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CONTENTS

THE REASONS FOR GAINING AND LOSING THE POPULARITY OF A PARADIGM IN CONSTRUCTIVISM: WHY? AND HOW?

Abstract: In the context of paradigmatic transformations, different approaches have periodically dominated in the field of educational sciences, as happened in other fields. There are views related to which the scientific paradigms are rising rapidly and falling slowly. The purpose of this study is to investigate why? and how? paradigms gain and lose their popularity. Constructivism studied as a basic paradigm in this study. In Turkey, MoNE changed the primary and secondary school curriculum based on constructivism approach which was a new concept for teachers and researchers. Within this change an increases research happened about constructivism. Because of the increase and popularity of the constructivism the researchers of this article decided to analyze this change in a paradigmatic change. The researchers collected data from researchers who studied and experienced the constructivist approach in their papers. So, this study used phenomenological approach to why, what, and how participants experienced the constructivism. The study reached the findings that the reasons why scientists start to conduct a research were "intellectual curiosity, faddism, external history, belief and authority"; the reasons of maintaining a study based on a specific approach were "development and belief", and the reasons of not continuing their study were explained as "dullness, hobbies and belief". Consequently, an approach in Turkey does not show a rapid rise and then a slow decrease, contrary to what is expressed theoretically; it can be said that it shows a very rapid uptrend and a very strong downward trend.

Keywords: Kuhn, paradigm, paradigmatic change, constructivism, paradigm shift, paradigmatic lose

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INTRODUCTION

Human history includes many periods in which certain paradigms (ideas-phenomenon/approach) dominates the scientific thoughts and works. Kuhn exegesis, The Structure of Scientific Revolutions, is arguably the most important book about the history and philosophy of science ever written (Schwartz, 2018). Kuhn (1970) defines paradigm in his book as the dominant and widely accepted theories and concepts in a particular field of study. This paradigm dominates and leads the thoughts and works because they are accepted the best way to understand the phenomena at that time. Paradigms are sometimes seen best way for thinking and gathering the people together to work but sometimes paradigm can blind the people and lead limited questions to ask for their observations. When a dominant paradigm cannot explain the phenomenon, an Anomaly occurs. Anomalies many times can not persuade the people to abandon the dominant paradigm when someone must articulate an alternative paradigm that accounts convincingly for the anomaly (Kuhn, 1970). A scientific revolution occurs when enough people in the community abandon the old paradigm and change their thoughts or works the new paradigm. This new paradigm entirely changes the thoughts of the people and they look at the world completely different view.

Kuhn (1970) used the concept of paradigm to cover all the explicit or implicit beliefs, rules, values, and conceptual / experimental tools that a particular scientific approach uses to question nature and find a whole relationship in nature. The paradigm, which dominates in a certain area of scientific study for a certain period, can lose its power over time and begins to show a tendency to fall. This paradigm changes over time and replaces with a new one.

There is no publication related with Kuhn's paradigm explaining constructivism in Turkey. There are a lot of publications in Google Scholar or other indexes about constructivism but there is no article analyzed the constructivism in the light of Kuhn paradigmatic change. The constructivist view of learning argues that students do not come to the classroom illiterate but arrive with lots of strongly cultivated ideas about how the instinctive world works (Wing-Mui-So, 2002). In the view of constructivists, students are not to be passive beneficiaries of knowledge equipped by teachers and teachers are not to be curators of knowledge and classroom managers (Fosnot, 1996). From this aspect, learning is a process of gaining new knowledge, which is active and complex. This is the result of an active interaction of key cognitive processes (Glynn, Yeany & Britton, 1991). It is also an active interaction between teachers and learners, and learners try to make sense of what is taught by trying to fit these with their own experience.

