy to use	19
Total		116

In Table 6, the students' views on the interactive whiteboard were grouped under five themes before the UTEC training to be given to teachers and school administrators. When the first theme, "method of processing in the course" was taken into consideration, it was seen that the majority of students wanted the courses to be processed on the interactive whiteboard, and the few remaining students wanted that courses should be taught on the blackboard. Some of the students' opinions on this issue are given below:

"It is better to use interactive whiteboard in courses such as physics and chemistry, and the classical method in other courses." (S4)

"I prefer the interactive whiteboard because it is visual..." (S8)

In the second theme, considering students' expectations from teachers, it was observed that students wanted that teachers use interactive whiteboards, learn how to use interactive whiteboards, use them when needed, and come prepared for class. Some of the students' opinions on this issue are given below:

"Let them use the interactive whiteboard more often..." (S3)

"They need to learn interactive whiteboard programs... They need to come to class prepared." (S5)

The third theme is the positive effects of interactive whiteboard; "increasing success", "increasing interest", "saving time" and "increasing participation". Some of the students' opinions on this issue are given below:

"... The interactive whiteboard saves time." (S2)

"Because visual materials are used, it improves performance." (S1)

"... It allows for more involvement in the class." (S15)

The fourth theme contains negative effects of interactive whiteboards such as "decreasing success", "loss of time in the course", "decreased participation". Some of the students' opinions on this issue are given below:

"Teachers need to learn interactive whiteboard programs well. Otherwise, it is a waste of time. They need to come to class prepared." (S7)

"It does not affect interest and participation in the class." (S8)

Considering the self-efficiency, the fifth theme, students reported that interactive whiteboard use was easy. One of the students' opinions on this issue is given below:

"I find it easy because I use a computer and a smartphone." (S9)

Content analysis findings of the data collected in the interviews to determine students' opinions on the use of interactive whiteboards after UTEC training provided to teachers and school administrators are given. Analysis findings of data obtained in the 6-item interview form are given in Table 7.

Table 7

Students' Opinions on Interactive Whiteboard after UTEC Training

Themes	Codes	f
Teaching method in the course	Interactive whiteboard	16
	Classic lesson	4
Positive Effects	Increased participation	14
	Increased interest	3
Adverse effects	Interactive Whiteboard failures	6
	Abuse of interactive whiteboard	1
	Power cut	1
Interactive Whiteboard self-efficacy	Ease of use	13
Total		58

In Table 7, the students' views on the interactive whiteboard were grouped under four themes after the UTEC training to be given to teachers and school administrators When the first theme, "method of processing in the course" was taken into consideration, it was seen that the majority of students wanted the courses to be processed on the interactive whiteboard, and the few remaining students wanted that courses should be taught on the blackboard. One of the students' opinions on this issue is given below:

"I prefer courses with interactive whiteboards..." (S3)

In the second theme, as the positive effects of the interactive whiteboard; increased participation and interest were reported. One of the students' opinions on this issue is given below:

> *"Interactive Whiteboard has a good effect on interest and participation in the course. Sometimes, we can go up to examples, so we participate." (S12)*

The third theme shows negative effects such as the failure of interactive whiteboards, students abusing the interactive whiteboard, and power outages. Some of the students' opinions on this issue are given below:

> *"...For example, because it is dirty, when it is written on it, the lines can go on and on. There is no problem except for technical problems." (S5)*

> *"Sometimes it freezes. There are no other problems." (S13)*

Considering the self-efficacy in interactive whiteboard, the fourth theme, students reported that interactive whiteboard use was easy. One of the students' opinions on this issue is given below:

> *"It is easy, not difficult. Because it is similar to smartphones and tablets." (S3)*

General Evaluation of Students' Opinions regarding Interactive Whiteboard Use and UTEC training

There were no changes in the number of students who wanted to study with both interactive whiteboard and blackboard before and after the UTEC training given to teachers and administrators. Also, before and after the UTEC training, the students expressed a positive opinion that the interactive whiteboard increased course participation.

While students reported negative opinions before UTEC training such as decreasing success, wasting time and reducing attendance in the course, they reported negative opinions after UTEC training such as interactive whiteboard failure, students' abuse of interactive whiteboard and power cuts. It can be seen that, while the negative opinions before the UTEC training were

from academic aspects, the negative opinions after the UTEC training were from technical aspects.

Before UTEC education, almost all students stated that interactive whiteboard use would be easy, while after UTEC education, about half of the students stated that interactive whiteboard use was easy.

General Assessment of Teachers, Students and School Administrators' Views on Use of Interactive Boards and UTEC Training

Before the UTEC training, teachers, students, and school administrators reported that the use of interactive whiteboards would be easy. After the UTEC training; teachers and students used interactive whiteboards. School administrators did not use interactive whiteboards due to their workloads. Before the UTEC training, teachers and school administrators indicated that they did not develop material for interactive whiteboard. After the UTEC training; teachers reached a level that they could partially prepare the material. School administrators, on the other hand, were unable to develop materials even after the training. The content of the UTEC training needs to be improved in material development. Before UTEC training, teachers, students, and school administrators indicated that students' achievement and their participation in the course would increase with the use of interactive whiteboard in courses. After UTEC training, it was seen that these positive opinions were realized. Although teachers considered UTEC education insufficient in terms of time and content, school administrators considered the training sufficient. The reason for this contradiction is that school administrators are not objective about education and have a positive view of this training.

Conclusion, Discussion and Suggestions

Conclusion and Discussion

When the study is described in terms of demographic variables; it was determined that male teachers were included more than female teachers, and the maximum attendance was between 26-30 years old, and 1-6 years of service period teachers. Therefore, it can be concluded that the teachers participating in the study are new to their profession and young. Furthermore, after

UTEC training, it was observed that there was an increase in the number of teachers who used the interactive whiteboard in each lesson. Besides, it was determined that vocational teachers were outnumbered in the study compared to teachers in the other branches, the majority of teachers were undergraduate graduates, they used computers and smartphones, and universities prepared these teachers to use technology at a moderate level.

When the findings on the scale and survey were examined, it was observed that, after the UTEC training, the amount of increase teachers' self-efficacy and use of interactive whiteboards in classes did not increase significantly compared to their levels before UTEC training. Both before UTEC training and after UTEC training, it was observed that teachers' self-efficacy to use the interactive whiteboard was at "Agree" level in the survey, and their level of using the interactive whiteboard was moderate. Yalçınkaya (2013), in his study, found out that there was a positive and significant relationship between teachers' self-efficacy and levels for the use of interactive whiteboards. This finding supports the results achieved in our study.

When the findings of semi-structured interview questions were examined, it was found that teachers used slideshows prepared by others or themselves, they used slideshows on teaching topics, and they showed films about topics. This is because teachers used to use computers and projection devices previously. The results of this study show parallelism with the opinions stated in the studies conducted by Altınçelik (2009) and Yalçınkaya (2013). Besides, it was found in the study that the teachers achieved a high level of increase in the level of drawing geometric shapes on the interactive whiteboard with the training of UTEC. When the field literature is examined, it is seen that teachers have objectives of saving time, drawing colorful, smooth drawings with drawing tools by using the interactive whiteboard (Smith et al., 2005).

In the study, teachers have self-sufficiencies, such as the fact that the use of interactive whiteboards is easy, and that they can prepare materials. Kurt, Günüç and Ersoy (2013), in their study, called the group “a digital immigrant” who has to follow the technology for occupational, occupational reasons, etc. Since teachers are also in the digital immigrant group, they did not have any trouble using the interactive whiteboard.

With the use of interactive whiteboards in the course, students' interest, attention and participation in the course increased. In addition to these positive benefits, interactive whiteboard should be used in training because it facilitates time management. Erduran and

Tataroğlu (2009), as a result of their study, revealed that the use of interactive whiteboards in the course increases students' interest in the course and has a positive effect on the learning environment. Beeland (2002), on the other hand, found that using a smartboard to process the course is a tool to help teachers improve students' level of attention and their success. Furthermore, Baydash et al. (2011), as a result of their research, concluded similar results to this research reporting that interactive whiteboards can record the course, visual elements and written texts can be used effectively, animations can be shown, allowing students to direct their attention to the course, stating that the whiteboard reduces the workload of teachers.

UTEC training was given in a practical and face-to-face manner by the IT formative teacher and IT teacher. The reason for teachers' use of interactive whiteboards effectively although they consider UTEC training insufficient in terms of time and content is that teachers in this study were young and from the digital immigrant group and they achieved in closing the gap in UTEC training. The fact that teachers could not develop material at the end of the UTEC training shows that hardware and software components of the FATIH Project and the in-service training of teachers component were planned independently of each other despite the objective of FATİH project towards increasing teaching quality of teachers. Supporting this study in a way, Koçak (2013) reported that teachers should be given necessary training at the point of material development and discovery within the scope of the FATIH Project. In this case, the number of hours allotted for material development should be increased because the UTEC training content is not sufficient to develop material for the interactive whiteboard.

School administrators have reported before UTEC training that the interactive whiteboard was a technological tool to assist the teacher and was more useful because it contained other technological tools in education. They also stated that technical staff should be present at the school because it would be a waste of time due to technical problems on the interactive whiteboard. Albayrak (2014) indicated that schools need technically equipped staff due to the idea of a waste of time due to technical glitches and the loss of time and distraction during the opening-closing of the interactive whiteboard. This research supports the present study.

In contrast to teachers' opinions, administrators stated that UTEC education was sufficient in terms of duration and content, but they were unable to prepare material for the interactive whiteboard. This also shows that administrators were not objective while evaluating UTEC training, and they considered the training positively. Besides, the majority of expectations of

school administrators before UTEC training were not realized after UTEC training. This is because administrators are unable to use the interactive whiteboard because of their workload.

Since students are in the age of technology, they have self-efficacy such as ease of use in interactive whiteboards. Students preferred the lessons of teachers who use interactive whiteboards, so they wanted to use the interactive whiteboard in the lessons. Besides, together with using interactive whiteboards in the course; student success increased, and interest and participation in the course were positively affected. Parallel to the present work; in the study conducted by Wall et al. (2005), students indicated that it made it easier for them to learn when they used the smartboard. Teachers stated that the interactive whiteboard positively affects student attention, attention, attendance, and motivation. Bell (1998), however, stated that students are more interested in the course and motivated when the smart whiteboard is used, compared to other teaching materials.

Teachers, students, and administrators have stated that interest and participation in the course increased with the use of interactive whiteboards in the course. Kozma (1994), supporting this view, also suggested that characteristics of a certain media separated from a technological, formal or cognitive sense are its unique media features. For example, the ability of an educational game on a computer to magnify part of the screen or draw attention with color can be expressed as a media feature.

In general, within the scope of this study, it was observed that teachers had interactive whiteboard self-efficacy and usage levels. Teachers did not find UTEC training adequate and were found to be using the interactive whiteboard as a projection device. It was determined that there was not enough content in the EIN regarding vocational courses. It was determined that, although the administrators stated that they found the UTEC training sufficient, they did not use the interactive whiteboard and were unable to develop materials. This is due to their positive view of UTEC training and they were not objective on the issue. Students, on the other hand, seemed to want teachers to use interactive whiteboards in class.

Considering the limitations of the study; although many teachers, students and school administrators provided satisfactory answers to questions, some teachers, students, and school administrators gave some avoidance answers to some of the interview questions. At the same time, some teachers answered scale and survey questions by passing them out. Nevertheless,

the data obtained from scale, survey and interview forms showed parallelism with the field literature and practical observations. The working group of the research was limited to Midyat Telkari Vocational and Technical Anatolian High School teachers. Due to the small number of teachers, interactive whiteboard self-efficacy and usage levels according to the demographic variables of teachers could not be examined. More valid results can be obtained by expanding the research into more areas.

Suggestions

Recommendations for MNE, school administrators and teachers

- Periodically, teachers may be given rearranged in-service training on the use of the interactive whiteboard.
- A technical team can be created or deployed in schools regarding interactive whiteboard and network-related technical issues.
- Teachers can be trained in developing materials for the interactive whiteboard.
- It is recommended that teachers come to class prepared.
- Hands-on topics can be processed in lessons for teachers to use interactive whiteboards.
- In in-service training and seminars for teachers; it can be emphasized that the interactive whiteboard is different from the use of a computer or a projection.
- The course curriculum may be directed towards the use of interactive whiteboards.
- Physical conditions can be improved before interactive whiteboards are installed.

Recommendations for researchers:

- As a result of this study, re-studies should be done to learn the effect of interactive whiteboard training. That is because, in general, teachers, school administrators, and students seem to have positive thoughts about the use of interactive whiteboards. It should be analyzed if there is a difference in their views in the future.
- Interactive Whiteboard usage status can be further evaluated based on the demographic variables of the teachers.
- The success of the public school and private school using interactive whiteboards can be examined in the same course.
- Larger sample groups can be examined regarding the use of interactive whiteboards.

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Research Article

A Study on the Use of Suggestion Strategies among Turkish EFL Learners

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Abstract

Pragmatic competence can be regarded as one of the pillars of language competence and it involves the effective use of speech acts, which can be defined as carrying out actions through utterances. In second/foreign language contexts, using speech acts effectively grows highly significant mainly for two reasons: i) speech acts are fundamental to communication, ii) speech acts reflect the basic social norms and cultural values of the target speech community. Although speech acts such as requests, apologies and refusals have been investigated in a plethora of studies, suggestions have received relatively limited scholarly attention in the English as a second/foreign language (ESL/EFL) contexts, and in particular, in a writing medium. As such, this qualitative study aims to investigate how Turkish EFL adult learners suggest in English in a writing medium. The data were collected by using a scenario-based task which helped elicit how the participants suggested and what kind of linguistic strategies and elements they used while making suggestions. The results of the qualitative content analysis demonstrated that the most commonly used suggestion type was "conventionalized" whereas "direct strategies" remained scarce. Moreover, it was found that the participants mostly used "possibility" and "should" as suggestion strategies. Overall, the findings suggested that the participants tried to render their suggestions as less face-threatening as possible by lessening the degree of imposition placed on the hearer while being as cooperative as possible, a tendency which can be deduced from the frequent use of "we can" structure.

Keywords: *Second/foreign language learning, pragmatic competence, speech acts, suggestions, Turkish EFL learners.*

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İngilizce'yi Yabancı Dil Olarak Öğrenen Türk Öğrencilerin Öneri Sözeylem Stratejileri Kullanımı

Özet

Dil yeterliğinin temel bileşenlerinden biri olarak kabul edilen edimbilimsel yeterlik, sözeylemleri etkili kullanabilme becerisini içerir. İkinci/yabancı dil bağlamında, sözeylemlerin etkili bir biçimde kullanılması esas olarak iki nedenden ötürü önemlidir: i) sözeylemler iletişimin temel yapı taşlarından biridir, ii) sözeylemler hedef konuşma topluluğunun temel sosyal normlarını ve kültürel değerlerini yansıtmaktadır. Talep etme, özür dileme ve reddetme gibi sözeylemler pek çok çalışmada incelenmiş olsa da öneride bulunma sözeylemi ikinci/yabancı dil bağlamında ve özellikle yazma ortamında nispeten sınırlı sayıda çalışmada ele alınmıştır. Bu nitel çalışma, yetişkin Türk öğrencilerin öneri sözeylemini İngilizce'de yazılı ortamda nasıl gerçekleştirdiklerini irdelemektedir. Nitel veri, katılımcıların nasıl öneride bulunduklarını ve bu önerilerde ne tür dil stratejileri ve unsurlarını kullandıklarını anlamayı amaçlayan senaryo bazlı bir iletişimsel etkinlik kullanılarak toplanmıştır. Nitel içerik analizinin sonuçlarına göre, en sık kullanılan öneri stratejisi türü "konvensiyonelleştirilmiş" stratejiler iken, "doğrudan" stratejiler ise sınırlı sayıda kullanılmıştır. Ayrıca, katılımcıların öneri stratejisi olarak çoğunlukla olasılık ve gereklilik bildiren yapıları kullandıkları saptanmıştır. Buna ek olarak, katılımcıların mümkün olduğunca işbirlikçi bir söylemde bulundukları ve iletişim kurulan kişiye yöneltilen dayatmayı daha az tehdit edici hale getirmeye çalıştıkları katılımcıların sıklıkla kullandığı "yapabiliriz" yapısından da anlaşılmaktadır.

Anahtar Kelimeler: *İkinci/yabancı dil öğrenimi, edimbilimsel yeterlik, sözeylemler, yetişkin İngilizce öğrencileri.*

Introduction

Pragmatic competence can be regarded as one of the pillars of language competence along with the organizational competence which entails grammatical and textual knowledge (Bachman, 1990). The notion of pragmatic competence includes knowledge and skills that language learners need to operate in a particular cultural and social context and the knowledge of linguistic elements that help realize a particular speech act. Speech acts, which can be defined as doing actions by means of utterances, are the crucial components of pragmatic competence (Schmidt & Richards, 1980). Typical examples of speech acts would be claiming, requesting, promising, refusing and apologizing. Language users and learners need to be equipped with sociopragmatic and sociolinguistic competence to effectively utilize speech acts for communicative purposes (Leech, 1983). Sociopragmatic competence entails the knowledge of what speech act is appropriate in a specific situation and when to perform it, while sociolinguistic competence involves the knowledge of linguistic features to conduct a particular speech act. In other words, a language user needs to know i) what speech acts is appropriate in the context at hand, ii) what strategies are needed for conducting the speech act of interest and iii) what lexical and grammatical properties are needed for realizing the speech act.

Due to their centrality to second/foreign language competence, speech acts have been explored in a significant number of studies conducted in ESL/EFL contexts to understand how English language learners perform speech acts. There has been a growing body of literature on ESL/EFL apologies (e.g., Bergman & Kasper, 1993; Chang, 2010; Cohen & Olshtain, 1981; Dalmau & Gotor, 2007; Kondo, 1997; Mir, 1992; Trosborg, 1987; Ugla & Abidin, 2016), complaints (e.g., Bikmen & Martı, 2013; Boxer & Pickering, 1995; Clyne, Ball, & Neil, 1991; Deveci, 2010; Martínez-Flor & Usó-Juan, 2017), and requests (e.g., Chen, 2015; Li, 2000; Gürsoy, 2011; Halenko & Jones, 2011; Jalilifar, 2009; Kılıçkaya, 2010; Otçu & Zeyrek, 2008; Savic, 2015; Suh, 1999; Şanal & Ortaçtepe, 2019; Taguchi, 2006). However, despite rich literature on various speech acts, suggestions remain relatively underexplored (Jiang, 2006). This situation might be surprising considering the frequency of the act of suggesting in real life. Schmidt, Shimura, Wang, and Jeong (1995) also maintained that suggestions have attracted less attention when compared to requests, which is a cousin of suggestions and a

frequent target of scholarly scrutiny. Apart from this relatively limited scholarly attention, the face-threatening nature of suggestions and their frequent use in daily life make this speech act a legitimate target of the inquiry.

Considering the dearth of studies dealing with suggestions in general, and in Turkish context in particular, the present study aims to investigate following research questions:

1) How do Turkish EFL (English as a Foreign Language) learners make suggestions in English in a writing medium?
2) What kinds of strategic/linguistic features do Turkish EFL learners employ to make suggestions?

To the researcher's best knowledge, so far, suggestions have not been investigated in the Turkish EFL context. Hence, it is hoped that the present study would add to the growing body of literature on L2 suggestions.

Literature Review

The Nature of Suggestions

Suggestions can be grouped under the directive and expressive speech acts (Searle, 1969). Directives encompass speech acts such as suggestions, requests, and commands whose primary goal is to get the hearer to do something. However, the degree of imposition on the hearer varies across these speech acts. For instance, Haverkate (1984) made a distinction between impositive and non-impositive speech acts by stating that while the former group includes more threatening speech acts like requesting and ordering, the latter contains suggestions which are nonimpositive. The distinction between these two groups of speech acts lies in the benefit scale. In impositive speech acts, the benefit is on the side of the speaker, on the other hand, in non-impositive speech acts benefit is to the hearer. On this issue, Rintel (1979, p.99) stated that "In a suggestion, the speaker asks the hearer to take some action which the speaker believes will benefit the hearer, even one that the speaker should desire." Even though suggestions are nonimpositive and indicate a benefit to the hearer, Brown and Levinson (1987) considered suggestions as face-threatening since the speaker intrudes into the world of the hearer and this

imposition may threaten negative face of the hearer. Moreover, Brown and Levinson (1987) stated that when suggesting, several elements, including the urgency of the suggestion, the degree of embarrassment in the situation, social distance and power relationship between the speaker and the hearer should be taken into consideration. Hence, in order not to offend the hearer or lessen the degree of impositions speakers may resort to mitigations or politeness strategies.

Previous Research on Suggestions

Speech act theory involves doing actions through utterances (Schmidt & Richards, 1980). In the relevant literature, a number of studies have been conducted on exploring the structure and properties of various speech acts such as requests, complaints and apologies. On the contrary, the number of studies investigating suggestions in the ESL/EFL context remained relatively limited. Santos and Silva (2008) discussed the possible reasons for the relatively scant attention that suggestions have attracted and speculated that the difficulty of defining suggestions may be the culprit.

To date, Banerjee and Carrell (1988) conducted a study on 28 native speakers of Chinese or Malay and 12 native speakers of American English using a discourse completion questionnaire that included 60 situations to elicit suggestions in English. The authors aimed to find out if there were differences between the fashion that adult native speakers and nonnative speakers suggested. They demonstrated that native speakers suggested to some extent more frequently, nevertheless, nonnatives were more direct in their suggestions than their native counterparts. The study conducted by Martinez-Flor and Fukuya (2005) had a different focus. The study investigated the impact of explicit and implicit pragmatic instruction on suggestions made by adult Spanish learners of English. The findings demonstrated that both explicit and implicit groups improved regarding producing pragmatically suitable and linguistically accurate suggestions. Two studies that were conducted in the EFL environment took place in the Iranian context. Pishghadam and Sharafadini (2011) found out that modals, imperatives, to clause, and conditionals were the most used strategies, while let's was among the least commonly used strategies in the suggestions by Iranian learners of English. They also concluded that gender and language proficiency play a vital role in making suggestions. Ahmadi, Kargar, and Rostampour (2014), on the other hand, revealed that the most commonly used strategies by

Iranian EFL learners were imperatives, conditionals, modals, yes/no questions, to clause, let's, wh questions and performatives. The findings showed there was no difference in suggestions made across three levels of proficiency and gender. Finally, Jiang (2006) aimed to investigate the linguistic forms used to make suggestions in both real language and ESL textbooks. The results demonstrated that the order of suggestions used by the native speakers of English was let's, modals, imperatives, wh-questions, conditional, pseudo-cleft, performatives, to clause and yes/no question in decreasing order. Given the scarcity of studies focusing on EFL learners' suggestions, the present study set out to investigate Turkish native speakers' suggestions in English.

Methodology

The Context

The study took place in a higher education setting where the participants learnt and used English as a foreign language. The participants were enrolled in a compulsory general English course offered in their department. The course was centered around activities that required the students to use English for communicative purposes, such as preparing a poster for a departmental event and watching a film in English and holding discussions about the film. The task that was used to elicit the participants' suggestion strategies was given to them as a requirement of this course. Although the course focused on communicative aspects of the foreign language and activities utilized were communicative in nature, the students did not receive any explicit instruction on speech acts.

Participants

The participants of the study were 65 undergraduate students attending foreign languages department of a large-sized state university located in a metropolitan city (54 female students, 11 male students). They were aged between 21-23 and all of them were native speakers of Turkish. The participants' English proficiency corresponded to B1-B2 level on the CEFR scale. Since all the students participating in the course were included in the study, a convenience sampling method was applied.