APPROACHES IN PARADIGM CHANGES

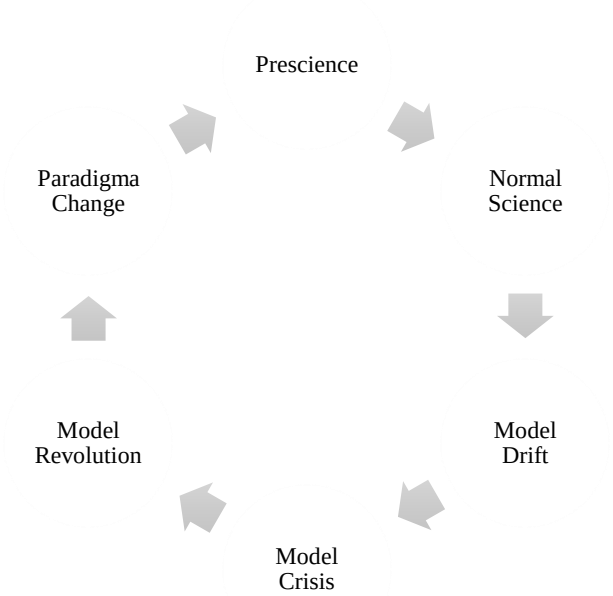
Questions such as “How are the paradigms settled?” “Why do they change?” “Why is the existing paradigm abandoned?” and “Why does a popular paradigm begin to lose its influence?” come to mind. There are different opinions from pioneering names such as Rogers (1995), Christensen (1997), Kuhn (1970) and Popper (1992) in this regard. According to Rogers (1995) about the change in the context of the paradigm, there are five reasons for accepting an innovation in the process of change. The first of these is the relative advantage, that is, the new idea or product is better than the replaced one. The second one is suitability, that is, it is more suitable for today's requirements and needs. The third one is complexity which means the new product or service is easier to understand than the older one, and thus it spreads faster. The fourth one is testability, that is, the product can be easily tested. The fifth one is observability, that is, the results of the new product can be observed by everyone.

Alterations- transformations taking place during the paradigm shift process are also described as "Disruptive innovation" by Professor Clayton M. Christensen of Harvard University (Christensen, 1997). Innovations and technologies destroy the ones used before by replacing them. Here the destructive term is used to mean "substitute". Disruptive innovation is the emergence of a product or service in any industrial field, which is not initially attracted to the attention but stubbornly stays on the scene, eventually replacing competitors' products or services and leading to a massive demolition in that industry (Behara & Davis, 2015). These are home phones which were replaced with cell phones and analog cameras with digital cameras, but not vice versa.

In education we can give some disruptive innovations examples of educational technology such as letter, newspaper, radio, gramophone, TV was replaced by now with computers, mobile phones. Disruptive innovations lead to paradigm shifts (Mbatha, 2015).

The paradigmatic transformation of Thomas Kuhn must also be examined in relation to the change of paradigms. Kuhn's paradigm might best be understood in terms of its life cycle. A paradigm is born when a "concrete scientific achievement" resolves debate over foundations, assumptions, and methods in a scientific field of inquiry (Walker, 2010: 435) Kuhn (1970) described the paradigmatic transformation as five stages in his work, The Structure of Scientific Revolutions.

Figure1. Thomas Kuhn's stage of Paradigmatic shift



Kuhn gives the classic example of Copernican model of solar system changes the Ptolemaic model and the development of Newtonian physics. The replacement of one model by another model is called "paradigm shift" (Hairston, 1982). These changes are disruptive, and it occurs when the number of unsolved problems in a discipline reaches to crisis proportions. But these changes are not widely accepted by the old paradigm followers immediately because they have intellectual and emotional investment to old paradigm. Kuhn calls this old paradigm as normal science (Kuhn, 1970). Normal science continues for a long time until some experiments start to find inconsistencies with the old paradigm. But by the time the new paradigm can demonstrate that it will solve the problems that old paradigm could not solve, the resistance to the new paradigm will be fade away. Many of the new scholars, philosophers and academicians will start to adopt the new model and research about it. The paradigm should supply to its followers with "topic, tools, methodologies and premises" (Lehnert, 1984, s.22).