Data Collection and Analysis

Conventionally, discourse completion tests (DCTs) have been extensively used in the relevant literature to collect speech act data. According to Kasper and Rose (2002), DCTs can be considered as questionnaires which help collect written production data. The instrument is designed in such a way that it includes a depiction of a situation which requires the use of a specific pragmatic aspect. However, despite their common use, DCTs have also been criticized for being artificial, test-like and cannot be compared to authentic communication (Sasaki, 1998). Hence, in the present study, a more authentic qualitative data collection tool, a scenario-based communicative task was generated following the guidelines proposed by Martinez-Flor (2005) was presented to the participants to overcome the limitations of DCTs. The scenario was as follows:

> "*One of your foreign friends that you have been online friends for years sends you an e-mail and asks you that he/she plans to visit Turkey soon. Respond to your friend's e-mail and make suggestions about the visit so that s/he can make arrangements beforehand.*"

The participants were asked to craft an e-mail response to their friend and make suggestions about the visit, specifically about the timing, sightseeing, and possible activities. They were familiar with the concept of writing an e-mail to a friend in both in Turkish and English. Before starting to compose their e-mails, they were asked to brainstorm about and describe places that they thought worth seeing and exploring in Turkey. Then, they wrote their e-mails during the class.

The content of the e-mails were analyzed by using the qualitative content analysis technique based on the suggestions taxonomy proposed by Martinez-Flor (2005) (See Table 1). Qualitative content analysis can be described as an umbrella term for different strategies that are utilized to scrutinize texts and determine the characteristics of the content, trends, patterns and structures by posing a systematic coding and categorization approach (Vaismoradi, Turunen, & Bondas, 2013). In the present study, suggestions were classified into three strategies that are elaborated in Table 1.

Table 1
Taxonomy of Suggestions

Suggestion type	Suggestion Strategy	
Direct strategies		
	Performative verb	"I suggest that you..."
	Noun of suggestion	"My suggestion would be…"
	Imperatives	"Try using..."
	Negative imperative	"Don't try to..."
Conventionalized forms		
	Interrogative forms	"Why don't you..?"
	Possibility	"You can…"
	Should	"You should…"
	Need	"You need to…"
	Conditional	"If I were you, I would…"
Indirect Strategies		
	Impersonal	"It might be better to…"
	Hints	"I've heard that…"
	Inclusive we	"Let's…"
	Obligation	"You must…"

While conducting the analyses, a suitable suggestion type and a strategy were assigned to each instance detected. To illustrate, initially, "How about a music show on Friday evening?" was labeled as a suggestion. Then, based on the taxonomy, it was decided that this suggestion belonged to the suggestion type, conventionalized forms. Finally, it was concluded that this suggestion was made by using by the strategy "interrogative forms". Stated differently, for each instance identified, a three-step placement was carried out. Finally, the analysis of qualitative data was quantified through. The analyses were conducted, and strategies were coded at three different times to ensure intra-rater reliability.

Findings

This section reports on the results of the content analysis. The first research question sought how Turkish EFL learners make suggestions. The results about this question are presented in Table 2.

Table 2
Suggestion Types Employed by the Participants

Suggestion type	Frequency	Percentage
Conventionalized form	132	84
Indirect strategies	21	13
Direct strategies	5	3
Total	158	100

The results revealed that the most frequently used suggestion type was "conventionalized forms". "Conventionalized forms" are not direct, yet they allow the hearer to grasp the speaker's intentions behind the suggestion. Martinez-Flor (2005) maintained that strategies categorized under "conventionalized forms" exhibit a greater variety concerning linguistic realization. Second, 13% of the suggestions made were "indirect strategies" that refer to suggestions in which the intentions of the speaker are not clearly articulated. Such suggestions do not include any conventionalized forms that signal a suggestive force in the utterance. As a result, the hearer needs to infer that a suggestion is made. Finally, the number of "direct strategies" was five, corresponding to 3% of the total suggestions. In "direct strategies", the speaker clearly states what s/he suggests. Typically, these suggestions entail the use of a performative verb.

The second research question sought what kinds of linguistic realizations were employed to make suggestions. To answer this question, in each suggestion was examined in line with the strategy types elaborated on Table 1. Each suggestion type is realized through several strategies which are directly linked to a linguistic structure. Results on this research question are demonstrated in Table 3.

Table 3
Suggestion Strategies Employed by the Participants

Strategy	Suggestion type	Frequency	Percentage	Examples
Possibility	Conventionalized form	91	58	"You can buy traditional goods around the castle of Ankara."
Should	Conventionalized form	27	17	"I think you should see Antalya."
Impersonal	Indirect strategies	12	8	"My hometown is worth seeing."
Obligations	Indirect strategies	10	6	"You must see historical places in Bursa."
Conditionals	Conventionalized form	5	3	"If I were you, I would come to Istanbul."
Interrogative forms	Conventionalized form	5	3	"Why don't you come to Istanbul?"
Performative	Direct strategies	3	2	"I suggest that you visit my cute hometown Isparta."
Imperative	Direct strategies	3	2	"Come and taste our traditional meals!"
Inclusive we	Indirect strategies	1	1	"Let's have some fun!"
Total		157	100	

The results revealed that the most commonly used strategy was "possibility" by far (91 instances). Typically, this strategy features the use of models such as "can", "could" and "may". In conventionalized forms, possibility "can" was the most dominant structure used to realize suggestions except for a few cases in which "may" was used. Below, several extracts taken from the e-mails are presented.

“We can eat the most delicious kumpir in Ortaköy.”

“You can visit Hagia Sophia, Blue Mosque and Topkapı Palace and a lot of historical buildings."

“We can go to Mount Erciyes, have a picnic, get on the aerial tramway and eat mantı."

"You can go skiing, take a walk near the lake surrounded by mountain pines which have all the tones of green."

“If you come here this summer, we can go on a picnic around Göksu and Mogan Lake."

“You can visit the Grand Bazaar in Istanbul.”

One striking feature about this strategy is that, in the majority of instances, speakers used the plural pronoun "we" instead of "you", a situation that signals a collectivist attitude. Likewise, by using possibility "can" in 53 instances out of 91 instances, the participants used utterances beginning "We can ...", reflecting a collectivist attitude. Moreover, in some cases, the speakers directly included themselves in the suggested action by using the first personal pronoun "I". Below, there are some extracts illustrating this observation.

“Maybe I can help you with choosing your destination.”

“If you come to Istanbul, I can show you around.”

“If you prefer Izmir, I can cook delicious meals for you.”

"If you decide to come to Ankara, I can help you during your visit, and we can go everywhere."

“I can take you to coffee-houses where we can taste a special coffee called mırra.”

The second most used strategy was “should”, another conventionalized form. Below, there are examples illustrating how this strategy was used by different participants.

“Gaziantep has a dessert called baklava. You should taste it!”

“You should see Çorum because you earlier said that historical places attract you.”

“If you come to Turkey, I think you should see Safranbolu, which is a very beautiful place attracting lots of tourists."

"You should see the Galata Tower."

"You should come to Trabzon and experience its attractive atmosphere."

The third most frequently used strategy was “impersonal”, an indirect suggestion type. Using impersonal suggestions has been a way to make indirect and face-saving suggestions in which the speaker offers the hearer greater space to avoid or dismiss the suggestion made. Below, a few examples of these suggestions have been presented.

“*If you want to have a rest, Uzungöl is the best place.”*

“There are many wonderful places to visit in İstanbul such as Hagia Sophia, the Grand Bazaar, Istiklal Street."

“If you don’t like visiting museums, there are several concert halls for classical music and opera."

“If you want to go shopping, there are lots of shopping centers in Trabzon.”

The fourth most frequently used strategy was obligation, which was usually expressed by using “must”. This strategy was used ten times.

“I think you must visit Eminönü and eat fish.”

“You must see Gaziantep.”

“You must come to Ankara.”

Apart from these strategies, conditionals as in “If I were you, I would spend my holiday in Balıkesir", interrogative forms as in "Why don't you join me?", performatives as in "I suggest you go to a seaside resort", imperatives as in "Come and visit me and we have a good time together" and inclusive we as in "Let's have some fun" were used by the participants in a few instances.

Discussions and Conclusions

The present study aimed to investigate how Turkish EFL learners make suggestions in English and in the writing medium by scrutinizing suggestion types and linguistic properties of the

suggestion strategies. Especially, investigating suggestions in the writing medium by using an authentic task is significant in that most research efforts in the literature have opted for structured DCTs for data collection. The first research question sought how Turkish EFL learners make suggestions. In other words, it investigated what type of suggestions (i.e., direct, conventionalized and indirect) they used. The second research question sought what kinds of strategies and linguistic elements were employed to express suggestions at the micro level. Pertaining to the first research question, the results demonstrated that the most frequently used suggestion type was “conventionalized”. The participants did not prefer using “direct” suggestions which could be regarded as face-threatening by the hearers. Although social distance and power was not a concern in the scenario at hand, the majority of the participants opted for using “conventionalized” suggestions. The number of “indirect” suggestions, in which the hearer infer the suggestion himself/herself was extremely scarce. The results also demonstrated that the participants avoided being forceful or pushy by using the “direct” suggestions. They used the “conventionalized” suggestions which exhibit greater linguistic variety (Martinez-Flor, 2005), include elements that lessen the degree of imposition on speakers, and protect the hearer’s face.

Pertaining to the second research question, the results indicated that the most commonly used suggestion strategy was “possibility”. The participants specifically included modals such as “can” and “may” to mitigate the force of their suggestions. Since suggestions can communicate an authoritative tone, the participants may have resorted to such structures to soften the impact. The order of most commonly used strategies was as follows; “possibility”, “should”, “impersonal”, “obligations”, “conditionals”, “interrogative forms”, “performative”, “imperative” and “inclusive we” (let’s). Of interest, the study conducted on Iranian EFL speakers by Pishghadam and Sharafadini (2011) revealed that modals were the most used strategy, while “let's”, in other words, “inclusive we” was among the least commonly used strategies. These findings of the present study seem to concur with the findings of Pishghadam and Sharafadini (2011) since there were resemblances between the most frequently used strategies across studies: the frequent use of modals and the absence of inclusive we, i.e., "let's". On the other hand, Ahmadi, Kargar, and Rostampour (2014) found out that the participants mostly used “imperatives”, “conditionals”, “modals”, “yes/no questions” in decreasing order to make suggestions. This finding is not in line with the findings of the present study since the most frequently used strategies differed across studies. However, this is quite understandable

since the contexts and frameworks of the studies were different. Finally, the findings of the present study partly concur with Jiang (2006) who explored suggestions made by American speakers of English. Jiang (2006) listed inclusive we, modals and imperatives as the most commonly used strategies. In the present study, possibility (can, could) and should were the most commonly used strategies while inclusive we and imperatives remained scarce. Thus, it can be deduced that there are commonalities and discrepancies between the findings of the two studies.

Overall, the findings of the present study revealed that the participants mostly used "conventionalized forms", specifically modals, to make suggestions. Suggestion strategies used by the participants were not as direct as the ones used by American or Iranian speakers of English who opted for more direct strategies. Turkish speakers of English tended to be as cooperative as possible, which can be deduced from the use of "we can" structure. They also tried to make their suggestions as less face-threatening as possible by lessening the degree of imposition placed on the hearer. Hence, it can be inferred that Turkish speakers of English in the present study generally applied negative politeness principles proposed by Brown and Levinson (1987). According to Brown and Levinson (1987), negative politeness strategies are applied to mitigate the impact of imposition made on the hearer by offering the hearer more space to avoid the suggestion. Typical strategies to achieve this goal would include being indirect, employing questions and hedging, minimizing the imposition and giving deference. In the present study, the participants seemed to avoid direct suggestion strategies to sound less pushy. However, they also did not employ indirect suggestion strategies to avoid being regarded as uninterested, uncaring or uncooperative. Therefore, conventionalized forms seemed to be a plausible option for meeting these conditions.

Suggestions made by the participants exhibited some degree of linguistic variety. Nevertheless, the extent of variety reflected in the suggestions could be enhanced. The literature on pragmatic development also indicates that pragmatic competence may not go hand in hand with overall language development, specifically with grammatical development (Bardovi-Harlig and Dörnyei, 1998). Furthermore, pragmatic failures or inefficiencies can be encountered even during the comprehension and production process of advanced foreign language learners (Blum- Kulka, House, & Kasper, 1989). To address these concerns, increasing attention has been paid to incorporating pragmatics into language teaching (e.g., Alcon Soler, 2005; Koike

& Pearson, 2005; Takimoto, 2009). Results from the relevant literature demonstrated that language learners benefit from the teaching of pragmatics. Even though the present study did not employ an experimental design in which the impact of pragmatic instruction was investigated, the findings of the study revealed that there was a need for pragmatic instruction since the participants mainly opted for a limited range of suggestion strategies. Thus, it could be implicated that foreign language learners could benefit from targeting at pragmatic competence through the use of authentic language samples which showcase how pragmatic elements are used in real communication. Specifically, activities which help language learners understand, practice and produce pragmatic elements, and activities that raise learners' pragmatic awareness could prove useful if implemented at early stages of language learning.

When conclusions are drawn from the findings of the present study, the following limitations need to be taken into account since they also point to future possible research directions. First, the qualitative data collected were based solely on a scenario-based writing task. Although this task was authentic and communicative and proved to be effective in yielding rich qualitative data, future studies could diversify the data collection tools. Moreover, future studies could investigate sociopragmatic features across the first and second/foreign language performances to understand whether there is a pragmatic transfer between the two languages. Finally, the sample of the present study was limited to a group of undergraduate students learning English in an academic EFL context. Future research may also investigate the use of suggestions in nonacademic contexts across different age and proficiency groups.

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Research Article

Teachers Opinion about Support Program in Primary Schools (SPPS)

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Abstract

The aim of this study is to examine the opinions of teachers' about the Support Program in Primary Schools (SPPS) implemented in the 2018-2019 academic years. In this study, which is based on qualitative research, the study group consisted of 18 teachers who were determined with maximum diversity technique and criterion sampling technique. The data of the study was collected by semi-structured interview form and analyzed by content analysis. As a result of the research, teachers believe that the program is helpful for students in terms of providing students with one-to-one interest and compensating the deficiencies of the students. In addition, the participating teachers found that the SPPS materials are appropriate but suggested that the levels should be diversified. On the other hand, it was seen that teachers were not informed enough about SPPS. All of the teachers who participated in the research stated that the program had positive effects on the students and emphasized that the academic achievement of the students increased and their self-confidence and motivation towards the lesson increased.

Keywords: *Support program in primary schools, SPPS, primary school, teacher opinions.*

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İlkokullarda Yetiştirme Programına (İYEP) İlişkin Öğretmen Görüşleri

Öz

Çalışmanın amacı, 2018-2019 öğretim yılında uygulamaya konan İlkokullarda Yetiştirme Programına (İYEP) ilişkin öğretmen görüşlerinin incelenmesidir. Nitel araştırmaya dayalı gerçekleştirilen bu araştırmanın çalışma grubunda amaçlı örnekleme tekniklerinden maksimum çeşitlilik tekniği ve ölçüt örnekleme tekniği ile belirlenmiş 18 öğretmen yer almaktadır. Çalışmanın verileri yarı yapılandırılmış görüşme formuyla toplanmış ve içerik analiziyle çözümlenmiştir. Araştırma sonucunda öğretmenlerin İYEP'i, öğrenciye birebir ilgi sağlaması ve öğrencilerin eksiklerini telafi etmesi yönüyle olumlu buldukları programın süresini ise yetersiz buldukları görülmüştür. Ayrıca katılımcı öğretmenler İYEP materyallerini uygun bulunmuşlar ancak seviyelerin çeşitlendirilmesi gerektiğini dile getirmişlerdir. Öte yandan öğretmenlerin İYEP hakkında yeterince bilgilendirilmedikleri görülmüştür. Araştırmaya katılan öğretmenlerinin tamamı programın öğrenciler üzerinde olumlu etkilerinin olduğunu ifade etmişler, öğrencilerin akademik başarılarının yükseldiğini, öz güvenlerinin ve derse yönelik motivasyonlarının da arttığını vurgulamışlardır.

Anahtar Sözcükler: *İlkokulda yetiştirme programı, İYEP, ilkokul, öğretmen görüşleri.*

Introduction

Education is one of the main forces that provide social and economic development. In today's information age, it is essential for developing to improve the capacity of children' getting knowledge and using it. This capacity largely depends on the ability of the people of the country to acquire the skills of using mother anguage, numerical skills, communication skills and problem solving skills (Fidan & Baykul, 1994). The basic education in which these skills are gained in solving the personal and social problems faced and faced in every citizen's life; to adapt to the values and regulations of society; productive and frugal basic competencies, is a training that gives habits (Başaran, 1982).

Basic education consists of the fundemantel of education and training in Turkey, likewise all over the world. In this context, Turkey has made significant progress in access to basic education and in the education academic year 2010/11 reached 98.4 percent enrollment in primary education in all countries. Although the gap between regions has quickly closed, the enrollment rate in some regions unfortunately continues to vary by region and gender (World Bank, 2011). Gender, socioeconomic status and school structures are the main variables of the inequality ofopportunity that emerged among students enrolled in school. Inequalities in each of these areas; qualified teachers, materials and structures of schools deepen inequalities between individuals and this has a negative impact on students' achievement (Oakes, 2004, p.345; Cited by Mete, 2009, p.2). On the other hand, studies show that the social benefit of investments in education is higher than the individual benefit. In this context, it is of utmost importance that education is provided on the basis of equality of opportunity and high quality (TÜSİAD, 2006).

Although significant progress has been observed in access to education, different studies are needed to improve quality and eliminate inequalities. For an equal and quality education in Turkey, which has always been debated some improvements need to be made. Reading, writing, reading comprehension skills and basic mathematic calculations can be considered as a positive step in raising the quality of education in order to reveal the individual learning needs of students in early classes and to plan a new system to support students. In this context, the development of the Support Program in Primary Schools (MEBb, 2018) is an important reflection of these efforts.

Support Program in Primary Schools is a program applied to the education of the students who attend the third and fourth grades of primary schools, who do not have a special education diagnosis, who are included in the curriculum of Turkish and mathematics courses due to various reasons during the previous education and training years and who do not obtain the required qualifications within the scope of this program (MEBa, 2018).

Support Program in Primary Schools (SPPS) style programs are implemented in terms of education not only in Turkey but also developed countries which has successful economies. One of these is the "No Child Left Behind" project in USA. The share of immigrant children in the school age population increased from 6% in 1970 to 19% in 2000. That is why in 2000, almost half (47%) of primary school-aged children in California were immigrant children, and the success of those children left behind in education, including the children of immigrants, came to the fore (Capps et al., 2005). Based on this, in 2002, Bush started implementing the "No Child Left Behind" project in order to improve education and ensure equal opportunities. This law increased the responsibilities of schools on the academic achievement of students. The law covers several federal education programs. Each year, sub-group students are identified through exams that measure the level of students in language, mathematics and science courses and educational support is provided to these students (https://www.newamerica.org/education-policy/topics/federal-education-legislation budget/federal-education-legislation/essa/nclb/).

Again during the Obama administration, another project aimed at closing the gap between education and equal opportunities in education and success between the state and schools was created (https://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf). The ESSA law, signed by the Obama government on 10 December 2015, has similar aspects to "No Child Left Behind". Some suggestions have been made in ESSA, especially for the development of "No Child Left Behind" (https://www.understood.org/en/school-learning/your-childs-rights/basics-about-childs rights/thedifference-between-the-every-student-succeeds-act-and-no-child-left-behind). ESSAhttps://www.ed.gov/essa?src=ft).

Monica Olveire worked with the United Nations and UNICEF, focusing on the education of refugee children, assessing comparatively the education provided to refugee children in Europe within the framework of No Child Left Behind. In a study examining the education provided by Germany, France and the UK, Olveire stated that Germany offers the most powerful training

program for immigrants, that France offers less individualized education and accepts less refugees. Monica Olveire also noted that the UK "No Child Left Behind" is strong in more liberal urban areas, such as London, but that the program is less effective in less metropolitan schools (https://tfurj.wordpress.com/2017/12/06/no-child-left-behind-a-comparative-study-of-child refugee-education-policies-in-europe/).

Schlicht, Steffen & Freitag (2010) gave the rates of social inequality in education of Western EU countries and Eastern EU countries and stated that there are significant differences between EU countries in terms of social inequality in education. Emphasized that the elimination of educational inequalities in general is not a realistic commitment, and stated that in the implementation of a policy, if measures are not sufficiently comprehensive or the policy does not target low social classes, the policy will not ensure equality in education at the intended level.

In Alcala, Spain, the No Child Left Behind project, similar to SPPS, was implemented and immigrant students were admitted to the school because the majority of the students (more than 50%) were Moroccan students. As stated in the project, two difficulties were encountered in practice; the first was communication with the parents, and the second was the education of students with special educational needs. Like the Turkish part of SPPS program, English language education was given to foreign students and psychosocial support and integration studies were conducted as in SPPS (Campanar, 2016).

UNICEF, "No Child Left Behind" project aims to ensure that all children have the right to education free of charge, equal and with high quality. In twenty-one countries in Europe and Central Asia where UNICEF programs are implemented, studies are being conducted for children who are left behind in education (https://www.unicef.org/eca/our-mandate-no-child-left-behind). SPPS applied in Turkey is also supported by UNICEF financially.

In 20 of the 28 European Union countries, children are at greater risk of social exclusion and poverty than adults. In this context, "No Child Behind" project aims to ensure equal opportunities and opportunities not only in education but also in health. For example France; In November 2016, the Ministry of Health and the Ministry of National Education signed a contract for the prevention of disease and the protection of health. School environment; aims to fight against social inequalities and create health supporting environments. In Germany, the

scope of the No Child Behind project has been broadened and the inequalities of children from pregnancy to working life have been tried to be eliminated (http://www.euro.who.int/en/media-centre/sections/pressreleases/2016/12/europe-commits-to-leaving-no-child-behind).

Sardelic (2017) conducted a research on Roma children in the "No Child Behind Project" implemented in the European Union and as a result of this study, racist behaviors towards Roma children were mentioned. In contrast to SPPS; psychosocial support guide aims to support refugee students' adaptation to school and academic achievement.

In many OECD countries, income inequality has increased in recent years. Some researchers see poverty as worrying, while others are concerned about income inequality. In this sense, education policies are important. Policies that promote equality of opportunity in education also help reduce income inequality (OECD, 2012). As can be seen, programs similar to SPPS are being implemented in many countries for different reasons, especially migrants. However, these programs should be evaluated from time to time to develop. In this context, the aim of this study is to evaluate the SPPSs applied in our country by primary school teachers who are practitioners.

Method

Research Design

Qualitative research approach was adopted in this study which aims to evaluate SPPS according to the opinions of primary school teachers. Because during and after the collection of qualitative research, the researcher constantly tries to understand the data from the subjective perspectives of the participants. The most important task of qualitative research is to get the opinions of people who know the inside of the events (Christensen et al., 2015, p.54). During the qualitative evaluation process, the researcher aims to gain deep and detailed information about the success or failure of a project or program (Kuş, 2003, p.88).