In the Kuhn approach, a world in which Newton's laws are valid and a world in which Einstein's laws are valid can never be identical. The other must be wrong for one to be true. Just like capitalism and socialism in political revolutions, it can be said that this view of Kuhn is not fully accepted in the field of education. The paradigm shifts from behaviorism to constructivism did not kill or destroy behaviorism. Behaviorism is a branch of psychology that, when applied to a classroom setting, focuses on conditioning student behavior with various types of behavior reinforcements and consequences called operant conditioning.

As explained above, there are changes in scientific approaches in every period. One of the main arguments on which Thomas Kuhn's theory

is based is that scientific development is not based on a linear and cumulative process. According to him, scientific progress is not in a linear way, but it shows itself in radical changes and breaks. The reason behind these radical changes and breaks are the paradigm shifts caused by scientific revolutions (Denktaş, 2015). There is a view that scientific paradigms rise rapidly and fall slowly in the process of change (Bornholdt, Jensen and Sneppen 2011). This asymmetric situation is said to reflect how difficult it is to put out an entirely original idea when considering the ease with which the minds are subject to erosion through innumerable changes.

It is also possible to give examples to different scientific approaches or disruptive innovations competing from the field of educational sciences, which is described as paradigm by Thomas Kuhn.

Table1. Changes in Approaches in the Field of Educational Sciences

	Tendencies
Scientific Research	Qualitative → Quantitative
Psychology	Behaviorism→Cognitive→ Postmodern Therapies
Educational Administration	Effective School Movements → quality school movements → world-class school movements
Curriculum Development	Curriculum Development → Understanding Curriculum
Process of Learning	Traditional / Behavioral → Active Learning →Constructivist→ Information navigation

As seen in the Table 1. the change occurs in all dimensions of the life. As we begin this research, the question why an approach is suddenly popular has been the starting point. Again, because of the observations in academic sense it has been observed by the researcher that Constructivist approach is beginning to lose popularity. In this study, "Constructivism" was examined as a theme with priority to find out an answer to this question.

The purpose of this study is to investigate Why? and How? The constructivist approach gained and lost its popularity in recent years. Beginning by the 2005 the popularity of constructivism started the increase exponentially but after about ten years it started to lose its popularity according to some observations of the researchers. Constructivism studied as a basic paradigm in this study. In this context, the answers to the following questions were sought:

1. How does the number of publications change on the constructivist approach as a paradigm?
    1.1. How does the number of publications about constructivist approach in scientific indexes change between 2000-2016? How will this change follow in the upcoming years?
    1.2. How does the number of publications about constructivist approach changes in Turkey?
    1.3. How does the number of publications about constructivist approach changes in other countries according to the Google Trends Application?
2. What are the reasons for the change in the number of studies on the constructivist approach as a paradigm?
    2.1. Why did the researchers start studying the constructivist approach?
    2.2. Do they continue their study of the constructivist approach? Or did they quit? What are the reasons for continuing and quitting studies?

METHOD

MODEL OF THE RESEARCH

This study has been carried out using the phenomenological design. The basic principle of the phenomenological studies is that those who have similar experiences have common opinions and perceptions and the researcher treats these common perceptions as "basic characteristics" and tries to explain them (Fraenkel, Wallen and Hyun, 2012). It focuses on phenomena that we are

aware of but do not have an in-depth and detailed understanding. In the context of this study, according to our observations we are aware of the issue that constructivist approach has been popular for a certain period and has recently started to lose its popularity. This phenomenon has been investigated in terms of the data obtained from different sources within its context, depending on the selected pattern.

CONSTRUCTIVIST APPROACH AS A RESEARCH CONTEXT (PHENOMENON)

In this research, which analyses the reasons for the increase/decrease of popularity of an approach in a scientific field, “Constructivism" has been taken as a context. Concerning the teaching process, there has been a shift from the traditional approach to the constructive approach recently because of the changing paradigm in primary school curriculum by MoNE (Orakcı, Durnalı and Özkan, 2018). The constructivist approach has become one of the focuses of many researchers and thousands of studies have been done.