Participants

The study group in this research consists of primary school teachers who have applied or are implementing SPPS in 2018-2019 academic years. When selecting primary school teachers in

the study group purposeful sampling techniques; criterion sampling technique with maximum diversity was used. Purposeful sampling allows in-depth study of situations thought to be rich in information (Patton, 1997). The maximum diversity sampling is the determination of homogeneous different situations related to the problem examined in universe and the study is conducted on these situations (Büyüköztürk et. al. 2008, p.93). In this context, when selecting teachers; from Turkey's different regions and provinces attention has been paid to the fact that there are teachers who have different seniority years and provide education in different socioeconomic schools. The basic understanding of criteria sampling is to study all situations that meet a predetermined set of criteria. The criterion or criteria mentioned herein may be created by the researcher or a list of criteria previously prepared may be used (Yıldırım & Şimşek, 2006). The first criterion in the study was that the participants applied SPPS. The second criterion was the willingness/volunteer of teachers. Information about the teachers participating in the research is given in Table 1.

When Table 1 is examined, it can be seen that there are 18 primary school teachers (15 female and 3 male) in the study group. When the seniority years of the participants are examined, there are 8 teachers in the first five years, 6 teachers in 6-25 years and 4 teachers in 26-50 years. Looking at the grade level taught by the teachers, the combined classroom teacher is two, second grade teacher is four, third grade teacher is five and fourth grade teacher is seven. In the SPPS groups of the teachers participating in the research; there are three students of one teacher, four students of three teachers, five students of five teachers, six students of one teacher, eight students of five teachers, thirteen students of two teachers and twenty students of one teacher. In addition, Table 1 shows the modules in which teachers participating in the study started SPPS.

Table 1.

Information about Teachers Participating in the Research and SPPS

Teachers	Gender	Year of Seniority	Graduated Department	Grade Level	Number of Students in SPPS	Lesson and Module
T1	Famele	4	Primary School Teacher	3	6	Turkish 2, Math 1
T2	Male	10	Primary School Teacher	2	13	Math 2
T3	Famele	3	Primary School Teacher	4	5	Turkish 1, Math 1
T4	Famele	3	Primary School Teacher	1, 2, 3, 4	4	Turkish 3, Math 1-2
T5	Famele	1	Primary School Teacher	4	8	Turkish 3, Math 1
T6	Famele	3	Primary School Teacher	3	8	Math 3
T7	Famele	2	Primary School Teacher	2	20	Math 1
T8	Famele	4	Primary School Teacher	3, 4	5	Turkish 2, Math 1
T9	Famele	40	Primary School Teacher	3	5	Turkish 1, Math 3
T10	Famele	25	Primary School Teacher	3	5	Turkish 2, 3, Math3
T11	Famele	30	Primary School Teacher	4	5	Turkish 2, Math 1
T12	Male	21	Primary School Teacher	4	8	Turkish 1, Math 1
T13	Famele	31	Primary School Teacher	4	3	Math 2
T14	Famele	3	Primary School Teacher	2	8	Math 1
T15	Famele	22	Department of Chemistry	3	4	Turkish 1, Math 1
T16	Male	16	Primary School Teacher	2	8	Turkish 1, Math 1
T17	Famele	29	Primary School Teacher	4	4	Turkish 1, Math 1
T18	Famele	22	Environmental Sciences	4	13 (7 + 6)	Turkish 3, Math 1

Data Collection Tools

In the study, semi-structured interview form was prepared by the researchers in order to determine the opinions of the primary school teachers related to SPPS. While preparing the interview form, the literature was searched and the interview form was drafted considering the elements of the SPSS program and the course process. In the first stage, the draft of the semi-structured interview form consisting of twenty-five questions was presented to two field experts and two primary school teachers. Following the suggestions and criticisms, the questions were reduced to fourteen and questions about the program were collected under five general titles. The interview form was presented to two field experts and two primary school teachers, and then a trial interview was conducted with two class teachers and the interview form was completed.

Research Process

The semi-structured interview form provides first-hand access to opinions about the program and teacher experiences. Therefore, semi-structured interview form was used in the study. In semi-structured interviews, some parts of the interview are structured, some parts are not structured, and the questions allow the individual to react freely (Erkuş, 2005). Interviews target the determination of experiences of participants and how these experiences are shaped. In this study, semi-structured interviews with individual participants targeted their perspectives about the experiences and outcomes they gained during the process.

The interview questions were first conveyed to the participant and they were allowed to follow the flow of the interview if they wish. Nine participants were interview by appointment and face-to-face interviews. An online video call was made with the other nine participants. The interviews lasted a minimum of twenty and a maximum of thirty-five minutes. Data were collected between 20 March - 31 March 2019.

Data Analysis

In this research one of the qualitative data analysis techniques, content analysis technique was used. Content analysis is defined as a systematic renewable technique in which some words of a text are summarized in smaller content categories by coding based on certain rules (Büyüköztürk et al., 2008, p.259). Interviews with teachers for data analysis were written and organized. Afterwards, the responses of the participants were examined and the answers were divided into themes and codes. In this process categories and themes revealed by coding of data were used to interpret data. The coding process for data was separately completed by two researchers, then combined and consistency between coders was ensured.

Validity and Reliability

A quantitative study has to convince the reader that all procedures are strictly performed. Because there is little information about what any one and others are doing in this process. On the other hand, the qualitative study provides detailed descriptions that can convince the reader that the result is reasonable and logical (Sharan, 2009, p.200). In this context, in qualitative research, as in quantitative research, the reliability and validity determined with definite lines

cannot be mentioned. Therefore, the researchers acted as impartially as possible while collecting the data, transcribed verbal statements in the interviews and analyzed these data in a systematic manner.

For the reliability study, the reliability formula (Reliability=Consensus/Consensus+ Disagreement) developed by Miles and Huberman (1994) was used for the reliability of the analysis of qualitative data. According to the reliability formula of Miles and Huberman, two different field experts encode and analyze the data according to pre-determined themes. Sub-themes are created as a result of these encodings. Thus, the sub-themes that are agreed between experts and where there is a difference of opinion are determined and the reliability ratio can be determined by the reliability formula between the opinions of the two experts (Yanpar Yelken, 2009). As a result of the calculation, the reliability of the study was calculated as 92%. Over 70% of reliability calculations are considered reliable for research (Miles & Huberman, 1994). The result obtained in this context was considered reliable for the research.

Findings

In the analysis, the highest frequency expressions were themed in order to reflect the general opinion of the teachers, and these themes were detailed in the required parts with the codes. The themes and codes were supported by direct excerpts from teacher views. At any stage of the research, personal information of teachers was not provided and codes representing the participant were used. The research findings were grouped into five categories. The findings were presented under the themes.

Findings about Teachers

In this theme, teachers' opinions about whether they were informed enough about the program they are implementing and what they experienced while entering information into the e-School System were included. In this context teachers' opinions about knowing the program and their experiences regarding the e-School system are presented in Table 2 and in Table 3.

Table 2.

Teachers' Opinions about Knowing the Program

Category	Example Teacher Thoughts
I have been informed (N=6)	My best source of information about the program was my director and assistant manager. I was informed about the stages of the process…(T.6)
I haven't been informed enough (N=8)	I cannot say that I was sufficiently informed because no one had clear knowledge because it was applied for the first time…(T.7) I was informed by the seminar given by the National Education but it was not enough. (T.8)
I haven't been informed (N=4)	I researched it myself. I took advantage of the Education Information Network. (T.18) I wasn't informed about the program. Information was inadequate. I think it was November 12, SPPS started.... Preliminary information was insufficient, but since we have been teaching for years, we acted with our experience... (T.17) On the day of the exam, we learned SPPS. The exam wasconducted... "Is anyone volunteering?" was asked. So we informed…(T.11)

When Table 2 is examined; it was seen that the teachers' responses to informing about SPPS fall into three categories. Teachers' responses were that they were not sufficiently informed about SPPS. Participants who stated that they were not informed and those who stated that they did not provide sufficient information generally referred to the administration and the guidelines provided by Ministry of Education as the first source of information. While some participants also needed research themselves, some participants stated that years of experience were enough to cover the lack of information about the program.

Table 3.

Teachers' Opinions about e-School System

Category	Example Teacher Thoughts
I didn't have difficulties or trouble (N=13)	I don't have difficulty in entering information and reports to e-School. The system is very practical. (T.14) …I have no problems with the e-School system; I am satisfied with the system. (T.1)
System not opened (N=5)	We kept a notebook and a lesson plan. System not turned on. (Ö.11) We kept a report with our guidance counselor. (T.13)

The e-School software is a web-based management information system, which provides accurate and fast information to educational administrators (school principals, provincial and district directorates and Ministry of Education) at all levels, which was implemented under the

MEBBIS Project. In 2007, Ministry of Education launched e-School software. All primary education institutions affiliated to Ministry of Education have been using e-School since 2007 and secondary education institutions since 2008 (Bağlıbel et al., 2010, 2). The e-School system, which was put into use in 2007, is known to all by participants. Participants stated that they did not have any problems with the e-School system established for SPPS, and only five participants expressed problems related to the non-opening of SPPS's e-School system. The participants found the e-School prepared for SPPS in general practical and easy.

Findings about Program

Teachers' views on the program are grouped in four categories. The first is how they evaluate the program in general, the advantages and disadvantages of the program (Table 4), second, the level of effectiveness of SPPS (Table 5), third, evaluation of modules (Table 6) and finally, the Student Selection Tool (SST) and the Student Assessment Tool (SAT) (Table 7).

Table 4.

Teachers' Opinions about Curriculum

Category	Codes	Example Teacher Thoughts
I find it useful (N=15)	Benefit and advantages (N=6)	The program was very efficient for the students. Both parents and students were very satisfied. (T.16) I think it is very useful especially for those who teach in combined classes like us. (T.8) … He was very productive in intelligent refugee children. It also worked well for children without family support. (T.17)
	Benefit and disadvantages (N=9)	It is a bit tiring to do the weekend but it is beneficial for the students. (T.12)
I dont find it useful (N=3)		The program does not serve its purpose, the books are simple and low level. (T.9) I think it's an unnecessary practice in general. Because in my region (Eastern Anatolia Region) students who joined SPPS fell behind their peers because of problems such as absenteeism. They do not come to SPPS too. (T.3)

Fifteen respondents found the program useful, while three did not find it useful. Six out of fifteen participants who found the program useful were of the opinion that the program was advantageous. About the advantage; general statements were made that the program is beneficial for students who might be better off with some support. Nine participants mentioned

the program as well as some disadvantages of the program.As a disadvantage, it was stated that the duration was not sufficient and the content was not sufficient. The three participants who did not find it useful suggested that different reasons such as the problem of attendance, the simplicity of the book contents and the lack of time.

Table 5.
Teachers' Opinions on the Effectiveness Level of SPPS

Category	Codes	Example Teacher Thoughts
Effective (N=18)	Level unreachable (N=1)	SPPS is an effective program for students, but progress has not reached the intended level. (T.1)
	Insufficient time (N=2)	Difficult to achieve desired target but effective. (T.2) The number hours of lesson is not enough. (T.18)
	Absence problem (N=3)	A good practice for students who are able to continue, but nothing can be done for a student who does not attend and comes to class without a book. (T.7).
	Enough (N=12)	…It was especially useful for refugee students. It was also very useful for students who could not get support from home ... (T.10) I think it's effective because these students are unsuccessful students in the class and discouraged children. One-to-one interest in them enabled them to succeed… (T.11)

When Table 5 is examined, it is seen that all participants stated that SPPS is effective. However, twelve participants found the program effective and sufficient, while the other six participants mentioned some of the drawbacks of the program. Teachers stated that the program is effective but that if the students continue, there will be progress. Both teachers stated that the program was effective, but the periods were not sufficient. One teacher said that while the program was effective, there was some improvement but the desired level was not reached. Most of the teachers who evaluated the program as effective and sufficient stated that the program was effective because it provided one-to-one interest. In addition, some of the teachers were found to emphasize that SPPS improves students' self-confidence.

Table 6.
Teachers' Opinions about Turkish and Mathematics Modules

Category	Codes	Example Teacher Thoughts
Math (N=4+1)	Inadequate time (N=3)	It had target and a time mismatch in the math module. Because the time given in Module 3 was insufficient but the gain was many… (T.6)
	Easy (N=1)	Very easy. The book is beautifully prepared. (T.2)
	Suitability (N=1)	…The mathematics module is better planned than the Turkish module and the time allocated to the gains is sufficient... (T.8)
Turkish (N=3+1)	Inadequate time (N=1)	The third module devotes little time to reading comprehension activities. (T.8)
	Easy (N=2)	Modules were good but Modules 2 and 3 were like repetition of each other. The third module should focus more on comprehension activity. (T.11)
	Problem with book supply (N=1)	Turkish activity books did not reach the school. (T.18)
General (N=10)	Inadequate time (N=1)	Time is inadequate for children who have difficulty understanding. There is no time for repeat... (T.13)
	Easy (N=4)	Activities were easy in activity books. Levels of activities were below student level. (T.9)
	Suitability (N=5)	Modules are suitable for student level. (T.15) The gains of the modules are given in accordance with the student level. (T.1)

Looking at Table 6, the evaluation of the modules is divided into three categories. There are only four people evaluating the mathematics module. There are only three people evaluating the Turkish module. One of the participants also evaluated both Turkish and mathematics modules. This participant is +1 Ten participants evaluated the modules in general. Module headings combined into three categories are divided into codes with general expressions used by participants. About the mathematics module, three participants discussed the module duration. Stated that the given time was insufficient. One participant thinks that the math module is simple and another participant thinks that the math module is appropriate. Only one of the participants evaluating the Turkish module mentioned the module duration and found the duration insufficient. The two participants found the Turkish module simple and similar. Another participant stated that Turkish resources could not reach the school. Four of the

participants who made a general evaluation of the modules found the modules simple and five found them appropriate. One participant stated that the periods were insufficient.

Tablo 7.
Teachers' Opinions about Student Selection Tool and Student Assessment Tools (SST - SAT)

Category	Example Teacher Thoughts
I didn't have difficulty (N=9)	I had no difficulty... (T.8) The questions in Student Selection Tool and Student Assessment Tool are understandable. There were no problems implementing. (T.6)
I had difficulty (N=6)	…Not well understood. It was misunderstood SST. It could not distinguish students much. (T.9) It was difficult to apply in crowded classes… (T.18)
I didn't implemented (N=3)	I haven't implemented it yet because of the class level I've taught. (T.14) ...Their primary school teachers evaluated. (T.15)

When Table 7 is examined, it is seen that teachers give opinions about three categories for SST and SAT. It is seen that the majority of the participants did not have any difficulty in applying the tools. Stating that they have difficulty, teachers emphasized the difficulty of practicing in crowded classrooms. Three teachers stated that they did not implement the tools.

Findings Related to Materials and Contents

Teachers' views on the SPPS materials and their contents were grouped in three categories. Accordingly, teachers' opinions about the materials are given in Table 8. The opinions of the Turkish and mathematics courses on the achievements are given in (Table 9). Their views on the duration of the modules (Table 10).

Table 8.

Teacher' Opinions about Materials Prepared for SPPS

Category	Codes	Example Teacher Thoughts
Effective and adequate (N=9)		Prepared textbooks were very nice. (T.16) The number of events is quite sufficient. They meets the targets… (T.12)
Inadequate (N=4)	Only Turkish module 3 (N=2)	I found the number of texts insufficient in module 3 of Turkish... (T.8) … Good for first stage but resources insufficient for post-literacy... (T.17)
	Books inadequate in general (N=2)	I found the book inadequate. There should be more practice and activity. (T.13)
Easy (N=2)	Sources were simple. We made use of additional resources. (T.11)	
Problem with book supply, but those who reached were good (N=3)	Resource is sufficient for module 1. Module 2-3 resources did not reach the school. (T.18)	
	SPPS resources reached with a delay of one to two weeks and we could not reach the teacher's guide book. Activities in the book are understandable… (T.6)	

Considering the information given in Table 8, teachers' opinions about the sources prepared for SPPS are gathered around four categories. "Insufficient" category is divided into two sub-categories. Nine participants found the materials sufficient and four participants stated that the materials were insufficient in Table 8. Two of the four participants stated that the materials were insufficient, especially for the Turkish course and the other two gave general opinions. Two participants made a general assessment that resources were simple. Three participants stated that although they had difficulties in accessing resources, they were satisfied with the resources they received.

Table 9.

Teachers' Opinions about Turkish and Mathematics Course Objectives

Category	Example Teacher Thoughts
Adequate (N=13)	Targets are appropriate. (T.14) Objectives are suitable for students at this level. (T.12)
Easy (N=2)	Below the level. (T.9) It was simple. (T.10)
Should be expanded (N=2)	Targets should be expanded. (T.4) Targets should be increased... (T.13)
By student group (N=1)	Efficient for refugee students but it was simple for Turkish students. (T.11)

Considering the information in Table 9, the targets were found to be appropriate by the majority of teachers who were appropriate, adequate and appropriate to the level. Two teachers think that the gains should be expanded and both teachers think that the gains are simple. One teacher made evaluations according to student groups found, the gains appropriate for foreign students and found simple for Turkish students.

Table 10.

Teachers' Opinions on the Projected Times for Each Module

Category	Codes	Example Teacher Thoughts
Evaluating Time in General (N=13)	Time are sufficient (N=10)	I think time is enough… (T.4) The duration of the modules is sufficient. (T.5)
	Time are Insufficient (N=4)	Time are insufficient. Because these students learning late and forget quick… (T.13) Modules must start at the beginning of the academic ye and last until the end of the academic year... (T.17)
Specifically Evaluating Modules Duration (N=3)	I found the time distribution of mathematics modules very balanced, but I think the time difference between Module2 and Module3 should be reduced. (T.8) Module 2 and Module 3 do not have enough time in mathematics. The time allocated to the third module of the Turkish is insufficient… (T.1)	

As can be seen in Table 10, thirteen teachers evaluated the time in general.Three teachers made a special assessment. One participant did not evaluate the times. Ten participants considered that the periods were sufficient. Four participants felt that the durations were insufficient. Three participants evaluated in the context of the time the modules and have made suggestions in this regard.

Findings about the Student

Teachers' views on students are divided into three categories. The first one is how students participating in SPPS are affected by the program. The second is the status of students who are included in the program because of they do not have be diagnosed. Finally, in the context of the psychosocial support guide, teachers take measures to ensure that students don't get separated from their peers.

Table 11.
Teachers' Opinions on the Effects of SPPS on Students

Category	Example Teacher Thoughts
Self-confidence (N=3)	There was a significant increase in students' participation in lesson and their confidence. Parents are also satisfied. (T.1) Taking lessons separately from their friends affected them negatively. They exhibited behaviors such as shame and shyness. But when they saw they could do right, these behaviors were replaced by self-confidence and desire. (T.8)
Positive (N=5)	Absolutely positive for both students and parents. (T.2) I observed positive changes. Parents also think positive. (T.13)
Success (N=7)	Some students progressed. (T.7) …As the levels are equal in this class, cooperation and communication between children improved in a better way. (T.5)
Happy (N=3)	…Children were happy because the teacher took care of the children one to one. The parents were not interested... (T.10) The parents of my students were not interested at all. But the students were very happy… (T.11)

Table 11 shows that all the participants said the program had positive effects on the students. Accordingly, it was seen that three participants increased the students' "self-confidence", five participants focused on the word "positive" seven participants emphasized the increase of students' "academic achievement" and three participants emphasized the students' "emotional state".

Table 12.
Teachers' Opinions about Students Who are not Diagnosed with Special Education but are Included in SPPS

Category	Example Teacher Thoughts
No problem (N=12)	I think that the students' deficiencies are eliminated. (T.12) Not categorizing children shows children that they can do better. (T.18)
Problem (N=5)	It was exhausting for students who did not have special education diagnosi. I don't think the result will be achieve. (T.3) Causes different problems. I have a student that she has not been diagnosed who forget and with a perception problem. …My student is not progressing. ...It was a bit difficult. (T.17)
Parent did not send (N=1)	The family did not send the child because of the concern of his child being stigmatized… (T.9)

The number of teachers who do not see any harm in the participation of students who have special education needs and who are not diagnosed is twelve. In fact, some of these twelve teachers stated that this was beneficial for the students. Five teachers stated that the situation was a problem. The teachers who stated that there was a problem generally stated that these students did not make progress.

Table 13.
Teachers' Opinions of Weathering Feeling from Peers

Category	Example Teacher Thoughts
Positive progress (N=2)	…Students who did not communicate in the classroom started to communicate better when they attended the course. (T.1)
Other students envied them (N=2)	…Sometimes I take other students on a course. (Ö.3)
They didn't feel (N=5)	...I did not make the students feel that they were taking the course because their level was low for the course. That's why they don't know they came to the course. They don't have the feeling of leaving their peers… (T.5)
One-on-one interest (N=4)	They don't feel segregation because it's one-on-one interest. They were very pleased from one-on-one attention. They felt discredited before but when they joined SPPS they felt themselves at the center of the incident… (T.11)
They are happy (N=2)	They do not feel segregation, they are happy. (T.10)
Applied outside lessons hours (N=2)	They did not feel bad because SPPS was applied outside lessons hours. Have positive effects. (T.9)
Troubled (N=1)	We are having trouble because the class level is mixed. (T.14)

As seen in Table 13, the majority of students did not have the feeling of separation. Two participants stated that there was a positive improvement in their communication in contrast to the feeling of separation of students. Two participants mentioned that SPPS was envied by other students. Five participants mentioned prevented students from feeling bad. Two participants emphasized that SPPS course is out of school hours. Only one participant stated that they had problems.

Findings about Cooperation and Assistance

Teachers' views on cooperation are divided into two categories. The first is the views on parents and the second is the views on cooperation with school counselors.

Table 14.
Teacher Opinions Regarding SPPS Parents

Category	Example Teacher Thoughts
I can't get support from parents (N=8)	Parents are not interested. Children would be successful if parents were concerned about their children. (T.4) …I cannot communicate very well because parents are not very interested in students. (T.7)
I'm collaborating (N=6)	I cooperate with the parents. I'm telling them what their children will learn. That's why the parents are happy. (T.9) We are in constant communication with parents about the situation of children. (T.18)
Parents satisfied (N=4)	Parents send students with great enthusiasm. Parents are very satisfied. (T.12)

Table 14 shows that teachers evaluate parents in three categories. Accordingly, eight teachers stated that they did not receive any support from the parents. Most of these eight teachers; complained that the parents were not concerned with their children.Six teachers stated that they kept the parents informed and the parents were helpful. All four teachers expressed their satisfaction with the program.

Table 15.
Teachers' Opinions about the Contribution of School Counselors to the Program

Category	Example Teacher Thoughts
We are cooperating (N=9)	I cooperate with the school counselor. For example there were students who lost some members of their families in SPPS class. …I've been careful. I also received help for students to continue. (T.6) I communicate with the school counselor for programming, progress and etc. status. We solve the problems we face together … (T.17)
No contribution (N=3)	The guidance teacher never helped. (T.9)
Not in our school (N=5)	There is no guidance unit in our school. (T.4)
Not responsible (N=1)	Counselor is not responsible for this program (SPPS). (T.18)

Looking at Table 16, nine of the participants received help from the school counselor and communicated with the counselor. Three participants stated that the guidance teacher had no help. In addition, there was no guidance service in the school of five participants and one of the participants thought that the guidance teacher was not responsible for the program.

Discussion and Conclusion

In this study, which aims to determine the opinions of teachers about the Support Program in Primary Schools which was put into practice in 2018, some results were reached in the light of the findings. The results obtained are presented in a related manner within the framework of the themes and categories created.

In the first theme, which includes pre-program information, participants think that they are not informed enough about the program they are implementing before the program. The study of Gönen & Kocakaya (2006), which determines that the courses organized by the Ministry of National Education is not sufficient in terms of number and quality, also supports this opinion of teachers. In addition, in the study conducted by Gözütok et al. (2005) regarding the curriculum, the finding that the two-week in-service training given to teachers was not sufficient overlaps with the results obtained in this study. It may be a problem that teachers do not receive adequate in-service training after the program is established. Önen et al. (2010) stated that in-service training eliminates teachers' lack of information and increases teacher competence. This can be interpreted that improving the quality of in-service training for SPPS will have a positive effect on SPPS teachers.

Participants who stated that they did not have difficulty in entering information into the e-School system prepared for SPPS welcomed the system positively. In this respect, the satisfaction of the participants with the e-School coincides with the work of Bayraktar (2017). By the participants; In the theme in which the program is evaluated in general, it is seen that there is an increase in students' academic success and course motivation as the program provides special attention to the student. This result is consistent with the lack of interest towards the student, which is one of the reasons for student failure in Altun's (2009) study. The structure of SPPS; Altun (2009) is very important as it compensates for the lack of interest and motivation which are the first two reasons of student failure. Teachers have also developed a general opinion that SPPS is useful.

The situation that stands out in the theme of the effectiveness of the program is that the program has an effect on the participants and there are different levels of positive progress for students. As stated by the participants, the fact that the number of students in the SPPS is low and that

the program provides one-to-one interest to the students are among the strengths of the program. The result of the fact that the small number of students provided positive returns for both the student and the teacher coincides with the research results of Öğülmüş & Özdemir (1995) and Yaman (2006).

In the theme of the modules, participant views are focused on two points. Accordingly, some participants found the modules simple. Some participants found the intended objectives consistent with the content aspect. Although the participants found the modules simple, the fact that a large number of students needed and remained in the program, indicating that the quality of the students was low and the simplicity of the resources were prepared considering the student level.

SPPS program is prepared according to the selected gains from the existing program. Therefore, it is considered appropriate to associate Turkish and mathematics curricula with the studies when evaluating SPPS.

The evaluation of the Turkish module as simple and inadequate includes the same result as the study of Epçaçan & Erzen (2008), It is in contradiction with the study in which Şahin (2007) evaluated the Turkish program. For SPPS prepared from Turkish curriculum it can be said that the result will change when the sample changes done. As a matter of fact, the results obtained by Şahin (2007) are in line with the opinions of the participants who evaluate the modules as appropriate and convenient. Gömleksiz, Sinan & Demir (2010), it is concluded that the Turkish Curriculum is generally effective in applications related to the field of writing learning. This result coincides with the opinions that the modules are effective and appropriate.

Teachers' common opinion about SST and SAT is that measurement tools are not difficult. According to Çakan's (2004) research results, teachers find themselves insufficient about measurement tools. In this respect, Çakan's (2004) research contradicts the result of this research. Akata (2007) and Arda (2009) stated that teachers found alternative assessment methods mixed. However, the teachers in the SPPS did not have such concerns. In the studies conducted by Çelikkaya (2010) and Kabapınar & Ataman (2010), the most important problem faced by teachers in using measurement tools is the crowded classes. A similar problem was encountered when applying SST in SPPS. However, this problem was not encountered since the SATs were applied only to students who received modules. Therefore, when applying SSTs,

it is necessary to make sure that students understand the measurement tools correctly in crowd class.

When the sources were evaluated, teachers generally liked the sources. The critical part of the sources has been reading comprehension activities. These activities should be developed. At the same time resources are seen as simple. Since the education system in our country is prepared according to the level of middle level students, this education is very easy for some and difficult for some children (Yakut, 1997). When the themes were examined, this was also the case for SPPS.

SPPS is not an alternative to existing curricula or formal education system (MEBb, 2018). In this context, it is considered appropriate to support the research results with the existing researches about the gains. Most of the teachers found the gains appropriate and sufficient for the program. This is similar to the results of Bal (2008) on mathematics curriculum gains.
In the theme in which the duration of the program was examined, the majority of the participants found that the duration of the modules was sufficient. However, there are also participants who find their times inadequate. Aydın (2009) emphasized the time problem of the participants in the study in which teachers' opinions about the new primary education program were taken. In the study of Ünsal (2013), the participants mentioned the lack of time. These results show that participants have different expectations regarding duration.

All participants stated that the program had a positive effect on students. It has been said that students' academic achievement increased. It was also said that the students' motivation towards the lesson increased. Demir & Budak (2016) stated that there is a significant relationship between motivation and mathematics achievement. This study also supports the relationship between motivation and success in SPPS.

Most teachers think positively about the participation of students who do not have a special education diagnosis in SPPS. Teachers said that these students can also progress. Rakap & Kaczmarekda (2010) stated that teachers who had fewer students in their class considered the inclusion education as positive (Cited by Nayır, 2013). This research has reached the same conclusion with SPPS. All but one of the teachers stated that the students did not feel the separation.

Positive parent-teacher relationship is also very important for the success of the student (Hill & Taylor, 2004, Cited by Koç, 2018). Teachers who cooperate with parents stated that parents are very satisfied with the program. Turanlı (2009) concluded that most of the parents and students do not believe that homework helps students understand the subject. However, SPPS provides students with one-to-one learning with the teacher at the school and is appreciated by the parents.

Çelenk (2003) concluded that children from families who have a supportive attitude in terms of education have higher achievements. Shaw (2008) and Sheldon (2003) concluded that family participation positively affected students' academic achievement. When the parent profile in SPPS is examined, it is seen that the parents are indifferent towards the student. This is in line with the results of Çelenk, Shaw and Sheldon's work.

Most of the teachers who have school guidance teachers in their school receive support from the guidance service. According to the study conducted by Bakioğlu & Gayık Asyalı (2005), teachers who see the positive developments and changes resulting from the guidance activities and benefit from these changes are more willing to cooperate with the guidance teachers. This supports the findings in the SPPS.

Recommendations

- Program duration can be extended/The course hours of the modules can be increased.
- The quality of in-service training provided to teachers for the program can be improved.
- Effective measures can be taken to ensure students' attendance.
- Resources can be prepared in two different levels as “Simple and Difficult”.
- The content of the resources can be expanded in terms of scope and number of activities.
- Research can be designed using different data collection techniques.

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Research Article

Reflective Peer Feedback in the Practicum: Qualitative and Quantitative Practices

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Abstract

Professional development for teacher-trainees is commonly viewed as the relationship between a university supervisor, a school mentor and the trainee. The feedback provided by more experienced practitioners is thought to enhance professional development process. On the other hand, peer-feedback can also be used as a means to facilitate teaching practices of pre-service teachers. By receiving and providing feedback, the teacher candidates can also gain a better understanding of their own learning processes. By following a triangulation mixed methods design, this study aims to investigate the peer-feedback practices of 100 pre-service English teachers. The study also examines the relationship between reflective practice and peer-feedback. For the data collection tool, an online rubric scale consisting of forty questions has been used. Data analysis procedure entailed descriptive statistics and coding of the qualitative data. The items in the rubric scale were categorized and the results obtained from quantitative data were compared with findings acquired through qualitative data. The results of the study revealed that the pre-service teachers tend to give high scores (m=4.37) for their peers; although, they provided some criticisms in their comments. The study also showed that, the most problematic areas for the participants were pronunciation of the target language, asking questions, error correction, linking previous lesson and the present one, and using audible voice. The results gained from qualitative analysis indicate that the participants also had difficulties with classroom management, nervousness and cooperation. The findings of the study suggest some fruitful implications to reinforce peer-feedback practices in pre-service teacher education.

Keywords: *Reflective practice, pre-service English teachers, peer-feedback, professional development.*

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Öğretmenlik Uygulamasında Yansıtıcı Akran Dönütü: Nitel ve Nicel Uygulamalar

Öz

Öğretmen adaylarının mesleki gelişimi denince akla yaygın olarak üniversiteler ve okullardaki danışmanlar ile öğretmen adayları arasındaki ilişki gelmektedir. Daha deneyimli meslektaşlar tarafından verilen geribildirimin, mesleki gelişimi desteklediği düşünülmektedir. Diğer bir yandan, akran-geribildirimi de hizmet öncesi öğretmen yetiştirmede bir araç olarak kullanılabilir. Geribildirim alarak ve vererek, öğretmen adayları, kendi öğrenme süreçleri hakkında daha iyi çıkarımlarda bulunabilirler. Zenginleştirilmiş karma yöntemden faydalanarak, bu araştırma, 100 hizmet öncesi İngilizce öğretmeninin akran-geribildirimi uygulamalarını incelemeyi amaçlamaktadır. Çalışma, ayrıca, akran-geribildirimi ve yansıtıcı uygulama arasındaki ilişkiyi de incelemeyi hedeflemektedir. Veri toplama aracı olarak, kırk sorudan oluşan çevrimiçi bir anketten yararlanılmıştır. Veri çözümleme süreci betimleyici istatistik ve nitel verilen kodlanmasından oluşmaktadır. Anketteki maddeler önce kategorilere ayrılmıştır. Nicel veriden elde edilen bulgular, nitel veriden alınan sonuçlarla karşılaştırılmıştır. Çalışmanın bulguları hizmet öncesi öğretmenlerin, akranlarına yüksek puanlar verme eğiliminde olduklarını göstermiştir (m=4.37). Bununla birlikte, nitel olarak sağladıkları veride, gözlemledikleri akranlarına bir takım eleştirilerde de bulunmuşlardır. Bulgular aynı zamanda katılımcıların, hedef dilde telaffuz, sınıfta soru sorma, hata düzeltme, bir önceki dersle ilişki kurma ve anlaşılabilir bir ses tonu kullanma gibi noktalarda sorun yaşadıklarını göstermektedir. Nitel veriden elde edilen bulgularda ise, sınıf yönetimi, tedirginlik ve işbirliği açısından öğretmen adaylarının sorun yaşadığı gözlemlenmiştir. Çalışma, hizmet öncesi öğretmen eğitiminde akran-geribildiriminin kullanılmasına ilişkin bir takım olumlu çıkarımlarda bulunmaktadır.

Anahtar kelimeler: *Yansıtıcı uygulamalar, hizmet öncesi İngilizce öğretmenleri, akran-geribildirimi, mesleki gelişim.*

Introduction

The practicum has a pivotal role in teachers' professional development as an induction to their teaching career. In spite of several benefits of the practicum experience on the pre-service teachers (Richards & Lockhart, 2007), the nature of this process; being evaluated and criticized on their performance in the real life context where they teach and encounter new situations for the first time, can cause several burdens on the pre-service teachers. The feedback that many pre-service teachers receive after teaching practice from the university supervisors and/or mentors is revealed as the main source of negative experience and attitudes of many pre-service teachers (Forbes, 2004). In many countries, the practicum adapts a kind of transmission model in which pre-service teachers receive feedback from university supervisors and experienced mentor teachers on their lesson plans, teaching performance and other components of teaching in post-observation sessions (Nguyen, 2007). Although these post-observation sessions are valuable for pre-service teachers' development (Hyland & Lo, 2006), the dominant figure of supervisor and the mission of evaluating could limit pre-service teachers as they mostly agree on the feedback without reasoning or reflecting on their performance. Nguyen (2017) defined such model of practicum as 'a process of transferring knowledge and experience from experienced teachers to pre-service teachers' rather than a process of reflective learning by pre-service teachers themselves (p. 12).

The literature points out that peer mentoring has been commonly used as a technique for teacher development since it enhances collaboration, reflective teaching, and critical thinking (Nguyen and Ngo, 2017). In other words, teacher training is viewed as a "transformation" process rather than as a "transmission" process (p. 189.) The same study underlines that this process helps co-construction of knowledge and practice among peers. Through negotiating, inquiry, and conversation, the feedback provided can enhance reflective practice for the professional development of teachers. In other words, it can be inferred that the feedback provided by the peer pre-service teachers may be as beneficial and helpful as feedback given by supervisors and mentor teachers.

On the surface, peer feedback may strike as paradoxical since feedback in teaching practice is commonly linked with the relationship between teacher candidates and the university

supervisors or mentors at schools. On the other hand, recent studies in the literature refer to teacher training and mentoring to be much more collaborative or collegial relationship rather than the supervisor or mentor feedback (Cornu, 2005). It is believed that peer feedback improves teaching practices, since the use of these feedback routines provides an environment in which the professional communities can offer help and challenge one another to learn new practices, and to change old assumptions, beliefs and practices. Furthermore, for teacher candidates, daily conversations with colleagues or peers along with the classroom experience can be helpful to build links between beliefs and principles (Richards et. al., 2001). Moreover, the peer feedback, collegial cooperation, supports pre-service teachers to develop a sense of support and fellowship while providing them with a chance to express their professional feelings and thoughts as well as receive vocational help. Similarly, peer feedback reduces the chance of isolation and burnout in professional sense since it helps build communication and trust among colleagues (Forbes, 2004). For this reason, peer mentoring is referred to as a reciprocal supportive process in which both pre-service teachers play the role of mentor to each other, providing psychosocial and career-enhancing support (Nguyen, 2017).

The premise of effective feedback either by peers or supervisors or mentors is the way it is provided. The means and method of feedback determines how well the pre-service teachers internalize it and thus how they reflect and develop their teaching practice accordingly. For feedback sessions, there are two common pedagogical practices; the use of analytic rubrics for grading according to the certain indicators and collaborative practices such as collaborative small group discussions with peers and supervisors. The advantages and disadvantages of these common practices have been studied so far from different perspectives in various contexts (e.g. Nguyen & Ngo, 2017; Yüksel, 2011). However, there is a paucity of the study on the potential use of combination of these two practices: peer feedback through analytic evaluation (Lindahl, Christison & Tomas, 2019) and reflective feedback. Addressing to this gap, the present study aims to investigate the potential use of peer feedback on analytic rubric supported with reflective feedback within the context of ELT pre-service teachers' education. Through this study, it is attempted to reveal that combining these two practices could help structure the peer feedback and it could provide a practical theoretical base to include the peer into the evaluation process supporting reflection.

Literature Review

The literature focused on several aspects of peer feedback such as the benefits of feedback from observers and observed teachers point of views, while some others placed more importance on learning by watching a colleague. Forbes (2004), for instance, studied the effectiveness of a reflective peer feedback model to observe the professional growth of teachers. The results of the study showed that peer feedback serves as a solid support mechanism whereby the teachers can boost their risk taking skills and enhance their professional development process. Along the same lines, Cornu (2005) denoted on the contrary of authority and dominant role of supervisors in traditional feedback type, the peer feedback has an advantage of providing a collaborative relationship based on partnership where neither of the participants holds a position of power over others. By studying the effect of analytic rubric use in peer feedback, Lindahl, Christison and Tomas (2019) revealed that after the use of rubrics, pre-service teachers' abilities to identify quality indicators for L2 lesson planning and delivery were positively influenced. Lindahl et al. (2019) underlined the fact that the knowledge of indicators does not translate into actual implementation of the indicators; however, the first step before implementation is "seeing" and "recognizing" (p. 75). Therefore, it was argued by the same study that the teacher trainers should provide opportunities for trainee teachers to realize, analyze and reflect the indicators of best teaching practices for professional development. These opportunities, of course, include mentor and peer feedback practices. In the same vein, Brown (2001) underlined the benefits of utilizing self and peer assessment that self and peer assessment provides fast evaluation, direct involvement, enhances autonomy and motivation. As noted by several other studies, direct involvement of pre-service teachers in the evaluation process prepares them for the professional environment where they are expected to make judgements about their own teaching practices (Boud & Falchikov, 2006).

Ratminingsih, Artini, and Padmadewi, (2017) observed that by the help of peer assessment, the participants can learn to give constructive feedback to evaluate themselves and make comparisons between each other's practices. Furthermore, peer feedback can help learners to create a collaborative learning environment where they can practice their assessment and critical thinking skills. Additionally, the peer collaboration can inspire them to learn from one another to develop themselves academically, emotionally and cognitively (Cheng & Warren,

2005; Kollar & Fischer, 2010; Vickerman, 2009;). Based on these; it can be argued that peer feedback is a fruitful technique for evaluation (Ratminingsih et al. 2019). The advantages of utilizing peer feedback are not limited to the aforementioned points alone. Spiller (2012) identified several benefits of using peer feedback in evaluation process: (1) it can promote collaboration among learners to understand the nature of good work, (2) the learners can realize the gaps in their practices and develop a more advanced sense of their own learning process, (3) by giving feedback to their peers, the learners can develop their own analytical thinking skills, (4) receiving feedback from their peers can help them to analyze their practices from a different point of view, (5) peer feedback can diminish the power imbalance between practitioners and learners and it can help the learners to take the responsibility of their own learning process, (6) peer feedback can help create and maintain community of practice, since they become the active participants of the learning process through negotiating the structure of their own learning community (Wenger, 1999).

Additionally, White (2009) concluded that the use of peer assessment showed a significant result in learning process. The study examined peer assessment practice through a questionnaire administered to 55 learners taking Public Speaking in EFL in Japan. The results revealed that the participants had positive beliefs about peer evaluation and this resulted in the enhancement of student learning. Similarly, by carrying out an experimental study, Sun (2015) concluded that peer assessment can have a positive effect on learners' achievement. What's more, peer feedback can provide opportunities for interaction between learners and hence can increase the chances of giving and receiving objective evaluation; their critical thinking skills, and autonomy (Azarnoosh, 2013).

The potential of peer feedback in practicum has been recently realized in Turkish context. Although the effects of peer feedback and peer mentoring have been studied in relation with micro teaching at methodology courses (Koç & Ilya, 2016), there are limited studies which investigated the peer feedback in teaching practices in actual classrooms during practicum course at 4th year. Out of these limited studies, Göker (2006) examined the effects of peer mentoring on pre-service teachers' self-efficacy beliefs and development of instructional skills. The results indicated that self-efficacy was increased at the end of the term as peer coaching allowed more focus and reflection on action, promoting autonomy and more freedom for the

pre-service teacher. Yüksel (2011) compared two feedback modes; teacher-mediated and peer feedback to investigate the change in the pre-service teachers' language teaching during their teaching practice. The results showed that peer feedback had a potential to change the teachers' beliefs through critical reflection skills that were fostered as a result of collaboration within the peer group. In spite of promising results of peer feedback on the pre-service teachers' perceptions and performances, there is paucity of the studies and implementations about the peer teaching and mentoring during practicum course. In this study, it is aimed to address to this gap and to examine the peer feedback in comprehensive manner integrating different peer feedback practices.

Methodology

Research Design

This study follows a triangulation mixed methods design (Creswell, 2005). This design makes use of both quantitative and qualitative data. It is suggested by Creswell (2005) that the aim of triangulation mixed methods design "is to simultaneously collect both quantitative and qualitative data, merge the data, and use the results to understand a research problem" (p. 514). In this study, the data collection tool included scale items and open ended questions. Through open ended comments, the study aimed to elicit students' responses that would enhance their reflective practices. It is argued that eliciting learners' responses through qualitative tools helps them to think and share their opinions as opposed to only providing scale scores (Creswell, 2005). In this design, both types of data are viewed equally important and they are analyzed to see the similarities and differences between the results of the two types of data (Creswell, 2005).

Following the premise of the triangulation mixed method design, the present study combined both quantitative and qualitative data for each different feedback practice. Through quantitative analysis, the participants' peer assessment on rubric scale was determined while the analysis of participants' written reflective feedback provided the qualitative data of the study. The combination of both quantitative and qualitative analysis revealed the comprehensive view on the potential use of peer feedback in the practicum.

Research Questions

The aim of this study is to examine the potential use of combining two different peer feedback practices; peer assessment on analytic rubric and reflective peer feedback. To reveal how these two different approaches could be used; two research questions were addressed:

1. How do the pre-service teachers assess their peers' teaching performance in the practicum?
2. What kind of reflective feedback do they give to their peers in the practicum?

Participants and Research Process

Criterion sampling among the purposive sampling strategies was applied; including the participants that meet the predetermined criterion according to the research topic and represent the population of the research (Yıldırım & Şimşek, 2011). The predetermined criterion for this study is to pass the school experience course and to attend to the teaching practicum course. As a result, 100 senior students in the department of English Language Teaching were included in the study.

The participants had two semesters of teaching practice course (school experience at the 7th term and practicum at the 8th term). This study took place at the 8th semester (last term) of the undergraduate program to which the participants were attending. The pre-service teachers had completed the methodological component and the school experience course of the program before starting the practicum process. During their practicum, the pre-service English teachers were required to submit weekly reports, lesson plans and reflection papers. The length of the practicum was 14 weeks and the participants had to attend the English classes offered at public schools for 6 hours a week. Each participant taught one class hour a week during this process. The participants were asked to observe each other throughout the practicum. Upon completing the practicum, the teacher candidates were invited to fill out the scoring scale as a rubric to evaluate their peers from several aspects and wrote reflective feedback about their friends' performances.

Data Collection Instruments

This study utilized a rubric scale as a data collection tool with forty 5-point-scale questions accompanied with forty open ended questions. The scale was developed by one of the researchers. In the development of the scale, the 4th year students attending to practicum, different from the participants of the present study, were asked to write down according to what criteria they want to be evaluated during their practicum. 42 students proposed 150 criteria; the repeated, overlapping and misleading or irrelevant ones were extracted, totally 50 criteria were obtained. After the related literature was reviewed (Bryant, Maarouf, Burcham & Greer, 2011; Pennington & Young, 1991 and sample rubrics on teaching performances were examined, the final version of the rubric scale for teacher performance was piloted with 42 participants as well as 4 supervisors of these students. The results indicated that the developed analytical scale as a rubric for teaching performance is reliable with .72 coefficient value.

For the present study, this developed scale was given to 100 participants and they were asked to give a score to their peers' from 1 to 5 ((1) unsatisfactory, (2) satisfactory, (3) average, (4) above average, and (5) excellent.). The items in the scale were categorized according to the domains of teaching: (a) preparation, (b) presentation, (c) performance, (d) personal characteristics, and (e) teacher-student interaction. Each group had different list of items to be scored. After scoring, the participants were to write their reflective feedback for each of the scale items. At the end of the scale, the participants were asked to write a reflective feedback for the overall evaluation of the observed peer. The data collection tool was administered online through survey monkey.

Data Analysis

For the present study, both qualitative and quantitative data were collected together, and the descriptive statistics were used to analyze the quantitative data. The mean scores for each of the items were calculated separately. Lastly, each of the categories were analyzed and the weighted mean scores were calculated for comparison.

In addition to the scores that each participant gave on the analytic rubric given in the scale, the participants were expected to provide comments for their peers for each of the items. The

participants were encouraged to write reflective feedback for each item. The participants had a training on how to give reflective feedback in the methodology courses before the practicum. This reflective feedback constituted the qualitative data of the study. Applying the content analysis, each of the item-comments was grouped according to the aforementioned categories (i.e. preparation, presentation, performance, personal characteristics and teacher-student interaction) and then used to compare the results obtained from the quantitative data. For the last item, overall evaluation section, the evaluations of pre-service teachers were coded and then classified into themes for further analysis and comparison.

Findings

The quantitative data was analyzed firstly and the peer assessment on the analytic rubric was presented for each category with the descriptive findings, then the qualitative data was discussed and exemplified with some quotations. The findings of the study are first presented referring to the five categories, questioning the domains of teaching performances as the foci of the study. In that way, it was firstly aimed to combine the participants' qualitative and quantitative feedback to their peers so that two different practices of peer feedback will be presented under the same category. Then, the qualitative analysis of overall reflective feedback of the participants is given.

Preparation

In this part of the rubric, the participants were asked to score items related with the preparation part of teaching. In this part there were 4 items to assess the observed peers. The weighted mean score of this category is 4.36 out of 5.