In 2005, primary education programs in Turkey were prepared based on the constructivist approach (Şentürk and Aydogmus, 2017). As seen above, the constructivist approach seems to have been rapidly popular in Turkey if it is considered in the context of paradigmatic transformation or disruptive innovation. As we begin this research, the question why an approach is suddenly popular has been the starting point. Again, because of the observations in academic sense it has been observed by the researcher that this approach is beginning to lose popularity. In this study, "Constructivism" was examined as a theme with priority to find out an answer to this question.

SAMPLE

In phenomenological studies, data sources are individuals and groups that live the focus of phenomenon of the research and the ones that can express or reflect this phenomenon (Fraenkel, Wallen, & Hyun, 2012). For this reason, criterion sampling was used in the study. In this context, firstly academicians who have done at least one scientific study related to the constructivist approach between 2000 and 2016 as the result of the literature search of various databases have been identified. Then, at least 10% of the academicians who studied between 2000-2005, 2006-2010 and 2011-2016 were identified. Those who have studies with one author, or two authors were preferred in this process.

Semi-structured interview form was sent as an e-mail to these academicians. Forty (40) academicians giving feedback were included in the study group. Semi-structured face-to-face interviews were also conducted with 10 researchers who responded to the semi-structured interview form via e-mail. 70% of the participants are males and 30% are females. 20% of the participants are Professors, 30% are Associate Professors, 35% are Assistant Professors and 15% are independent researchers who are not working in a university.

DATA COLLECTION

Semi-structured interview form and systematic literature review techniques were used to collect data in the study.

SYSTEMATIC LITERATURE REVIEW

Within the scope of the study, systematic literature review was used to be able to create both the working group and to reveal the change in the numbers of works on constructivism with respect to years. In this process, between 2000-2016 years, the “Google Scholar, Web of Science, ULAKBIM (Turkish Academic Network and Information Center), YÖK Thesis Search (Council of Higher Education) and EBSCOHOST databases were scanned. When the scans were carried out in the databases, they were screened based on "year". For example, the web of science was scanned with the key words “2011-2011 / 2012-2012”. Only studies carried out in the field of education were taken as a basis.

Secondly, "Google Trend" application was utilized to find search frequency. This application can be used to discover multiple search terms and terms in different languages (almost) in real time. Within the scope of this study, scanning statistics on "constructivism" taken as a cross section in the research in the world and in Turkey were calculated. The data obtained with Google Trends was downloaded to the computer in CSV format and converted into Microsoft Excel format. Later, the graphs were drawn converting data into annual data. The data obtained from each key term was combined and a whole graph was drawn.

The numbers displayed in Google Trend Apps show the total number of searches made for a term compared to the total number of searches made on Google over time. The downward-sloping line means that the relative popularity of the search term is decreasing. However, this does not mean that there is a reduction in the total number of searches made for the subject term. It only means that its popularity is decreasing when compared to other searches.

SEMI-STRUCTURED INTERVIEW FORM

It was used in the research process to determine the opinions of the working group on the topic. The form consisting of open-ended questions was examined by two specialists in their fields besides the researcher in terms of suitability for the purpose of the research. The final form was sent via mail to the working group. The questions on the form are given in the table 2. There are two semi-structured questions in the form.

Table 2. Semi-Structured Questions

Question 1: Why did you start study/studies on constructivism?
Question 2: Do you continue scientific studies on the constructivist approach (article, thesis, book, paper...)? Please explain your answer and the reasons. Yes. Because… No. Because

The interview form mentioned above in table 2 was sent to the researcher via e-mail who studied on the constructivist approach and they were asked to reply. The purpose of study was explained to most of these participants by calling.

In the scope of the study, negotiations were also conducted to reveal the in-depth implications of the phenomenon studied. Interviews are data collection processes that allow interaction, flexibility, and probing. The talks were conducted face to face, by Skype program and telephone. In the process, semi-structured interviews were conducted by asking the questions determined initially. In necessary situations, confirmation or re-interview with previous interviewees was conducted for different questions.