Majority of the participants (65%) think that their peers were well-prepared for the lesson; the students were warmed-up before the lesson (64%), and the goals of the lesson were clear (64%). When it comes to reviewing the previous topic and linking it to the current one, the participants provided mixed answers. The mean for this is the lowest in this group (m= 3.99). It can be argued that the participants think that their peers were somewhat unsuccessful in creating a link

between previous and new topics. Overall, the pre-service teachers were satisfied with their peers' preparation for teaching. This may stem from the fact that the pre-service teachers were required to submit lesson plans on weekly basis. Nevertheless, not all the participants agree that the observed peers were in fact prepared for the lesson. The reflective feedback on teacher preparation category contained the themes of lesson organization, activities and materials. Although the participants scored high for this item on the rubric, they gave mixed feedback comments for their peers' preparation. There were very positive comments as well as some criticism.

As for the lowest scored item in this group, linking the previous topic with the present one (m=3.99), the participants focused on the frequency aspect. Several of the reflective feedback mentioned that their peers did not always link the previous and current topic during their lessons.

> *"The teacher was very careful about making connections between previous lesson from time to time". (P9) [sic]*

> *"When the topic was hard or students didn't understand the previous topic, she reviewed the previous topic". (P61)*

Overall, the teacher candidates evaluated their peers to be well-prepared with some minor setbacks they mentioned in their comments. It can be observed that the comments and the scores they provided for this section of the rubric were somewhat in line with each other.

Presentation

In this part, the participants were to score their peers based on their actual teaching performances. The eleven criteria in this section were about the teaching procedure that the pre-service teachers had to complete. The overall score for this group is 4.40 out of 5.
Similar to the preparation section, the participants gave high scores to their peers for the presentation stage. The highest scored item was related with age appropriateness of the activities used in the lesson (m=4,67); while the lowest scored item was about the use of instructional aids such as instruction checking questions (ICQs) and asking questions (m=4,10). Overall, again, the participants were pleased with their peers' teaching performance on the rubric.

When it comes to the comments they provided for the presentation part, again, similar results can be observed. The participants generally wrote positive comments for their peers' presentation. For example, they stated that their peers were effective in presenting the topic and that the activities were appropriate for the class level. For lesson sequence and organization, the pre-service teachers provided comments that were in line with the rubric scores (m=4.42). They stated that the observed peer had well sequenced and planned lessons. Along the same lines, for lesson pace, the comments they provided were generally positive. On the other hand, there were few instances when the participants reported time management problems due to unexpected issues in the lesson or classroom management. The teacher candidates also wrote comments for giving instructions during the lesson. Generally, their comments bore positive statements about this item; however, a few of the participants also mentioned some problems related with instructions. They mentioned that the instructions were confusing and/or not clear. Some of them stated that getting used to giving instructions took time while others said that the nature of the activity (group/individual) or the language level of the students were the factors that made giving instructions difficult for them.

> *"Instructions were clear and concise but they weren't clear all the time, both of us sometimes had difficulty in giving the instructions". (P6) [sic]*

> *"Because of students' levels, instructions couldn't be arranged appropriately. So, sometimes different techniques (body language, showing, giving example, clues) for instructions didn't work well". (P49) [sic]*

> *"Especially when she prepared a group work, she had some difficulties to give instructions. By drawing on the board, showing an example are good for her (it was also difficult for me)". (P78) [sic]*

The highest scored item in this part of the rubric was about the activity appropriateness. Majority of the participants think that the activities used in the lessons were age (m= 4.67) and ability (m= 4.62) appropriate. The comments they wrote for these two items were in line with the scores they gave. The teacher candidates think that the activities their peers used during their lessons were appropriate for the student profile. They observed that their peers were successful in bringing activities that will attract the students' attention and also that are suitable. On the other hand, the participants mentioned few times where the activities were above the students' current level of language and due to this reason the students could not finish them.

For the last and lowest scored item of this section of the rubric, effective use of instructional aids, (m= 4.10), very few of the participants commented. They mentioned either that their peers were successful at using ICQs or that they failed to do so and wrote some suggestions.

> *"For some tasks, she used ICQs it worked effectively". (P3)*

> *"Instruction checking is a big problem for her. I don't know. Students are too naughty so that she forgets the checking. She should use more easier sentences when giving instruction and also for checking". (P48) [sic]*

Performance

In this part of the rubric, the participants were asked to evaluate their peers with regards to their performances as teachers. The mean for this part is found to be 4.33.

In this part of the rubric, the results revealed that the highest scored items were moving around the classroom and maintaining eye-contact with the students (m= 4.54) and using examples and illustrations effectively (m= 4.54). They are followed by using positive reinforcements (m= 4.49) and using drills and exercises effectively (m= 4.48). Interestingly, the lowest scored item was related with error correction policy (m= 4) in this section of the rubric.

Upon analyzing the comments provided for this section, it can be seen that the students showed similar tendency. They tend to write comments that are in line with the scores they gave. For example for using a variety of activities in the class (m= 4.35) they mentioned that their peers successfully selected activities and exercises for most of the time. Similarly for their peers' adapting skills (m= 4.21) they commented that the observed teacher candidate was able to overcome unanticipated problems for most of the time. Some students brought up some issues with unanticipated problems as well. They mentioned that their peers were not able to cope with unexpected problems due to being inexperienced or not knowledgeable enough.

> *"When there was a problem about the smartboard, he was stuck but it is because of lack of knowledge and training. Also, when the subject was broken and students started to talk about something else, he tried to do go back to lesson and ignore the environment of the class". (P58) [sic]*

> *"She looked shocked when she was in a situation that she would not anticipate". (P63) [sic]*

For making eye-contact with the students and moving around the class during lessons, the participants gave highest score of this section in the rubric (m= 4.54). In line with the scores in rubric, in their comments, they mentioned that at the beginning their peers were somewhat reluctant to move around the class but as the time went by, they got used to the class and they improved themselves. Others pointed out that their peers established eye contact with the students and used their body language.

The lowest scored item on this section of the rubric was having an error correction policy (m=4.0). In their comments they mentioned that the observed participant missed majority of the errors or the peer was not able to "catch" the errors all the time. They also mentioned the type of error correction they utilized. They preferred direct, indirect, and peer error correction in their lessons.

> *"Yes, first she repeated the question one more time and asked like "A or B? Please think about it one more time". (P28) [sic]*
>
> *"He might sometimes miss the error, but mostly he caught and told the true ones". (P39) [sic]*
>
> *"When students answer the questions and some of them make any mistake, her explanations weren't clear". (P50) [sic]*
>
> *"Sometimes she realized the mistakes of students and she corrected but sometimes she didn't realized". (P83) [sic]*

The last item of this part of the scale was about classroom management (m= 4.15). For this one, although the score can be considered as rather high, the comments revealed that the participants, in fact, criticized their peers' classroom management skills. They wrote that the observed pre-service teachers needed to improve themselves by monitoring the students and being more involving. Few of them also stated that they found their peers' classroom management skills effective.

> *"The students were passive in the lessons in general but they spoke about irrelevant topics all the time. However, the teacher controlled the class. (P33)*
>
> *"We were both not good at classroom management". (P40)*

> *"She had problems on controlling the class but she learnt thanks to her mistake. For example, she gave the materials (mask) before instruction. And she lost the control because the students focused on the mask. Then she never did the same mistake". (P67) [sic]*

The reflective feedback indicated that the participants could evaluate the performance more critically when they had chance to think upon it.

Personal Characteristics

This part of the rubric had items about the observed participants' characteristics as teachers (use of voice, facial expressions, fluent English, enthusiasm, and so on). There are six items in this part of the rubric and the mean is found to be 4.22.

The highest scored item in personal characteristics part was about the patience of the teacher in eliciting answers from the students (m= 4.40). The participants stated that their peers waited for students to give the correct answers rather than providing the answers themselves. On the other hand, the lowest score of this section belongs to the item about teachers' voices (m= 3.96). In their comments the participants wrote that their peers were not audible during their lessons at the beginning of the term; however, as the time passed some of them improved themselves in terms of this issue. Some pre-service teachers focused on the tone of voice rather than loudness.

> *"When there was an activity, there was a problem for back-sitters to hear him. He could have used his voice more effectively. Except this, he used his voice well". (P37) [sic]*

> *"Her voice was audible everywhere in the classroom. But she should change tone of her voice because sometimes she is talking as if shouting". (P40) [sic]*

In the same vein, the participants evaluated their peers' pronunciation in the target language as natural (m= 4.13). Again, the comments displayed different ends of a continuum. Some comments stated that the pronunciation of their peers was very good, while some others pointed out that there were serious problems.

> *"I don't want even comment about it. She doesn't care about her pronunciation and our mentor warned her many times. I may make mistakes too, this is okey. But how*

> *can a pre service teacher who will almost graduate makes that much simple pronunciation mistakes? I don't think that she checks words' pronunciations before coming school". (P49) [sic]*
>
> *"We were studying our pronunciation from online dictionaries with voice if it's a vocabulary lesson. She was studying on them". (P94) [sic]*

Teacher-Student Interaction

In the last part of the rubric, the participants were expected to evaluate their peers in terms of teacher-student interaction (involving students, questioning, encouraging, being friendly and so on). There were seven items in this part of the rubric and the mean score is 4.54.

With 4.66 mean, treating students with respect and fairly was the highest scored item of this part of the rubric, while the lowest score belonged to being able to involve the students in the lesson (m= 4.44). Treating students fairly and with respect (m= 4.66) was another item to be observed by the participants. All of the comments mentioned that the trainee was fair and respectful towards the students. Similarly, for the next item, encouraging the students (m= 4.6), all the comments bore positive remarks about the observed peers. For being aware of individual and group needs (m= 4.5), the participants commented that the trainee used group work and individual activities, they arranged the exercises and the materials based on the level of the students.

For encouraging participation of the students during the lesson (m= 4.45), the pre-service teacher stated that the observed peers were successful in general. They mentioned that the trainee used praise words and tried to include all the students in the lessons. There were few instances where the trainee was deemed to be unsuccessful.

> *"He tried to encourage all of the students but he needed to control the class' environment more. It was also because of the class, almost the half of the students did not willing to attempt". (P47) [sic]*

Finally, the last item to be scored on the rubric was about teachers' ability to create a friendly and fun atmosphere in the classroom (m=4.49). The participants wrote that the trainees were

humorous during the lesson, they utilized songs and music, and they included creative activities for the students.

Comparison of Category Scores

Examining the items in the whole rubric, it is observed that the highest score belongs to the item about activities being appropriate to the age of the students (m= 4.67) in the presentation part; while the lowest scoring item is about using audible voice (m=3.96) in personal characteristics part. The highest and the lowest scored five items of the whole rubric can be seen from Table 1 below. Based on these scores, it can be argued that the highest scored items are least problematic for the trainees while the lowest scored items are the most problematic for them.

Table 1

Top and Bottom Five Items of the Rubric

	Items	Weighted Mean
Highest	The activities were appropriate to the age of the students.	4.67
	The students were treated fairly and with respect.	4.66
	The topics were presented at the students' level of comprehension.	4.64
	The class felt free to ask questions, to disagree, or to express their own ideas.	4.62
	The activities were appropriate to the ability of the students.	4.62
Lowest	The pre-service teacher's pronunciation was natural.	4.13
	Instructional aids, such as ICQs and asking students were effectively used.	4.10
	The pre-service teacher had an appropriate error-correction policy.	4.00
	The teacher reviewed the previous topic and linked it to the present one.	3.99
	The teacher's voice was audible everywhere in the classroom.	3.96
	OVERALL RUBRIC SCORE	4.37

Similarly, upon comparing the mean score of the parts of the rubric, it is observed that teacher-student interaction part has the highest mean score of the whole rubric (m=4.54). Although, overall, the participants gave high scores to their peers (m=4.37), it can be deduced that the participants found teacher-student interaction in the observed lessons was more successful than all the other four groups of criteria. Summary of the mean scores for each category can be seen from Table 2 below. Again, based on the mean scores, the most problematic part for the trainees

was personal characteristics (m= 4.22). As the reflective feedback provided by the participants their peers needed to develop many manners.

Table 2

Summary of the Mean Scores of Group Items

Groups	Weighted Mean
A. Preparation	4.36
B. Presentation	4.40
C. Performance	4.33
D. Personal Characteristics	4.22
E. Teacher-Student Interaction	4.54
Overall Rubric Score	4.37

Overall Evaluation

For further evaluation and to triangulate the results of the quantitative data, the participants were asked to write a reflective feedback evaluating the overall evaluation of their peers' performances. Out of 100 participants 92 provided comments for their peers. While the "good" comments revolve around being successful, well-prepared, friendly, enthusiastic, creative, and bringing good materials and activities to the lessons; the criticisms are mainly about classroom management, not using audible voice, not following the stages of a lesson, having fluency and accuracy problems while speaking in the target language, being nervous, and uncooperative. When criticizing the participants followed certain patterns, such as opening with a positive remark and then mentioning the negative sides or pointing out the problem and then making some suggestions for improvement. Comparing the results obtained from the rubric and the open ended question, it is seen that there are some similarities and some differences. For example material appropriateness was the common point for "good" aspects of the trainees while using an audible voice and speaking in the target language were the common points for" bad" aspects of the observed trainees' teaching.

> *"She was well prepared for every class. She also did her best for teaching. However, while me, my partners and even our mentor was teaching and lecturing, she always talked with students. There is always noise in the classrooms, this was one of the our problems. In addition to this problem, she also talked with students instead of keeping them silent. Also, she behaved students as a friend. As a result*

of this behaviour, I and my partners had some difficulties to manage the classroom during the class time". (P9) [sic]

"She prepared good materials for her lessons. She was effective to design group works and she was good at developing her students' interaction in the class. She has a good relationship with her students but I suggest her to avoid personal talks in the class. She loses time. She should develop her classroom management". (P22) [sic]

As can be seen from the comments above, the pre-service teachers mention "good and bad" aspects of the observed teacher together. The participants started with positive comments, mentioned the problematic aspects and then closed with a positive remark.

"She did her best I think. Everybody will improve himself/herself in time. She was good at speaking, using true words during the lessons and pronunciation. She prepared materials but she mostly used worksheet and board. On the other hand, our students were young learners. She did not use interactive and movable teaching materials enough. Both of us were bad at classroom management. Her voice power need to be improved. She gave her instructions before her lesson mostly. However, her instructions was not successful. She was relaxer than me in an unanticipated situation. However, she did not prepared a plan B for her lessons at all. She was a good teacher in general." (P40) [sic]

"Generally, she was well-prepared in terms of materials and other supplies for the lesson. Her attitude toward students was respectful and kind. However, she is a bit shy to students sometimes. She can be more active in lessons and willing to communicate with students. in some lessons, she couldn't manage the time and I was stuck in a difficult situation to complete my lesson. Generally, she prepared and used materials well but I think she should be more careful about managing/controlling the class." (P62) [sic]

After providing specific examples and cases to root their criticisms, the participants close their comments with positive statements or use some at the beginning. By providing feedback on their peers' teaching practice, the pre-service teachers also reflect back on their own teaching as well. P40 focused on some problems and wrote that both herself and the observed peer need to improve their classroom management skills. P62 (above) mentioned that due to their peers' problems, they also experienced some difficulties. Similarly, by providing a comment, P70 (below) argues that a teacher should be aware of her/his weaknesses and strengths in order to develop professionally. These statements show that peer-feedback can also serve as a means for reflective practice. On the other hand, few of the participants focused only on the negative aspects of the observed pre-service teacher.

> *"If a person wants to be a teacher, he/she should be aware of students' needs. She should know her abilities or her skills which need to be improved. She was so quiet in the class even while teaching. When she had a problem in the class, she didn't do anything to solve it. She just smiled and continued her lesson like nothing happened. I think most of the time she didn't know what to do in class. She didn't use her creativity while teaching or preparing materials. She didn't good at managing the classroom. Her body language, her mimes, her voice and all of the things about her never impressed me through 10 weeks. I hope that she improve her teaching skills". (P70) [sic]*

As the example showed the participants sometimes felt free to criticize but as appropriate to nature of reflective feedback, they tend to reflect upon the reasons for their criticism and suggest the solutions.

Discussion and Conclusion

This study examined the potential use of combining two different peer feedback practices; structured analytic peer assessment and reflective peer feedback. Through analytic rubric, the pre-service teachers engaged in assessing their peers and they got familiarized with the criteria to evaluate the teaching performances. This increased their awareness and they received necessary guidance to reflect on the essential domains of teaching performance. Encouraging them to write reflective feedback in open-ended statements on each evaluation criteria in the rubric, the participants practiced to give feedback on the certain points. So, they improved to give focused reflective feedback. As the results indicated while assessing their peers on the rubric, most of them gave optimistic, high scores. So, the participants were mostly subjective and supportive. This results comply with the studies of and Sun (2015) and Azarnoosh (2003). In spite of some bias in the peer assessment, it fosters critical thinking skills and learning achievements, besides it could guide them how to give reflective feedback as Ratminingsih et al (2017) suggested. This was observed in the participants' reflective feedback on each criteria and overall evaluation. Particularly, in the overall evaluation, the participants' feedback was more focused and they reflected on their peers' and their own performances criticizing with clear rationales and suggesting the better ways. This is the desired manner for reflective peer feedback as Nguyen and Ngo (2017) stated. Thus, it could be claimed that combination of

analytic and reflective peer feedback fostered reflection and provided more opportunities to evaluate their own practice, but also enhances their professional knowledge.

Additionally, the results indicated that providing evaluation criteria and categories for evaluation eased the participants' feedback. Rather than limiting the feedback, it enriched the content. As Lindahl et al. (2019), as the pre-service teachers "realize" the indicators of the best teaching practice, they become more reflective and they touch on more points in their feedback. As the qualitative analysis showed that the participants mentioned many different themes for each category and they made sense of even the same themes according to different categories. For instance, they reflected upon the materials under the categories of both preparation and presentation but they evaluated it from different perspectives regarding the category.

As they practiced the reflective feedback for each item referring the basic indicators for "best" teaching practice, they became more component while giving the last feedback at the overall evaluation. In a way that, they included both positive and supportive but at the same time they had negative feedback criticizing both the peers and themselves. It was observed that they reflected on their performance and they either suggested the better way or they claimed they would adapt the same way that the peer did.

To conclude, the results of this study revealed that the peers could provide reflective and to the point feedback as long as they have a guidance including the indicators for the evaluation. The quality of peer mentoring and feedback could enhance as the pre-service teachers become aware of the cover or focus of their feedback. Combining both qualitative and quantitative methods of peer feedback, the quality and focus of feedback seemed to improve and it became reflective in nature for both their peers' and their professional development.

Suggestions

This study revealed that the pre-service teachers could give reflective feedback to foster both their peers' and their own professional development. Yet a guidance as provided in an analytic rubric format could lead more focused and structured feedback. This study was designed to present the potential use of combination of qualitative reflective peer feedback and quantitative

analytic peer assessment. Although this study consisted of a purposeful sample and the results could not be generalized, this study could inspire other studies on peer feedback and how to structure peer feedback sessions. Moreover, the results of this study could be supported and improved with the forthcoming studies on the pre-service teachers' development after such peer feedback practices.

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Research Article

Out of Class Language Learning Environments and Experiences Used by Learners of Turkish as a Foreign Language[1]

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Abstract

In this study, learning environments and experiences used by Turkish learners (learners of Turkish) as a foreign language in listening, speaking, reading and writing processes were investigated. For this reason, out of class language learning environments and experiences used by 98 foreign students who completed their Turkish education in Eskişehir Osmangazi University Turkish Teaching, Application and Research Center (ESOGÜ TÖMER) were described with respect to the variable of geographical location. In this study, a case study format based on the qualitative research approach is used. A focus group interview is used to determine the language learning environments and experiences of the learners and the data were explained through descriptive analysis. Data from the result of the descriptive analysis show that out of class language learning environments and experiences of the learners do not differ according to the variable of geographical region; it is determined that out of class language learning environments and experiences activities vary according to individual differences. It is obtained that out of class activities change according to individual differences. To improve their language skills they used TV series, movies, music, and communicating with Turks. They prefer to use social media for their writing skills. Out of the lessons, not much was done by the learners in terms of reading.

Keywords**:** *Learning Turkish as a foreign language, out of class language learning environments and experiences, basic language skills, case study*

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Türkçeyi Yabancı Dil Olarak Öğrenenlerin Ders Dışında Kullandıkları Dil Öğrenme Ortam ve Deneyimleri

ÖZ

Bu çalışmada, Türkçeyi yabancı dil olarak öğrenenlerin dinleme, konuşma, okuma, yazma süreçlerinde ders dışında kullandıkları öğrenme ortam ve deneyimleri araştırılmıştır. Bunun için Eskişehir Osmangazi Üniversitesi Türkçe Öğretim ve Uygulama Merkezi'nde (ESOGÜ TÖMER) Türkçe öğrenimini tamamlayan 98 yabancı uyruklu öğrenicinin Türkçe öğrenirken kullandıkları ders dışı dil öğrenme ortam ve deneyimleri dinleme, konuşma, okuma, yazma ve coğrafi değişkenler açısından betimlenmiştir. Çalışmada nitel araştırma yaklaşımına bağlı olarak durum çalışması deseni kullanılmıştır. Öğrenicilerin dil öğrenme ortam ve tecrübelerini belirlemeye dönük odak grup görüşmeleri yapılmıştır ve elde edilen veriler betimsel analiz yoluyla açıklanmıştır. Betimsel analiz yoluyla elde edilen veriler sonucunda öğrenicilerin ders dışı dil öğrenme ortam ve deneyimlerinin dil becerilerine göre değişiklik gösterdiği, coğrafi değişkenlere göre farklılaşmadığı; ders dışı dil etkinliklerinin bireysel farklılıklara göre değiştiği tespit edilmiştir. Öğrenicilerin birbirlerinden farklı ders dışı dil öğrenme ortamları kullandıkları, dillerini geliştirmek için en çok dizi ve film izledikleri, şarkı dinledikleri, Türkleri dinleyip onlarla konuştukları; yazma becerileri için sosyal medyayı kullanmayı tercih ettikleri bulgularına ulaşılmıştır. Buna karşın ders dışında okuma öğrenimi için fazla etkinlik yapmadıkları da görülmüştür.

***Anahtar Sözcükler**: Türkçe'nin yabancı dil olarak öğrenimi, ders dışı dil öğrenme ortam ve deneyimleri, dil becerileri, durum çalışması.*

Introduction

Studies related to learning and teaching mostly deal with issues related to the classroom environment. However, all kinds of activities outside the classroom also affect students' language development to a large extent. These out of class activities make a contribution to the rapid development of skills in some students and help them achieve independent learning. In order for the learners to use their language skills more effectively, out of class learning environments and experiences need to be investigated.

There has been an increase in recent studies on teaching Turkish as a foreign language and as a second language. Especially after 2000, around 140 masters and doctoral theses were made and about 100 of them were made in the last five years (YÖK, 2019). Among the studies conducted in the field of teaching Turkish to foreigners; history of teaching Turkish to foreigners (Bayraktar, 2003), principles of teaching Turkish to foreigners (Barın, 2004), problems encountered in teaching Turkish to foreigners (Er et al., 2012; Karababa, 2009) and studies on textbooks used in teaching Turkish to foreigners (Büyükikiz, 2014). However, when the publications on both Turkish teaching and Turkish teaching to foreigners are searched, it is seen that the number of thesis and articles related to extracurricular learning environments is very limited (YÖK, 2019; DergiPark, 2019).