DATA ANALYSIS

Inductive content analysis is a qualitative method of content analysis that researchers use to develop theory and identify themes by studying documents, recordings and other printed and verbal material (Chron, 2021). As the name implies, inductive content analysis relies on inductive reasoning, in which themes emerge from the raw data through repeated examination and comparison. Inductive content analysis was applied to the data obtained from the semi-structured interview form. Analyses were carried out to reveal the meanings. First, the codes were set, and the themes were deducted. The results were presented with descriptive explanations. A situation-based approach was applied in the analysis of the data and in the presentation of the results. In the presentation of the data, the criterion of intensity (different opinion) was tried to be taken into consideration.

Regression analysis was conducted to determine the direction of change in research results in the search engine according to years. Before the analysis, it was checked whether the publications obtained in each search engine overlap. Publications from multiple search engines were received as a single. In the analysis process, the "curve estimation" process was performed to determine which model was more compatible and it was determined that it was the most explanatory model of the "cubic" model ($R ^ 2 = 0.947$). As a result of this analysis, how the change would be in the following years was tried to be predicted.

RELIABILITY AND VALIDITY

Inter-rater reliability checking was conducted by two experts by experience once an initial coding frame had been developed. The inter-rater reliability between the coders was 80%, in line with Miles and Huberman (1994) that 80% agreement on 95% of codes is sufficient for internal reliability in the study. The compliance percentage was figured out 80%. The research process for external reliability was explained in detail. The data are kept by the researcher to be shared with the ones requesting it. Participants were asked to confirm their comments after the interview for internal validity. The results of the analysis obtained were shared with some

participants. The relationship of each specified theme with other items was checked and tried to be integrated. The internal validity with the examples of direct quotations of the participants in the interview process and the external validity with detailed explanations of the research committed in the research process was tried to be enhanced.

FINDINGS

In this section, findings obtained about research questions are presented.

A time series regression analysis was conducted to determine how this change in the survey would be depending on the years ahead. The results obtained are as follows.

Table 3. Regression Values for the Suitability of the Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4661763,606	3	1553921,202	70,818	.000
Residual	263308,394	12	21942,366		
Total	4925072,000	15			

According to the findings in Table 3, the proposed model was found to be fit for analysis.

Table 4. Values of Regression Coefficients

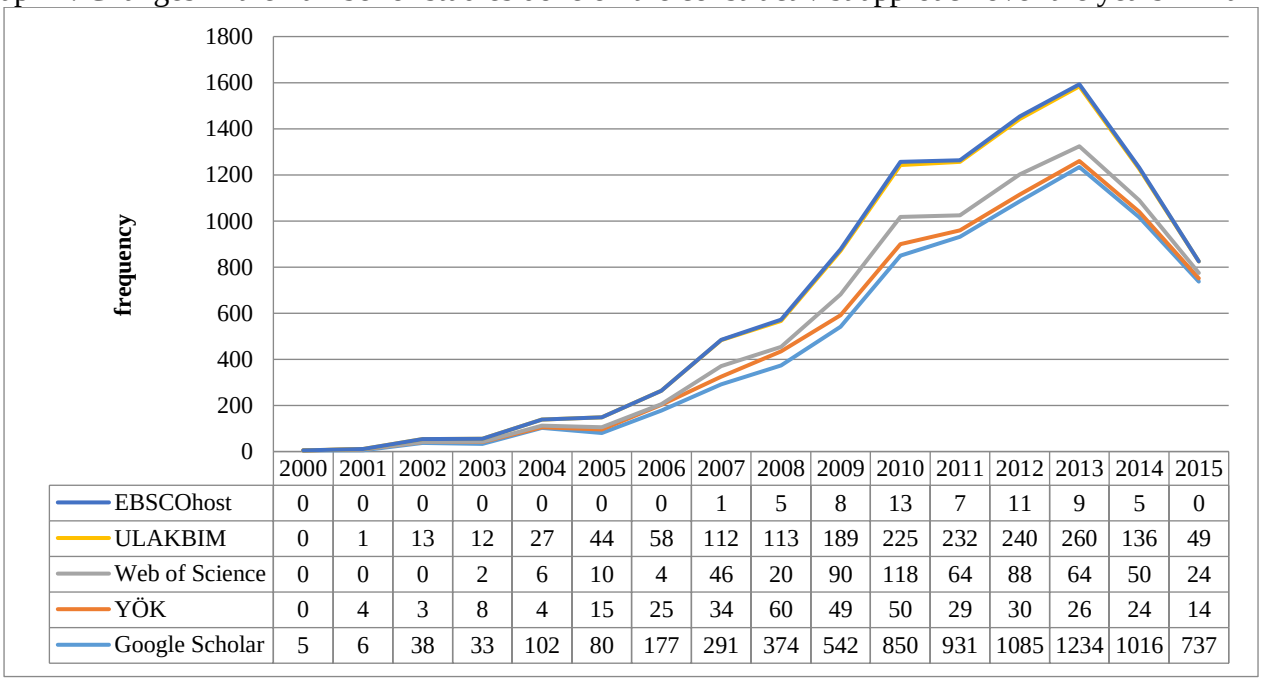
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
VAR00001	-371,999	94,342	-3,091	-3,943	.002
VAR00001 ^2	70,687	12,695	10,271	5,568	.000
VAR00001 ^3	-2,835	,492	-6,498	-5,764	.000
(Constant)	469,385	190,972		2,458	.030

Since the value of the time variable p is less than 0.005, it is a significant predictor of the number of scans. Time change formula for models is below:

Scanning number=469,385 -371,999 * time + 70,687 * time ^ 2- 2,835 * time ^ 3. Estimated number of scanning for 2016 and 2017 because of this formula estimation are given in the graph. According to the findings in the graph, there is a rapid rise and a rapid decrease, and this decrease will continue in 2017 as well.

The number of studies conducted in Turkey regarding the constructivist approach in this research question, and the changes in the number of studies by years, and the Google scanning statistics regarding this approach have been analyzed. The findings obtained from the literature analysis are presented in the following graphic.

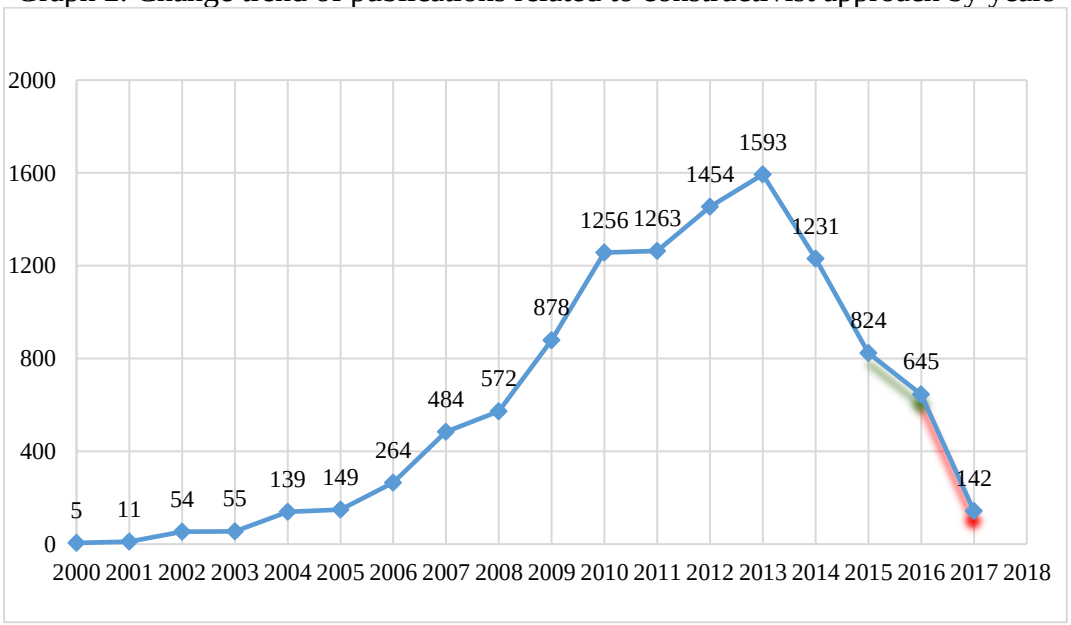
Graph 1. Changes in the number of studies done on the constructivist approach over the years in Turkey