Foreign language teaching is a multidimensional process with course books, materials and applied curriculam. In foreign language teaching, the educational dimension of the process is equally important as the way that the learner can easily use the language in daily life because language that can be used in daily life is functional. The use of materials in language classes is quite high, but these materials alone are not sufficient for language learning. The student should be able to practice the words, grammar rules and expressions learned in the classroom in daily life.

Learning the target foreign language in a country other than the country in which it is spoken makes it difficult for the language learning process. To reduce this, the learner should practice the target language as much as possible. Learning the language in the country in which it is spoken is a great advantage for learners.

Both mother tongue teaching and foreign language teaching are structured on four basic language skills: listening, speaking, reading and writing. Just as an individual acquires listening and speaking skills in his / her mother tongue development, and then acquires reading and writing skills with the school; in foreign language learning, learners primarily use listening and speaking, which are basic language skills, and then use advanced language skills, such as reading and writing.

Undoubtedly, the basic skill that an individual gains from the first moment of his / her life and is used continuously is listening. “In sequence, a child listens before speaking, speaks before reading and reads before writing” (Lundsteen, 1971: 3). From this point of view, it can be said that the child's ability to acquire speaking, reading and writing skills and to be successful in these skills depends on listening skills. Listening and speaking have been accepted as the basis of other language skills. The listening skill plays an important role in mother tongue and foreign language learning. As cognitive activities, speaking, as a secondary skill, continues the listening process. “Aural/oral skills precede the graphic skills, such as reading and writing, as they form the circle of language learning process” (Bozorgian, 2012: 657). If an individual learns to speak by listening, if he understands something he hears or listens to, he can respond accordingly. Language is learned as it is used. According to Nan (2018:420), “Speaking without listening or listening without speaking cannot achieve the communication goal.” A person who learns a foreign language, such as an individual who first listens to his / her mother tongue and then speaks, and then learns to read and write with his / her school life, tries to understand what he/she listens to in the language to which he/she is foreign. A foreign language learner who tries to find out which of the sounds heard are familiar and which are different and how to make these different sounds by trial and error, starts to read and then write with the vocabulary gained by listening and speaking skills. “Through reading, the students can enlarge their schematic knowledge which is useful for improving listening comprehension. A lot of reading enables the students to get more input by exposing themselves to various kinds of linguistic material, to broaden their knowledge, to increase background knowledge and enrich schematic knowledge, linguistic and non-linguistic. Students can enlarge their vocabulary in reading by exposing themselves to a great deal of practical and contextual words. Reading provides more opportunities for students to think about the target language. Students will be able to learn differences between their own language and culture and target language and culture. They can follow and react to different grammatical structures and idiomatic expressions quickly enough”

(Nan, 2018:419-420). Although people don't speak as they write or don't write as they speak; According to Lundsteen (1971), writing is an expressive process transmitting language to the sense of sight. Writing skill requires logical thinking and the use of complex grammar structures. The learner, who listens and speaks from the very beginning of the language learning process, reads and then writes the information learned by these two skills, develops the ability to use the target language in an appropriate way and to express himself / herself in a logical way. With the foreign language learning process that starts with listening skills and ends with writing skills, the learner will have the opportunity to express her/his ideas in a more appropriate and correct way through these skills. The key to success in language learning is not solely dependent on teachers, a single method or a book. The success of the learner in language learning cannot be explained only by the teaching methods, the classroom environment and the teacher. In addition to these factors, the success of the learner depends on his / her own motivation, desire and language learning capacity. Language learning is not limited to classrooms. Individuals who are aware of how to learn can choose effective methods of learning a language and thus become more successful. When the literature was searched, it was seen that learning environments were not studied in the field of teaching Turkish as a foreign language. With this research, out of class learning environment and experiences used by the learners of Turkish as a foreign language will be determined. In addition, the features of language learning environments and experiences according to geographical areas will be revealed. Through this, suggestions will be made to those who will learn and teach Turkish as a foreign language regarding what kind of learning environments and experiences they can use out of class. Research is important in this respect.

Based on the contributions of the literature and study summarized above, the aim of this study is *to determine the learning environment and experiences of learners of Turkish as a foreign language in terms of language skills.* To achieve this goal, the following questions will be sought:

- What are the out of class environments and experiences that Turkish language learners use for listening skills?
- What are the out of class environments and experiences that Turkish language learners use for speaking skills?
- What are the out of class environments and experiences that Turkish language learners use for reading skills?

- What are the out of class environments and experiences that Turkish language learners use for writing skills?
- How do the out of class environments and experiences of Turkish language learners vary according to geographical differences?

Method

In this study, where different language learning environments and experiences of Turkish language learners are used out of class, the case study design, one of the qualitative research methods, was used. “Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals” (Creswell, 2013). Learning environments and experiences that Turkish language learners use out of class and whether these environments and experiences differ according to geographical variables were investigated.

In this study, out of class learning experiences of Turkish language learners were determined using focus group interview technique. “If it is important to reach more individuals in the research and the researcher thinks that the data to be collected will be more, it is useful to conduct a focus group interview. The main purpose of the focus group interview is to understand what people think about a topic (Yıldırım & Şimşek, 2013). Participants in the focus group meeting cannot be expected to agree. What is important is that the participants should express their opinions and, if necessary, to discuss them. Although individual interviews are more advantageous, group interviews play an important role in revealing the opinions and ideas of the participants.

Considering that there is a sufficient number of learners related to all sub-variables such as language families, geographical area, educational status and gender in the learners of Turkish as a foreign language, it is thought that the study group can be selected among the international students studying in *Eskişehir Osmangazi University Turkish Teaching, Application and Research Center* (ESOGÜ TÖMER). First of all, we tried to determine the extracurricular learning experiences of 98 international students studying in ESOGÜ TÖMER while learning Turkish. Then, it was examined whether the students showed similarities and differences in terms of extracurricular learning from their previous language experiences and Turkish learning

experiences. In addition, the learning environments and experiences that the learners use out of class while they are learning Turkish have been examined.

Participants

The research was conducted in the 2013-2014 academic year with international students studying in Eskişehir Osmangazi University TÖMER. A2 level learners who started learning late and language level B2 learners were excluded from 140 learners studying at ESOGÜ TÖMER. 108 learners remained.

As 98 of these 108 learners voluntarily agreed to participate in the interviews, the study group was composed of these learners. These learners started A1 level education in September of the 2013-2014 academic year. In the research, the whole sample was used to determine the out of class learning experiences of Turkish language learners. The interviews with the students in the study group were conducted in May 2014 when the learners were at level C1 in Turkish.

Table 1

Distribution of the Number of Learners in the Participants

	Postgraduate (49)		Undergraduate (42)		Private Learners (7)		
	Female	Male	Female	Male	Female	Male	Total
Turkic Republics	3	4	8	3	1	1	20
Subsaharan Africa	--	15	5	11	--	--	31
Arab Geographical Area	2	12	1	7	--	1	23
Far Eastern Geographical Area	2	6	--	3	--	2	13
Europe	3	2	2	2	2	--	11
TOTAL	10	39	16	26	3	4	98

The learners in the study group were divided into five geographical groups. Due to their languages bearing close resemblance to the Turkish language, the Turkic Republics and Afghanistan formed the first group.

20 students in this group are citizens of Azerbaijan, Turkmenistan, Kazakhstan, Kyrgyzstan, Uzbekistan, Eastern Turkestan (China), Gagauz (Moldova) and Afghanistan. In the study group, the largest group, numerically, is composed of learners from Africa. The language and

cultural features of the learners from Northern Africa were not included in this group because they were closely related to the Arab geographical area. 31 learners from Subsaharan Africa are citizens of Ghana, Tanzania, Somalia, Gabon, Kenya, Burkina Faso, Democratic Republic of Congo, Uganda, Malawi, Mozambique, Zambia, Cameroon, Mali and Ethiopia. The third group, Arab geographical area, also included learners from Northern Africa. 23 students in this group are citizens of Egypt, Yemen, Palestine, Iraq, Syria, Mauritania, Tunisia, Lebanon, Iran, Libya and Algeria. The fourth group comprises the learners from the Far East. 13 students in this group are citizens of Nepal, Bangladesh, India, Myanmar, China, Indonesia, Thailand and Mongolia. The fifth group comprises learners from Europe. The 11 learners in this group are citizens of Albania, Kosovo, Macedonia, Croatia, Montenegro, Latvia, Ukraine and Colombia.

Instruments

In the research, as a qualitative data collection tool, interview questions with the learners were used to determine the extracurricular environment and experiences that the learners made for learning Turkish. For this purpose, the data that the learners made during the listening, speaking, reading and writing process, through communication channels in social environments, their various ways of using language in technological environments, etc. that will reveal their experiences, were collected through a focus group interview. Focus group interview technique, which is one of the qualitative research data collection methods, helps us to understand the unobservable such as experiences, attitudes, thoughts and the individual's perspective (Yıldırım & Şimşek, 2013).

The aim of the focus group interview within the scope of the research is to determine the out of class language learning experiences of international learners who learn Turkish as a foreign language. Interview questions were not prepared to measure learners' knowledge; they are prepared to determine which environments and experiences they benefit from while learning Turkish.

In the focus group meeting with international learners, each interview was recorded on camera. The interview groups were planned according to the demographic features of the learners such as geographical area, education and gender. The number of learners in each group was between 6-10. The focus group interview was recorded on camera. Also, the researcher benefited from the note-taking technique. Before the interview, permission was obtained from the students for

video recording and the interviews were completed on a voluntary basis. In the interview form prepared by the researcher, the students were asked the following questions in order to obtain qualitative data about the out of class language learning environments and experiences of the students:

1. What did you do while you were learning Turkish?
2. What kind of studies, practices and methods did you do for listening/ speaking/ reading/ writing out of class while learning Turkish?

How did you find / discover this method, practice?

- Why did you choose this method, practice?
- When / how often did you use this method, practice?
- How did you apply this method, practice?
- What are the advantages of using this method, practice?

The 970-minute data recorded on camera was monitored one by one by the researcher. These data which were separated according to the four basic language skills and geographical area variables were interpreted by content analysis.

Data Collection

In this study, in which out of class learning experiences of Turkish language learners were investigated, data were collected through focus group interview. The interviews were conducted in May 2014 with the permission of the TÖMER Directorate of Eskişehir Osmangazi University. For each interview, the students were divided into groups of 6-10 people. Before the interview, the learners were informed about the interview and the purpose of the study. Interviews were recorded on camera. A meeting room was used to make the students feel comfortable during the interviews. Learners seated at a round table were able to make face-to-face contact with each other and food and drinks were placed on the tables so that they did not feel themselves in the classroom.

Data Analysis

Qualitative data collected by video recordings during the interviews were written by the researcher without any changes. These data were then digitized with word frequency calculations. The reason for the digitization of the data is to reveal the language learning environments and experiences that the learners use the most. In order to ensure the consistency of these transcripts, 3 randomly selected video recordings and written transcripts were shown to 1 university lecturer with a Ph.D. in Turkish education, 1 student with a doctorate in Turkish education and 1 university lecturer with a doctorate in assessment and evaluation. Thus, it was examined whether the researcher showed differences with the transcripts. Following expert analysis, the basic coding differences were corrected. Systematic coding differences have been corrected in other videos.

These data were analyzed by descriptive analysis. According to Yıldırım and Şimşek (2013: 256), descriptive analysis is summarized and interpreted according to predetermined themes. In the descriptive analysis, direct quotations are often used to reflect the views of the interviewed or observed individuals in a striking manner. In the study, while mentioning the learner comments, codes like (Iran_DR_M) and (Colombia_U_F) were made by considering the country of the learners, educational level and gender. The codes are “Doctorate=DR, Masters=M, Undergraduate=U, Educational cost self-financing=CSF” for educational level. For sex the codes are “Male=M, Female=F”.

Validity and Reliability

For the reliability and validity study of the research data, firs of all the qualitative data collected through video recordings during the interviews were written by the researcher without any changes. These data were digitized with word frequency calculations. In order to determine the consistency of these transcripts, 3 randomly selected video recordings and their transcripts were shown to 3 experts and it was shown whether the researcher differed from the transcripts. At the end of the expert examination, the basic coding differences were corrected. Systematic coding differences were corrected in other videos.

Findings

In this section, the findings of the environment and experiences that international learners use out of class while learning Turkish as a foreign language are presented. The findings of the research are given on the basis of listening and speaking (basic language skills) and reading and writing (advanced language skills) skills, respectively. In addition, the issues that the learners talked about during the focus group interview were given in proportion to their contribution to the research, taking into account their geographical area.

Findings about out of class listening environments and experiences of Turkish language learners

The learning environment and experiences used by the learners to improve their listening skills while learning Turkish as a foreign language and their distribution according to geographical variables are given below (Table 2).

Table 2

Out of Class Listening Environment-Experiences and Distribution by Geographical Variables

Out of Class Listening Environment-Experiences	Turkic Republics (20)	Subsaharan Africa (31)	Arab Geographical Area (23)	Far Eastern Geographical Area	Europe (11)	Total (98)
Watching TV series or movies	18	24	17	10	9	78
Listening to music	13	26	12	7	7	65
Listening to Turks talking	8	14	6	7	-	34
Watching News / Documentary	4	7	7	3	1	22
Watching television programs	6	4	6	2	1	19
Listening to department courses	1	9	-	-	6	16
Participation in social activities	4	5	3	-	4	16
Listening to radio	-	5	1	1	3	15
Watching Cartoons	3	3	5	2	1	14
Watching football matches	-	11	-	1	-	12
Watching videos and courses from phone application or on the Internet	2	4	-	-	2	8
Listening to audiobooks	-	2	2	1	-	5
Listening to a seminar	-	-	-	4	-	4
Listening to poetry	-	1	-	1	-	3
Listening tutorial text / religious chats	-	1	-	2	-	3
Listening to roommates	-	-	-	-	3	3

When Table 2 is examined, it is seen that those who learn Turkish as a foreign language experience 23 different listening environments and experiences out of class. The most preferred ones are watching TV series, watching movies, listening to songs and listening to the Turks talking. Besides, it is worth noting that African learners watch football matches. In addition, African and European learners' listening to the departmental courses they will study at the university and listening to seminars by Far Eastern learners are among the out of class learning and experiences separated from other geographical groups.

"On the advice of my friends, I watched TV series and movies, listened to music every day and listened to the Turks talking." (Iraq_DR_M)

"I learned many words from the television and the Internet, and I didn't watch the news because I didn't want to have psychological problems." (Afghanistan_M_M)

"I watch the Turkish of a film ~~in~~ which I watched in Russian. This is very useful for me." (Uzbekistan_U_F)

"I practice the conversations of the people in the TV series, and I pay attention to where they emphasize."(Uzbekistan_U_F)

"For example, there are proverbs when watching movies. There are words used in the village. We learned this by watching movies." (Afghanistan_U_M)

"I watch the TV series two or three days a week, at first I did not understand much, then I began to understand 60%, 80%." (Ethiopia_U_F)

"For me, the most effective extracurricular listening environment is the TV series. I learn how to make new words and sentences and how to pronounce them from the TV series." (Ethiopia_U_F)

"As we watch a TV series / film, we learn Turkish traditions, new words, accents." (Mozambique_U_M)

"While watching movies we understand in which case can we use expressions. In the movies, when the son comes ~~to~~ home, we listen to their conversations. With time we are able to talk." (India_U_M)

"While watching movies, I learn both Turkish and Turkish culture." (China_CSF_M)

"I watch cartoons, they have simple words." (Lebanon_M_M)

"I love sports. I watch games outside, but I don't watch TV series or movies even if I know it are very useful because they speak very fast in them." (Ghana_DR_M)

"Only men watch funny TV series. In our culture only women watch TV series. That's why we don't like TV series." (Nepal_DR_M)

"I love politics, so I watch the news. I listen to classical songs on TRT just for pronunciation." (Tanzania_DR_M)

"I watched a documentary about Atatürk because I was curious about his life." (Iran_DR_M)

"I love listening to songs and hymns." (Ghana_DR_M)

"I listened to the old songs because they are slow" (Afghanistan_M_F)

"I sing songs. I listen to the lyrics of on the Internet. I'm learning new words. I do it every day. No day without music." (Montenegro_U_F)

"I listen to songs on the Internet, I look at their lyrics. This way I learn new words, I memorize them. Over time it sticks in mind." (Latvia_M_F)

"I hate studying. I don't study at home. I travel a lot, with my Turkish friends. We talk while we're walking. I learned a lot of words. I don't watch movies and TV series. I don't like virtual life. For me it's a waste of time." (Tunisia_M_M)

"People on the streets are more important to me. I listened to people on the streets, on the tram." (Mongolia_M_M)

"I listened to old people talking. Everyone loves different things, I want slow, more emotional speech." (Thailand_U_M)

"It's more effective to listen to my roommates than to learn words using a dictionary." (Afghanistan_U_F)

"I watched Turkish videos for A1-A2 on Youtube." (Ethiopia _U_F)

"There is a book, both text and audio that I read and listen to. Very good for improving pronunciation." (Iraq_DR_M)

"I listen less. I don't watch television, I don't listen to songs." (Croatia_CSF_F)

When the thoughts of Turkish learners as a foreign language about their out of class listening skills are examined, it is seen that their out of class learning and experiences do not change according to a certain geographical area. Besides, it can be said that they experience different environments and experiences according to their individual features. Some learners enjoy listening to songs, while others do not. Similarly, in some cultures, watching TV series is not preferred by men because it is a behavior specific to women, while some learners have stated

that they have learned new words and phrases especially from TV series. Some learners prefer to talk to slow-speaking elderly people, while some learners have little experience of listening.

Findings about out of class speaking environments and experiences of Turkish language learners

The learning environments and experiences used by the learners to improve their speaking skills while learning Turkish as a foreign language and their distribution according to geographical variables are given below (Table 3).

Table 3
Out of Class Speaking Environment-Experiences and Distribution by Geographical Variables

Out of Class Speaking Environment-Experiences	Turkic Republics (20)	Subsaharan Africa (31)	Arab Geographical Area (23)	Far East Geographical Area	Europe (11)	Total (98)
Talking to Turks	13	27	19	6	6	71
Being in social environments	4	2	12	-	4	27
Talking to strangers	4	6	-	2	-	15
Talking to girls / boys	-	1	-	4	-	5
Talking to older people / children	1	-	-	2	-	3
Self-talk	-	3	-	-	-	3
Talking to roommates	-	-	-	2	-	2
Telling what you read / watch	-	-	-	2	-	2
Talk on Skype	1	-	-	1	-	2
Speaking during shopping / at work	-	-	1	1	-	1
Teaching Turkish	-	-	1	-	-	1
Practice private conversation	-	1	-	-	-	1
Reading aloud	-	1	-	-	-	1

When Table 3 is examined, it is seen that those who learn Turkish as a foreign language experience 17 different speaking environments and experiences out of class. Among these, the most preferred ones are to talk to Turks, to be in social environments and to talk to foreigners. Besides, Far Eastern learners talk to the opposite sex and African learners prefer to speak to themselves. These preferences are noteworthy as out of class learning environments and experiences that are different among geographical groups.

Some of the out of class speaking environments and experiences of learners who learn Turkish as a foreign language and come from Turkic Republics are cited below:

> *"I talk to the Turks a lot. My roommate was Turkish but my friend wouldn't speak. Then I went to the manager to change my room, I said my roommate does not speak at all." (Uzbekistan_U_M)*
>
> *"My friends are talking, they use new words, I hear, I ask; what does this word mean?" (Afghanistan_U_M)*
>
> *"The Turks correct me. I'm learning more from them. Foreigners speak like me." (Afghanistan_M_F)*
>
> *"I changed my room because there were Afghans there. Now we speak Turkish. It would be too bad for me if I didn't change my room. I don't speak English to Turks because it could be dangerous for me, so I couldn't learn Turkish well." (Afghanistan_M_M)*
>
> *"I changed my room. There were Afghans. Now we speak Turkish. It would be too bad for me if I didn't change my room. I don't speak English to Turks because it could be dangerous for me, so I couldn't learn Turkish well." (Afghanistan_M_M)*

It is known that the speaking skills of the learners from the Turkic Republics are better than the other groups because most of the words in Turkish are similar to the words in their own language. Most learners in this group wanted their roommates to be Turkish. They also have relatives or acquaintances in this group of learners in Turkey and they had experience ~~of~~ speaking Turkish with them.

Some of the out of class speaking environments and experiences of other learners who learn Turkish as a foreign language are cited below:

> *"We meet three Turkish friends and talk like teachers." (Tanzania_DR_M)*
>
> *"It's better to talk to the Turks because it's their mother tongue. Foreign pronunciation is different. My pronunciation will be bad if I learn from strangers." (Yemen_DR_ M)*
>
> *"You must live with the Turks." (Tunusia_M_ M)*
>
> *"We need to find a girl who speaks Turkish. Turkish girls love to talk a lot, they ask a lot of questions." (Burkina Faso_M_M)*
>
> *"I prefer talking to girls. I speak very little. Even in my own language, I am not so talkative." (Mongolia_M_M)*

"I'm talking to the kids. They don't understand our mistakes. I prefer to talk to the Turks because they teach us. The girls are more appropriate." (India_M_M)

"I speak Turkish during sports. Turks have correct pronunciation. Foreigners like me, but Turks like the ocean. Foreigners are like streams." (Algeria_M_M)

"I tried to make friends at the company. We speak both normal Turkish and business language. We can learn new words from the Turks." (Syria_M_M)

"I have two Turkish friends, my best friends. They helped improved my speech a lot. I spoke to the Turks in Turkish. Teaching Turkish to foreigners, speaking Turkish with Turks is more useful." (Mauritania_U_M)

"It is more comfortable to speak Turkish with men." (Nepal_DR_M)

"Turkish with foreigners is better. I don't understand the Turks. But strangers speak slowly. Strangers are good for practice. You're not ashamed to make a mistake because they don't know. Foreigners to easily agree, but Turks to correct." (Ethiopia_U_F)

"Turkish is better learnt from foreigners. They speak slowly. They speak English." (Bangladesh DR_M)

"My roommates are strangers. We speak English, talk to Turks and girls. They talk about everything. "It's more instructive to talk for me." (Indonesia_M_M)

"I hate language since my childhood. I couldn't speak when I was a kid, so I wrote what I wanted." (Thailand_U_M)

"I mostly talk to my roommates. They do not speak English at all. Some Turks do not speak English, so I speak only Turkish." (Myanmar_U_M)

"I usually talk very little. I don't have many Turkish friends. That's why I read. Because I speak to myself while reading a book." (Kosova_U_M)

"I have no social life. I just talk to my husband. He's not a chatty person. I talk to him. He doesn't correct my mistakes. I talk at the market." (Croatia_CSF_F)

When the thoughts of Turkish learners as a foreign language about the ability to speak out of class are considered; it can be said that out of class learning and experiences do not change according to geographical area and that they experience different environments and experiences according to their individual characteristics. It is seen that learners who are self-confident and do not have socialization problems experience speaking with Turks, the opposite sex and / or foreigners. Learners, who see themselves inadequate or incomplete in *terms* of these personality traits -depending on the situation- prefer to speak Turkish with their friends from the same

country, husband/wife or self. Students who consider themselves inadequate in speaking skills have stated that they prefer writing.

Findings about out of class reading environments and experiences of Turkish language learners

The learning environments and experiences used by the learners to improve their reading skills while learning Turkish as a foreign language and their distribution according to geographical variables are given below (Table 4).

Table 4

Out of Class Reading Environment-Experiences and Distribution by Geographical Variables

Out of Class Reading Environment-Experiences	Turkic Republics (20)	Subsaharan Africa (31)	Arab Geographical Area (23)	Far East Geographical Area (13)	Europe (11)	Total (98)
Reading newspapers / magazines	7	19	10	9	4	49
Reading children books / fairy tales / riddles	10	18	9	2	4	41
Reading novels / stories / poems / lyrics	9	6	10	6	2	33
Reading books / newspapers / news / cookbooks / grammar texts from the Internet	6	8	4	4	7	31
Reading academic books / articles / primary / secondary school books, Turkish- English grammar books	8	6	6	1	-	21
Reading wrapping paper and advertisements	2	2	9	4	3	20
Reading on Facebook, Whatsapp, Twitter	4	5	9	-	1	19
Reading books about the academic department	2	-	-	3	2	10
Reading subtitles of movies / TV series / TED videos	-	-	1	3	-	4
Reading book translations / religious books	-	1	2	1	-	4
Reading SMSs / letters / dictionaries	-	2	-	1	-	3

When Table 4 is examined, it is seen that those who learn Turkish as a foreign language experience 34 different reading environments and experiences outside the course. The most preferred ones are “reading newspapers and magazines; reading children books, fairy tales, riddles; reading novels, stories, poetry, lyrics and reading books, newspapers, news, cookbooks,

grammar texts from the Internet. In addition, the number of academic books, articles, primary / secondary school books, Turkish-English grammar book readings of students from Turkish Republics is also noteworthy. This learning environment and experience is most preferred by European learners for reading. Lastly, among the number of learners from the Arab geographical area, wrapping paper and advertisement readings and readings from Facebook, Whatsapp, and Twitter is higher than among the learners from other geographical regions.

Some of the out of class reading environments and experiences of other learners who learn Turkish as a foreign language are cited below:

> *"I'm reading a lot of books now so that I won't have problems next year." (Afghanistan_U_M)*
>
> *"I watched the TV series Çalıkuşu. Then I took the book and read it." (Afghanistan_M_F)*
>
> *"I read newspapers, I read 10 books. I'm reading, there is everything if I read. When there is reading there is formal conversation; no reading, no official speech" (Tanzania_DR_M)*
>
> *"I read the Bible in Turkish." (Ghana_M_M)*
>
> *"I was reading children's books first, now I'm reading novels." (Tanzania_M_M)*
>
> *"I read 5-6-7th grade course books. I downloaded them from meb.gov.tr. The most important thing for reading is textbooks because I learned English so. Because there are the most important words, the most useful, and the most used words in the course books." (India_M_M)*
>
> *"In the beginning I read one page in Turkish and one page in French in A1 and A2. Now I understand 90% of the novels in terms of vocabulary." (Tunisia_M_F)*
>
> *"There are many good books, one page in Turkish and one page in English. The sentences are the same. This is very good. When I didn't understand anything, I looked at the English page." (Latvia_M_F)*
>
> *"Reading is too boring for me. I love reading advertisements. I read the package when buying biscuits or food. I bought a newspaper, I tried to read it, unfortunately it was impossible because it's boring." (Tunisia_M_M)*
>
> *"I read what I understand. I read newspapers." (Nepal_DR_M)*
>
> *"I'm reading a dictionary." (China_CSF_M)*
>
> *"I read the news. I read Turkish newspapers." (Montenegro_M_ M)*

"I have Aljazeera Turk application on my phone, I read the news." (Afghanistan_M_F)

"I don't read Turkish at all because I'm scared." (Ukraine_CSF_F)

When the thoughts of Turkish learners as a foreign language about their reading skills are examined; out of class learning and experiences show individual differences. The learners have experienced the learning environments and experiences that they used to learn a foreign language in the past while learning Turkish. It was also discussed that the reading environments and experiences out of class did not change according to geographical region. Students' attitudes towards reading seem to be effective. There are learners who understand the importance of reading, who stop reading because they cannot understand when using different reading environments and experiences, who prefer reading a dictionary in order to learn Turkish more quickly, and learners who do not read because they are bored or afraid of reading.

Findings about out of class writing environments and experiences of Turkish language learners

The learning environment and experiences used by the learners to improve their writing skills while learning Turkish as a foreign language and their distribution according to geographical variables are given below (Table 5).

Table 5

Out of Class Writing Environment-Experiences and Distribution by Geographical Variables

Out of Class Writing Environment-Experiences	Turkic Republics (20)	Subsaharan Africa (31)	Arab Geographical Area (23)	Far East Geographical Area (13)	Europe (11)	Total (98)
Writing on Facebook, Whatsapp	5	42	25	9	8	90
Write SMSs / mail	2	20	10	4	4	40
Rewrite text	6	2	1	1	2	13
Summarizing	3	5	1	1	2	12
Writing by translation	4	3	1	1	2	11
Writing on any topic	3	3	-	3	1	10
Keeping a diary/ writing a letter	-	2	1	3	2	8
Writing stories / poetry / lyrics	-	2	2	2	-	5
Taking notes	1	1	2	-	-	4

Out of Class Writing Environment-Experiences	Turkic Republics (20)	Subsaharan Africa (31)	Arab Geographical Area (23)	Far East Geographical Area (13)	Europe (11)	Total (98)
Keeping a vocabulary notebook/ Writing word cards	3	-	-	1	-	4
Writing lyrics while listening to songs	1	-	1	-	-	3
Solving tests on the Internet / writing on the site	1	1	-	-	-	2
Writing sentences while watching TV series	1	-	-	-	-	1
Doing Crossword Puzzles	1	-	-	-	-	1

When Table 5 is examined, it is seen that those who learn Turkish as a foreign language experience 21 different writing environments and experiences. The most preferred ones are "writing on social media such as Facebook, Whatsapp, writing SMS and mail, and rewriting a text." In addition, it is noteworthy that learners from the Turkic Republics use a slightly different writing environment and experiences, but unlike learners from other geographical regions, they prefer writing on social media. Likewise, learners from Africa have experienced more out of class environments and experiences to write. Finally, it is noteworthy that learners from Europe prefer only 10 out of a total of 21 out of class writing environments and experiences.

Some of the out of class writing environments and experiences of other learners who learn Turkish as a foreign language are cited below:

> *"Writing is my favorite thing because writing is easier than speaking. I have more time to think about my ideas. I use my phone in Turkish. I write on Whatsapp in Turkish. If there's a mistake, I don't do it again. I write message in Turkish." (Syria_CSF_M)*

> *"I make comments on Facebook. I pay attention to grammar." (Ethiopia_U_F)*

> *"I write sentences in songs and TV series. That's why I'm good at writing." (Afghanistan_M_F)*

> *"After watching the TV series, I write its summary." (Mozambique_M_M)*

> *"I write an article summary in Persian. I translate it into Turkish. I rewrite the Turkish text." (Afghanistan_M_M)*

"I write letters, messages and abstracts; my friend corrects my mistakes. It's very useful. I have written poetry several times." (Indonesia_M_F)

"I learn new words and write sentences with them. My roommate checks them." (Lebanon_M_M)

"I choose a topic and write about it. My husband checks it." (Croatia_CSF_F)

"Since I did little speaking practice, I make up for it by writing." (Albania_M_F)

"I don't have a habit of writing. I just choose words from the dictionary. I make sentences using that word." (Myanmar_U_M)

"If I make a mistake, I won't know how to correct it. That's why I need help." (Montenegro
_U_F)

"I write a lot in Arabic, but Turkish is not obligatory, so I do not. There is not much control." (Iraq_DR_M)

"I'm just lazy. I don't want to write. I only write short messages?" (Mauritania_DR_M)

"I don't like writing at all. I'm depressed about writing. I don't write anything for ten minutes during the exam. Simple sentences seem to me childish. That's why I quit because I don't like it. I don't struggle. I think I may have been influenced by my childhood. My teacher always said "Do not always use the same word in another sentence." This impressed me. We need to find a synonym. That's how they taught us." (Uzbekistan_U_F)

When the thoughts of Turkish learners as a foreign language about their writing skills are examined; it is seen that out of class writing environments and experiences show individual differences as in the reading skills. There are learners who like and practice writing skills as well as learners who do not prefer writing because they are bored by it. It is seen that the students who have good writing skills in their mother tongue have good writing skills in the foreign language and they also use the experiences they used in learning other foreign languages while learning Turkish. There are learners who receive support from Turks, friends from their countries, roommates and relatives in writing. The students who think that they cannot write because they think that they do not know Turkish grammar well and don't write because they are not checked are also noteworthy. The most striking situation is the Uzbekistanian learner who is educated by the Russian education system. The Uzbek learner, who did not want to write simple sentences, developed prejudice against writing Turkish.

When the data related to the language learning environment and experiences used by the learners of Turkish as a foreign language are examined, it can be found that individual differences are prominent in each language skill in general. When choosing a language learning environment and experience out of class, learners benefit from previous foreign language learning experiences, personality traits (such as self-esteem, courage, socialization) are influential in this choice, they face cultural differences, find their own learning experiences (such as talking to older people) and form their friendships accordingly. Also knowing their mother tongue well (a good knowledge of mother tongue), the presence of relatives or acquaintances in Turkey, the contribution of language skills to the study areas, prejudices against reading and writing affect the out of class language learning environment and experiences.

When the data on the features of out of class language learning environments and experiences are examined according to geographical area, there are two important findings. The first one is the effect of the mother tongue and Turkish being from the same language family on the speaking environments and experiences of the learners coming from the Turkic Republics. The second one is the Uzbekistanian learner developing prejudice against Turkish writing.

Discussion

In this section, the findings obtained in the research are discussed in terms of the out of class language learning environments and experiences used by the learners of Turkish as a foreign language. The main discussion area of the research is the change in the language learning environment and experiences of the learners of Turkish as a foreign language according to individual differences. The fact that learners frequently use past learning environments and experiences, and even benefit from the environments and experiences used by other friends, reveals the importance of cooperation and communication in foreign language teaching. When the effect of communication on learning a foreign language is mentioned, it is necessary to take into consideration the effects of personality traits and cultural differences. For learners, who are not self-confident, have poor interpersonal relationships and are not brave, learning environments should be organized in different ways. In addition, the learning experiences that learners find in their own way, such as talking to older people and children, show that places

such as the streets and shopping places should be taken into consideration when organizing learning environments. According to the research findings, other issues to be considered while organizing learning environments are: individuals' knowledge of their mother tongue, whether they have relatives or acquaintances in the geographical area where they learn the language, and whether they have prejudices against any of the four language skills.

When arranging the out of class language learning environments according to geographical area, it is necessary to use the relationship between the native languages of Turkic learners and Turkish. According to the findings, it is seen that concrete ties to be established between these languages including Turkish dialects and Turkish will have a positive effect on their speaking skills. By the way, while organizing the learning environments knowing the importance given to one or more of the four language skills in the educational systems of the geographical regions where the learners come from can guide the learners and teachers.

According to the findings of the research, besides the guidance of students' and their peers' out of class listening environments and experiences, the presence of relatives living in Turkey is seen to be effective. This finding shows that while arranging out of class learning environments, arrangements should be made by taking the learner's environment into consideration. Considering that the students prefer listening to Turks in places such as streets, buses and dormitories as out of class listening activities, it is an expected behavior for students who have no friends, to listen in their mother tongue and to be reluctant to learn Turkish. The experience of 23 different listening environments and experiences such as “watching TV series, watching movies, listening to songs and listening to Turkish speaking” coincides with the findings of Chusanachati (2009). However, when deciding to use some environments and experiences such as watching TV series and movies as out of class learning environments and experiences, cultural differences should be considered. As a matter of fact, the research findings showed that watching TV series in Nepal is not preferred by men because it is a behavior specific to women. Likewise, African students' watching football matches is related to their sports ability as well as their football culture. Therefore, the change in the listening environment and experiences chosen by the learners to develop their Turkish according to their interests and individual differences is similar to the findings in Knight's (2007) master thesis.

Among the 17 different speaking environments and experiences used by the learners of Turkish as a foreign language, the presence of speaking with Turks, being in social environments and

speaking with foreigners is different from Chusanachati's (2009) finding that English learners in Thailand do not speak too much out of class. This is because English-speaking environments in Thailand are limited, whereas students who participated in the research are learning Turkish in Turkey. In this respect, it seems that Knight's (2007) finding that the conversations of the learners with the natural speakers would improve the language proficiency. A wide range of variability between learners talking to the opposite sex and talking to themselves show the effect of personality traits such as self-esteem, courage and socialization. Students who are self-confident and do not have socialization problems, experience speaking with Turks, the opposite sex and / or foreigners; learners who consider themselves inadequate or incomplete in terms of these personality traits -depending on the situation- prefer to speak with friends from their own country, husband/wife or oneself. Those who will learn and teach Turkish as a foreign language should take into consideration the attempt to compensate for the inability of speaking skills with writing skills as well as personality traits when arranging out of class learning environments.

Among the 34 out of class reading environments and experiences of those who learn Turkish as a foreign language, they prefer "reading newspapers, magazines, children books, novels, stories, poetry, lyrics and reading from the Internet. This requires individual differences to be taken into consideration when organizing out of class learning environments. When organizing out of class reading environments, students' attitudes towards reading should also be considered. While some learners understand the importance of reading, some learners may give up and fear reading because they do not understand, and others may get bored from reading because of their personality.

Among the 21 different writing environments and experiences used by the learners of Turkish as a foreign language, writing in different social media environments necessitates creating a close connection between writing and technology for those who will learn and teach Turkish as a foreign language.

The findings of the research show that in this era when the Internet and technology have entered our lives so rapidly, the use of technology in the classroom and out of class learning environments shows that young people will actively participate in the writing experience. The fact that the learners from the Turkic Republics prefer face-to-face interaction instead of using social media may be because their Turkish language skills are better than those of the other groups. The fact that learners from Europe prefer only 10 out of a total of 21 out of class writing

environments and experiences may be due to the fact that they have more writing environments and experiences in their native language than learners from other geographical regions. The research findings show that there will be foreign learners who like writing in Turkish as well as learners who are bored of writing and prefer not to write. Based on the expression of the Uzbek learner, knowing the learning environment and experiences of the learners while learning their mother tongue makes it easier to provide them with an appropriate out of class writing learning environment and experience. It was seen that the students in the study group were afraid to write due to the fact that both the mother tongue of the learners in the study group and the other foreign languages they learned were generally dependent on the Indo-European and Hamito-Semitic languages. This led to the prejudice that Turkish was difficult in grammar. The fact that the departmental courses to be studied by the learners at the end of the Turkish education are in English is an important factor in their neglect of writing skills. In the interviews, the learners stated that they did not repeat the mistakes when their writing was checked. Again, in the same interview, Learning Turkish in Turkey was more effective in developing listening and speaking skills but it was said that it was not very effective in helping improve the reading and writing skills. Learners do not make special efforts for listening and speaking skills because they are in a natural environment and because reading and writing require special efforts, only those with interest and ability have experienced these two skills.

Conclusion

In this study in which out of class language learning environments and experiences of Turkish language learners are investigated, the results are presented in line with the sub-problems of the research.

From the findings, it is possible to reach the following conclusions on the learning environments and experiences used by learners of Turkish as a foreign language:

- The learning environment and experiences used by learners of Turkish as a foreign language out of class vary according to their characteristics.
- The learning environment and experiences used by learners of Turkish as a foreign language out of class generally do not vary according to geographical region.
- The learning environments and experiences used in learning other foreign languages are also used when learning Turkish.

- Those who learn Turkish as a foreign language prefer watching TV series, movies, listening to songs and talking to Turks.
- Environmental features, cultural features and interests (academic education area, work area, social area) and social features are effective in determining the preferences of out of class listening environments and experiences.
- Those who learn Turkish as a foreign language prefer to speak to Turks, to be in social environments and to speak to foreigners as the out of class environment and experience.
- Personality (self-confident, courageous, social, vs. introverted, etc.) of the learners of Turkish as a foreign language is effective in determining out of class speaking environment and experience preferences.
- In out of class speaking environment and experience, learners, whose mother tongues belong to the same dialect as Turkish, make different choices compared with the students coming from other geographical regions.
- Foreign learners, who think that the out of class speaking experience is insufficient, prefer to compensate for this deficiency by increasing their writing experiences.
- Those who learn Turkish as a foreign language prefer "reading newspapers, magazines, children's books, novels, stories, poetry, lyrics, and reading books from the Internet as their out of class reading environments and experiences.
- In the out of class reading environments to be organized for the learners of Turkish as a foreign language, taking into consideration their own cultures and religions and similarities with the Turkish culture affects the reading experiences positively.
- The positive awareness of the importance of reading affects the reading environment and experiences of those who learn Turkish as a foreign language.
- Those who learn Turkish as a foreign language prefer writing mostly on social media and technological environments as an out of class writing environment and experience.
- Learners from Europe use fewer Turkish writing environments and experiences because they can find more writing environments and experiences in their native languages.
- The attitude towards writing while learning Turkish as a foreign language affects the preferences of the out of class writing environment and experience.
- Students who are competent in writing in their mother tongue are also successful in out of class writing environments and experiences while learning Turkish.

- The mother tongue of the learners of Turkish as a foreign language and the language family to which the foreign languages they are familiar with belong, affect the out of class writing environment and experiences in Turkish.
- The importance given to the different language skills in the native education systems of those who learn Turkish as a foreign language in the geographical areas they come from affects their out of class learning environments and experiences while learning Turkish as a foreign language.

Recommendations

Based on the results of the out of class learning environments used by the learners of Turkish as a foreign language, the following suggestions can be developed:

- Due to the fact that those who learn Turkish as a foreign language experience extracurricular language learning environments according to individual differences, for the institutions and people who will arrange extracurricular learning environments for these learners; education, seminars and certificates should be provided for service such as mother tongue acquisition processes, foreign language teaching, education systems of countries where foreign students live, features of their mother tongue, geographical and cultural differences, and psychology in language learning process.
- Portal and Internet sites with systematic and progressive course videos encompassing the four basic language skills and grammar subjects should be produced and learners should be able to experience such environments out of class.
- In the teaching of Turkish as a foreign language, the different geographical regions should be described by scientific studies and different learning environments and experiences should be organized according to each geographical region.
- The learners should be encouraged to stay in dormitories and hostels in order to ensure that they stay together with the native speakers during the process of preparing for (learning) the Turkish language.
- In order to learn the Turkish culture, words and expressions, learners generally prefer watching television TV series and movies. Students should be guided in their choice of movies and television TV series, songs, books, magazines, newspapers.

- In order for the learners to develop their writing skills, their writings must be checked by both the teacher and their peers.
- Learners who have departmental courses in English or who will write their theses/ dissertations in English are more reluctant to write and read in Turkish. Universities and The Council of Higher Education (YÖK) should take the necessary precautions to make students write their dissertations and assignments in Turkish.
- Based on the result that learners experience different extracurricular learning environments, individual differences should be taken into consideration when organizing extracurricular learning environments.
- Based on the conclusion that the students prefer to write in technological environments, it is recommended that those who teach Turkish as a foreign language use technological materials in out of class writing environments.
- Based on the conclusion that the students prefer to listen to songs out of class, Turkish music environments should be arranged for the learners of Turkish as a foreign language and the students should be included in these environments.
- Social media should be used more actively in the centers where Turkish is taught as a foreign language and by teachers working there.
- From level B2 and above, international learners should be directed to the departments where they will study, to the environments they will work and live in order to increase and diversify their out of class language learning environments and experiences.
- Social activities such as symposiums, conferences, seminars, picnics, shopping should be planned and students should participate in these activities.
- Applications such as e-books, dictionaries, games and vocabulary teaching that can be used on smart phones should be developed in order to increase the students' out of class listening, speaking, reading and writing environments and experiences.
- Out of class language learning environments and experiences should be taken into consideration during the curriculum studies and assessment and evaluation stages of teaching Turkish as a foreign language.

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Research Article

Cognitive Problems in the Process of Programming Teaching in Higher Education: Learner-Instructor Experiences[1]

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Abstract

Programming teaching plays an important role in developing cognitive thinking skills that are considered to be among 21st century skills, such as problem solving, critical thinking, reflective and analytical thinking. However, it is considered to be a difficult and complex process due to its abstract structure. In this context, it is important to identify the factors that affect the process of the programming teaching and to develop solutions for these factors. Cognitive factors are the leading factors among them. In this context, the aim of the research is to examine the experiences of students and instructors regarding the cognitive problems they face during the process of programming teaching. Content analysis method was used to examine the experiences of students and instructors. The participants of the research consisted of 14 undergraduate students and 4 instructors selected through purposive sampling method Interviews, reflective student diaries, observer reports and semi-structured focus group interviews were used as data collection tools. It is thought that the cognitive problems determined regarding the process of programming teaching will contribute to the studies aimed at developing programming skills.

Keywords: *Higher education, programming teaching, cognitive problems.*

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Yükseköğretimde Programlama Öğretimi Sürecinde Yaşanan Bilişsel Problemler: Öğrenen-Öğreten Deneyimleri

Öz

Programlama öğretimi, 21.yy becerileri arasında gösterilen problem çözme, eleştirel düşünme, yansıtıcı ve analitik düşünme gibi bilişsel düşünme becerilerin geliştirilmesinde önemli bir rol oynamaktadır. Ancak, soyut yapısından dolayı zor ve karmaşık bir süreç olarak değerlendirilmektedir. Bu bağlamda, programlama öğretimi sürecine etki eden faktörlerin belirlenmesi ve bu faktörlere yönelik çözüm önerilerinin geliştirilmesi önemlidir. Bu faktörlerin başında bilişsel faktörler öne çıkmaktadır. Bu kapsamda araştırmanın amacı, öğrenci ve öğretim elemanlarının programlama öğretimi sürecinde karşılaştıkları bilişsel problemlere ilişkin deneyimlerinin incelenmesidir. Öğrenci ve öğretim elemanlarının deneyimlerinin incelenmesinde içerik analizi yöntemi kullanılmıştır. Araştırmanın katılımcıları amaca uygun örnekleme yöntemiyle seçilen 14 lisans öğrencisi ve dört öğretim elemanından oluşmaktadır. Veri toplama aracı olarak mülakat, yansıtıcı öğrenci günlükleri, gözlemci raporları ve yarı yapılandırılmış odak grup görüşmeleri kullanılmıştır. Programlama öğretimi sürecine yönelik belirlenen bilişsel problemlerin, programlama becerisinin geliştirilmesine yönelik çalışmalara katkı yapacağı düşünülmektedir.

Anahtar Sözcükler: *Yükseköğretim, programlama öğretimi, bilişsel problemler.*

Introduction

Recently, studies on the programming teaching have gained a momentum in almost all teaching levels, especially with early age groups (Tsai, Wang, & Hsu, 2018; Popescu, 2018). Programming is the process of modelling the required script sequence to real life, necessary for computer systems to operate (Prensky, 2008; Thomas & Greene, 2011; Vee, 2013). Researches have shown that programming teaching is effective in developing important skills of individuals such as reflective, critical and analytical thinking (Lye & Koh, 2014; Gezgin & Adnan, 2016; Smith & Burrow, 2016). Programming teaching has important functions such as developing the imagination of individuals, helping them think in a process-oriented way, internalizing information, preparing product-oriented projects and gaining the habit of collaboration (Cosar, 2013; Gülbahar & Kalelioglu, 2014; Demirer & Nurcan, 2016). In recent years, as in other countries, studies on programming teaching have accelerated in our country (Akpinar & Altun, 2014). With the decision made in 2012 to upskill basic programming skills from an early age in our country, the content of “Information Technologies Course” was updated and software and programming subjects were added to the curriculum. In the "Computer Science Course" program for secondary education, which was published by the Board of Education and Discipline in 2016, new gains were added for the development of "critical thinking", "algorithmic thinking”, “creative thinking" and "analytical thinking" skills. In 2018, the Computer Education and Instructional Technologies Undergraduate Program was updated within the scope of "New Teacher Training Undergraduate Programs" in order to ensure that “Information Technology Teacher” candidates have these qualifications. Similarly, in the United States, the United Kingdom, South Korea, and many European Union countries, the importance of programming teaching for the future of the country was realized and regulations were made in relation to programming teaching (Demirer & Nurcan, 2016). In the UK, programming topics were included in the "Information Technology Course" curriculum and regulations were made to enable students to program the applications on their own mobile phones (Burns, 2012). In America, the programming campaign that began with the president's “anyone can learn coding" call was extended as far as the "Coding Olympics" regulation (USA Computing Olympiad, 2015).

Examining the researches on programming teaching, it’s seen that the programming skill is considered to be a difficult and complex process, that the attempts to facilitate the programming

teaching make some concepts easier to comprehend, but they are not successful enough in the development of the programming skill (Al-Tahat, Taha, Hasan, & Shawar, 2016; Bosse & Gerosa, 2017; Gulbahar & Kalelioglu, 2018). Therefore, it is important to identify the factors that affect the process of the programming teaching and to develop solutions for them.

In literature review, only a limited number of studies on cognitive problems experienced during the teaching of direct programming are available (Gomes & Mendes, 2014; Ouahbi et al., 2015; Cevahir & Ozdemir, 2017; Bosse & Gerosa, 2017; Sayginer & Tuzun, 2017; Lazarinis et al., 2018). Most of them are studies in which the critical (Solmaz, 2014; Shahmoradi, Nosratinia, & Shangarffam, 2018), reflective, analytical, computational (Lye & Koh, 2014; Kalelioglu, 2015; Wong & Cheung, 2018) and problem solving skills (Gomes & Mendes 2014; Taheri, Sasaki, Chu, & Ngetha, 2016) related to programming teaching have been researched. There are also studies on cognitive problems experienced during the process of programming teaching (Ersoy, Madran, & Gulbahar, 2011; Smith and Burrow, 2016). Cognitive problems identified in researches conducted in various contexts are shown in Table 1.

Table 1

Cognitive Problems Determined Based on Literature

Problems	Resources
Programming logic and abstract thinking	(DuBoulay, 1986; Linn & Clancy, 1992; Thomas, Ratcliffe, & Thomasson, 2004; Lahtinen, Ala-Mutka, & Jarvinen; 2005; Kinnunen & Malmi, 2008; Renumol, Jayaprakash, & Janakiram, 2009; Ersoy, Madran, & Gulbahar, 2011; Ozmen & Altun, 2014; Segmen, 2016; Cevahir & Ozdemir, 2017)
The complex structure of programming	(Bayman & Mayer, 1983; Esteves & Mendes, 2004; Arabacioglu, Bulbul, & Filiz, 2007; Imal & Eser, 2009; Ozoran, Çagiltay & Topalli, 2012; Sirkia, 2012; Sorva, 2012; Mayer, 2013; Altadmri & Brown , 2015)
Pattern building, sequential and cyclic thinking	(Byrne & Lyons, 2001; Esteves & Mendes, 2004; Gomes & Mendes, 2007; Kinnunen & Malmi, 2008; Fesakis & Serafeim, 2009; Imal & Eser, 2009; Ozoran, Cagiltay, & Topalli, 2012; Biju, 2013; Mhashi & Alakeel, 2013; Ozmen & Altun, 2014; Akcay & Coklar, 2016)

When the problems based on the literature are analyzed, it is seen that problems occur in the subjects such as the complex structure of programming, programming logic, abstract thinking, pattern building, sequential and cyclic thinking.

In this context, regulations such as adding software and programming subjects to the "Information Technologies" course content, changing the name of the course "Information Technologies" to "Information Technologies and Software", adding new gains to "Computer Science Course" curriculum and updating the "Computer Education and Instructional Technology" undergraduate program, show the importance given to the process of programming teaching. It also demonstrates the need for permanent solutions in the process of programming teaching. Examining the experiences of information technologies teacher candidates who are the implementer of the above mentioned regulations in programming teaching and instructors about the problems they faced in this process is important. It is thought that identifying the cognitive problems experienced during the process of programming teaching will give important clues to designers and practitioners.

Purpose of the Research

The aim of this research is to examine the experiences of students and instructors regarding the cognitive problems they face during the process of the programming teaching. In this context, answers to the following questions were searched.

1. What are the experiences of the instructors regarding the cognitive problems they face during the process of programming teaching?
2. What are the experiences of higher education students regarding the cognitive problems they face in the process of programming teaching?

Method

Research Model

This study, aiming to determine learner-instructor experiences to cognitive problems during the process of programming teaching in higher education, is designed in accordance with case study method, one of the qualitative research designs. Case study is a qualitative research method in which data is examined in-depth in its nature as a whole and in which state dependent categories are described (Creswell & Plano Clark, 2007; Yıldırım & Şimsek, 2013). Case study primarily aims to investigate and understand the case in-depth (Büyüköztürk et al., 2008). The most prominent feature of this method is that the situation or phenomenon being investigated is

examined within its context due to its specific characteristics (Ersoy, 2016). In this context, the aim of the research is not to make generalizations on the universe, but to understand and explain the defining characteristics of the situation or phenomenon. For this reason, the case study method used is seen as an appropriate method in achieving the purpose of the research. Since the case studies allow a detailed examination of the situations that the researcher cannot control on the basis of "what", "how" and in why "questions (Creswell, 2009), in this study, an in-depth study approach was adopted to answer the question "What are the cognitive problems experienced in the programming teaching process? ".

Participants

The participants of study composed of 14 undergraduate students (F=6, M= 8), enrolling in department of the Computer Education and Instructional Technologies from a state university in Southern East of Turkey during fall semester of 2017-2018 academic year and 4 instructors (F= 1, M= 3) from the same university. It was aimed to ensure maximum diversity in the selection of the participants. Sticking to this objective, 14 volunteer students who previously got programming course from the third grade and 8 volunteer students that were still having programming course at second grade and four instructors who had taught programming course previously were randomly selected. The main reason here was to constitute a small sampling group to allow participants explicitly state their experiences and enable researcher to examine and explain the problem in-depth (Yıldırım & Şimşek, 2013). Therefore, typical sampling method, one of the purposive sampling method, was used in the present study. Purposive typical case sampling allows an in-depth study of one of the many cases in the axis of the research problem. (Marshall, 1996; Büyüköztürk et al., 2017)

Data Collection

Data for the research were collected through interviews, semi-structured focus group interviews, reflective student diaries and observer reports. Observer reports, reflective student diaries and semi-structured focus group interview forms were used to identify the problems that students experienced while learning programming. Interviews were conducted to determine the experiences of the instructors regarding the cognitive problems they faced during the process of programming teaching. During the preparation of the data collection tools, an instructor specialized in programming and an expert in the field of assessment and evaluation were

consulted. In line with the suggestions of the experts, logical and language errors in the forms were corrected. A pilot application was carried out using the forms developed and as a result of this pilot application, some of the items were edited.

Data were collected from students and instructors for eight weeks to determine the cognitive problems experienced during the process of programming teaching. The researcher attended the classes with the instructor every week and observed the course. The reactions of the students to the subjects, their inclinations, participation and changes throughout the process were recorded with the observation forms. Each week, students' learning developments were monitored through reflective student diary forms and their participation in the course was ensured and recorded. In reflective student diaries, students were asked to reflect on the problems they faced and to think about these problems by asking questions about programming teaching. At the end of the eighth week, semi-structured focus group interviews were conducted with the students to get their opinions about the problems they experienced during the process of programming teaching. Also, the instructor who was teaching the programming courses and three instructors who had previously taught them were interviewed.

Data Analysis

In the present study content analysis, method was used to analysis data. The main purpose of content analysis is to reach the concepts and relationships that can explain the collected data (Krippendorff, 2018). In content analysis, coding of data, creating categories, finding themes and defining and interpreting the findings follow each other (White & Marsh, 2006; Çalık & Sözbilir, 2014). Although it embodies a systematic structure, there is not a universal consensus about content analysis. Researchers analyze data through different steps. Therefore, the process in the analysis of gathered data started by converting interview records into textual data. Then three researchers created coding table. In the next step, To determine the similarity rate for the same data set by using the encoding table, the reliability coefficient formula $\Delta = C \div (C + \partial) \times 100$ called consensus by Miles and Huberman (1994) was used (Δ:Realibility coefficient, C: number of terms that have consensus, ∂:number of terms that have not consensus). At the end of this process, 93% inter-investigator coding agreement was obtained and then this ratio was increased to 100% by discussing non-common codes. After this step, in line with the opinions of field experts and Turkish language experts, codes, categories and themes were finalized.

Findings

In this section, the findings obtained in the research are presented in categories and codes. Excerpts from participant responses supporting the findings are included.

Findings Related to Cognitive Problems Students Experience While Learning Programming

The categories of cognitive problems students face while learning programming and the codes that constitute them are presented below.

Table 2

Cognitive Problems Students Experience While Learning Programming

Theme	Categories	Codes
Cognitive problems	Syntactic errors	Brackets (S7, S10) Quotation (S1, S3, S9) Space (S14)
	Conceptual misconceptions	Idioms (S10) Operators (S3, S5, S9) Variables (S4, S11, S13)
	Mathematical thinking	Operation priority (S8, S12, S13) Deduction (S2, S6, S14) Induction (S8, S12)
	Algorithmic thinking	Algorithm (S3, S7, S9, S10, S13) Cause-effect (S2, S8, S9) Separation into components (S6, S8, S10)
	Sequential and cyclic thinking	While-For-Do (S1, S3) Else if-if (S14) Sequence-increment (S7, S8)
	Pattern recognition and building	Arrays (S4) Relationship order (S8) Switch-case (S11)
	Making logical inference	If-Else (S1, S8, S13) Comparison (S9, S12) If (S2, S5, S7, S10)
	Abstract thinking and generalization	Variables (S3, S11, S12) String-intigers (S1, S4, S5, S8, S12)
	Prior learning	General high school (S9, S12, S14) Java-C# complexity (S7)

Examining Table 2, it was determined that students expressed opinions with regards to the following categories about cognitive problems they experienced while learning programming;

syntactic errors, conceptual misconceptions, mathematical thinking, algorithmic thinking, sequential and cyclic thinking, pattern recognition and pattern building, making logical inferences, abstract thinking and generalization and prior learning. Findings by category and sample participant views are presented below.

Six students reported that they had problems due to incomplete or incorrect use of signs such as brackets, quotation marks, spaces. Sample participant views are as follows.

> S3: *"Whenever I code something, I always forget the brackets or one of the quotation marks, and when this keeps happening to me I get really tired of it."*

> S14: *"When we write code in C# class, we use too many signs and after a while, I get them mixed up.*"

Regarding conceptual misconceptions seven students stated that there were some misconceptions about the use of key words that are the basic building blocks of programming. Sample participant views are as follows.

> S10: *"I don't know exactly what the idioms we use mean, I keep getting confused."*

> P13: *"Some concepts are very similar in function, and I confuse them with each other because I don't know their meaning. Like Int-String."*

Eight students reported that they had difficulty in basic mathematics, that their knowledge of mathematics was not sufficient and that they had problems in mathematical thinking. Sample participant views are as follows.

> S2: *"In the class, we are asked to write a code that finds the sum of the numbers from 1 to 100 in the classroom. I don't even know how to do it normally, so am I supposed to write the code.*"

> S8: *"I think one of the biggest difficulties we have is that we have little knowledge of mathematics, I think coding equals mathematical knowledge.*"

11 students stated that they had problems due to the inability to comprehend the real life use of algorithms. Sample participant views are as follows.

> S6: *"I have difficulty in understanding the logic between writing algorithm and coding, I cannot relate them to one another. In our regular daily life, for example, it is easy to write the algorithm to come home from school, but it is very difficult for me to create an algorithm to write code."*

> S7: *"For example, let's address the algorithm of finding the largest of the three numbers entered on the keyboard. I can guess how it works in the background here, but I can't understand the logic in the writing of it."*

Five students reported that they had difficulty with if-else structures, for, do-while cycles, and that they had problems with sequential and cyclic structures that should be formed according to a certain amount of sequence and increment. Sample participant views are as follows.

> S1: *"Loops are the most challenging subject for me, its logic is very difficult to grasp. The subjects I think I can never learn are if-else, while, for and do."*
>
> *S14: "Nested conditions are very challenging for me, I think I can solve a lot of examples ranging from simple to complex and grasp the logic of it."*

Three students reported that they could not understand the relationship order between objects and concepts in switch case, if-else, if-for structures and that they had problems in recognizing and building patterns. The statement of one of the students is as follows.

> S4: *"Examples where if and for loops are used together really challenge me because it is not easy to understand their logic. It is extremely complex and difficult, as can be seen in the example of writing a code that will take the third number's power in the amount of the second number and add it to the first number."*

Nine students reported that they had problems in making logical inferences about what kind of codes to write in which steps while coding operation steps. Sample participant views are as follows.

> S12: *"What I find most difficult is that I don't know what type of code I want to write when I encode the operation steps. Because that's where reasoning comes into play and sometimes that's not enough either. To give an example, program codes for paying the salaries of workers in a workplace according to the number of days they work per month are very difficult for me."*
>
> S13*: "When the teacher gives examples in class and asks us to write their codes, the moments I have the most difficulty is when I can't decide what to do first, and what operations steps I have to do first."*

Eight students reported that they had problems in defining and generalizing abstract concepts such as variables. Sample participant views are as follows.

> S5*: "The subject of variables is the most challenging subject for me this week."*
>
> S8*: "Programming itself is something abstract, so it is very difficult to learn it through abstract concepts...*"
>
> S11: *"In fact, we reduce the complexity of the real world by writing program codes, sort of simplifying and classifying everything in our minds, which is not easy…"*

Four students reported that they had problems with programming due to previous learning experiences. Sample participant views are as follows.

> S7*: "While we were in vocational high school, we used Java in programming class and now we use C#, which completely confuses me. Sometimes when the teacher writes a code, I say to myself, "But we didn't do it like that in Java." This makes it completely difficult for me to learn."*

> S9: *"I wish I had little more hours of computer class in high school, then maybe it wouldn't be so hard for me now. My coding knowledge is virtually non-existent, so writing a program is a big problem for me."*

Findings Regarding Cognitive Problems Experienced by Instructors in the Process of Programming Teaching

The categories of cognitive problems instructors face while teaching programming and the codes that constitute them are presented below.

Table 3

Cognitive Problems Instructors Experience While Teaching Programming

Theme	Categories	Codes
Cognitive problems	Syntactic errors	Syntax (L1)
	Conceptual misconceptions	Idioms (L3)
	Mathematical thinking	Systematic (L1, L3) Deduction (L2) Induction (L4)
	Algorithmic thinking	Finding patterns (L3) Problem solving (L1) Algorithm (L2, L4)
	Sequential and cyclic thinking	Repetitive structures (L1, L2, L4)
	Pattern recognition and pattern building	Arrays (L3)
	Making logical inference	Conditional structures (L2, L3, L4) Comparison (L1)
	Abstract thinking and generalization	Variables (L1, L3, L4) Synthesis (L3)
	Prior learning	Inhibitions of prior learning (L4)

Going over Table 3, it was determined that instructors expressed opinions with regard to the following categories about cognitive problems they had experienced while learning programming; syntactic errors, conceptual misconceptions, mathematical thinking, algorithmic

thinking, sequential and iterative thinking, pattern recognition and pattern building, making logical inferences, abstract thinking and generalization and prior learning. Findings by category and sample participant views are presented below.

It was observed that an instructor who participated in the research stated that there were problems due to incomplete or incorrect use of spelling and punctuation rules. This issue was evaluated under the category of "syntactic errors." The views of the instructor are as follows.

> I1: "*I am always surprised by the operators, and I see that students have problems due to incomplete or incorrect use of the spelling and punctuation rules…"*

An instructor reported misconceptions about the use of keywords such as while, for, print, string, int etc. This issue was evaluated under the category of "conceptual misconceptions." The views of the instructor are as follows.

> I3: *"I often see that the key concepts such as while, for, prinf, string, int, etc. which are perhaps the most basic structures in the programming teaching are confused."*

All the instructors participating in the research stated that there was a problem about the level of readiness for mathematical thinking skills. This issue was evaluated under the category of "mathematical thinking." The views of the instructor are as follows.

> I2: *"There are students who have not yet fully learnt the four operations, and it is not easy to teach them the logic of programming. The students I have the hardest time with are those who are inadequate at mathematics."*
>
> I4: *"Students who are poor at mathematical thinking are the students who have the most difficulties when learning programming."*

All the instructors stated that they experienced problems with defining a set of steps listed to perform a task or solve a problem. This issue was evaluated under the category of "algorithmic thinking." The views of the instructor are as follows.

> I1: *"The fact that the algorithmic thinking skills of the students are not quite formed makes it difficult for them to learn programming."*
>
> I3: *"I think that even though we do a lot of practice about the algorithms, the students still have problems in this regard. Maybe we should develop new methods for algorithms. Or we should increase the number of courses."*

The three instructors reported that it was not possible to predict how a sequential and cyclic operation would behave in any given cycle or step and therefore the analysis could not be

performed accordingly. This issue was evaluated under the category of "sequential and cyclic thinking." The views of the instructor are as follows.

> I1: *"When mathematical knowledge comes into play in the repetitive-repetitive structures, we can say that that's where the real works starts."*

> *I4: "Problems arise in sequential structures that need to be constructed according to a certain sequence and increment amount. We can say that students get confused with elements such as if-else structures, for, do-while loops."*

An instructor stated that students had problems regarding the ability to make predictions and estimations for the next step by determining the cause-effect relationship between events, the order of relationship between objects and concepts, the systematic, logic and rules of repetitive structures. This issue was evaluated under the category of "pattern recognition and pattern building." The statement of one of the instructors is as follows.

> L3: *"Both the cause-and-effect relationship and writing the systematic program codes that are repeated by establishing connections make it very difficult for the students. Because coding information alone is not enough here, students also need to logically predict the next step."*

All of the instructors stated that, at the end of the mental processes, there were problems with the selection of one of the various alternatives or the execution of the selected statements according to whether the result of a condition statement was true or false. This issue was evaluated under the category of "making logical inferences." The statement of one of the instructors is as follows.

> I4: *"Basic if logic structures are comprised of the comparison between two states/variables, but our students are inadequate about what to do if the comparison is true or false"*

All the instructors stated that there were difficulties in solving problems related to real objects from the mind or associating them with the information in human memory. This issue was evaluated under the category of "abstract thinking and generalization." Sample participant views are as follows.

> I5*: "We do a lot of practice about various structures in the classroom, as long as we go through the same examples, there is no problem, but when I change the sample situation a little bit, I witness how they can't come up with ideas about how to produce a solution."*

> I8*: "Programming is inherently abstract and difficult to understand. In this context, I see that the abstract thinking skills of the students are not sufficiently developed."*

One instructor stated that students had never taken a programming course before, or that prior learnings of those who had previously taken a programming course interfered with their new learning and they had difficulties. This issue was evaluated under the category of "prior learning." The expression of the instructor involved is as follows.

> I4*: "The vast majority of students come having never taken any programming course. I always see the students complaining about it. The language in which secondary and high schools students take programming courses and the language in university can often be different. When students perpetuate the mistakes induced by their prior learning, it constitutes a problem."*

Results, Discussion and Recommendations

When the findings of the research were examined, it was concluded that the experiences of students and instructors regarding the problems experienced during the process of programming teaching were generally similar. It was concluded that there are syntactic problems caused by missing or incorrect use of "brackets", "quotation marks", "comma", "space" or other characters in the process of programming teaching. Problems arising from misuse of key concepts such as "for", "do" ,"while" or "if" which constitute the basic structure of programming process or from not perceiving their meaning have been identified. Due to the insufficient or incomplete mathematical knowledge of the students, problems have been identified about "order of operations" or "basic four operations." Accordingly, it was concluded that there were problems in the computational thinking skills of the students. It was seen that the students skipped some of the operation steps in the algorithms and could not relate them to the operation steps they used in real life. This showed that a set of steps listed to perform a task or solve a problem could not be identified and caused problems in algorithmic thinking. It was observed that students had problems in conditional structures and loops such as "if-else," "for," "do-while." Therefore, it was determined that there were problems related to sequential and cyclic thinking skills due to the inability of analysis resulting from the unpredictability of the cycle or step in which the sequential and cyclic process would behave. It was seen that the students had problems in the cause-effect relationship between events, the order of relationship between objects and concepts, the systematics, logic of repetitive structures, and the ability to make predictions or estimations for the next step. It has been found that at the end of the mental processes, learners had problems with the selection of one of the various alternatives or the execution of the selected statements according to whether the result of a condition statement was true or false.

This indicated that there were problems related to the ability to make logical inferences. In relation to the problems experienced in abstract thinking and generalization skills, it was found that there were problems in solving the problems related to real objects from the mind or associating them with the information in the human memory. It was concluded that students' readiness from the educational institution they had graduated from (general high school, Anatolian high school, etc.) was insufficient or there were problems arising from prior learning.

In summary, when the research results related to the cognitive problems experienced during the process of programming teaching were examined, problems due to "sequential and cyclic thinking," "pattern recognition and pattern building," "abstract thinking and generalization," "syntactic errors," "conceptual misconceptions," "mathematical thinking" and "prior learning" were found. In this context, it is possible to come across studies that have examined these cognitive problems in different contexts, if not as a whole. In the studies, problems relating to programming logic (Thomas, Ratcliffe, & Thomasson, 2004; Ersoy, Madran, & Gulbahar, 2011; Ozmen & Altun, 2014), abstract thinking (Renumol, Jayaprakash, & Janakiram, 2009; Segmen, 2016; Cevahir & Ozdemir, 2017) and complex programming structure (Imal & Eser, 2009; Mayer, 2013) were generally handled. However, there are also studies in which pattern recognition and pattern building (Gomes & Mendes, 2007; Kinnunen & Malmi, 2008; Biju, 2013) sequential and cyclic thinking (Byrne & Lyons, 2001; Esteves & Mendes, 2004; Gomes & Mendes, 2007) problems are revealed. In the research, it is stated that programming logic is an important threshold and this threshold is directly related to abstract thinking skills (Arabacioglu, Bulbul, & Filiz, 2007; Akcay & Coklar, 2016). The findings obtained from the research data coincide with these results. According to the findings of the research, it was found that students could not understand the order of relationship between objects and concepts while establishing cause and effect relationship between events and had problems in making predictions or estimations in the next steps. Similarly, it was seen that students had difficulty in choosing one of the alternatives that emerged as a result of mental processes and that they could not decide which statement to use according to the result of condition statements. This finding was interpreted as students having problems in logical inference, pattern recognition and pattern building. This finding is supported by the findings of Gomes and Mendes (2007), Kinnunen and Malmi (2008). In the research, it was found that there were problems caused by sequential thinking, cyclic thinking and prior learning during the process of the programming teaching. This was interpreted as the inability of the students to predict which operation would behave in

any given cycle or step and therefore perform analysis accordingly. This result is similar to the results of studies conducted by Byrne and Lyons (2001), Esteves and Mendes (2004).

When the results of the research were evaluated, the cognitive problems experienced in the process of programming teaching were put forward within the framework of the experiences of learners and instructors. The types of solutions that can be developed for these problems can be put forward by future research. It is recommended to conduct studies in this direction.

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