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EBSCOhost	0	0	0	0	0	0	0	1	5	8	13	7	11	9	5	0
ULAKBIM	0	1	13	12	27	44	58	112	113	189	225	232	240	260	136	49
Web of Science	0	0	0	2	6	10	4	46	20	90	118	64	88	64	50	24
YÖK	0	4	3	8	4	15	25	34	60	49	50	29	30	26	24	14
Google Scholar	5	6	38	33	102	80	177	291	374	542	850	931	1085	1234	1016	737

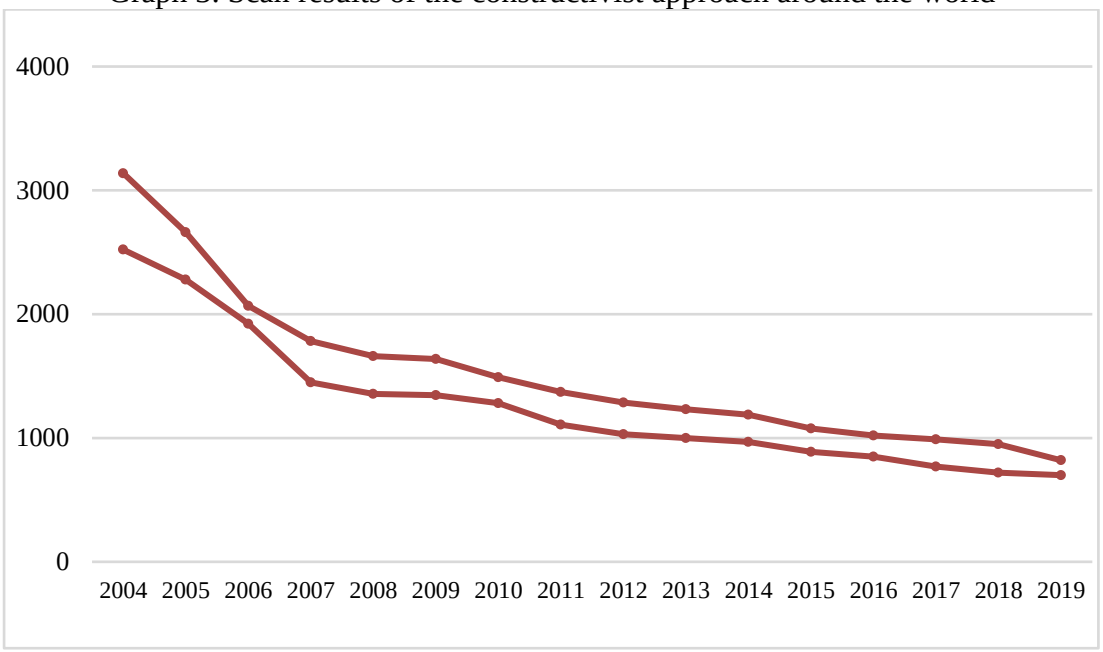
As it can be seen from the graph, it is understood that very few studies were done about this topic between 2000-2005, when the structural change in the program and learning processes in education system in Turkey were put into practice. It is observed that the rate of increase in scientific studies related to the constructivist approach is the highest in 2008-2010. It is seen that there was a standstill between 2010 and 2011 and most publications were carried out in 2013. In the same graph, it is seen that the studies related to this subject decreased dramatically after 2013 and continued in 2015.

Graph 2. Change trend of publications related to constructivist approach by years



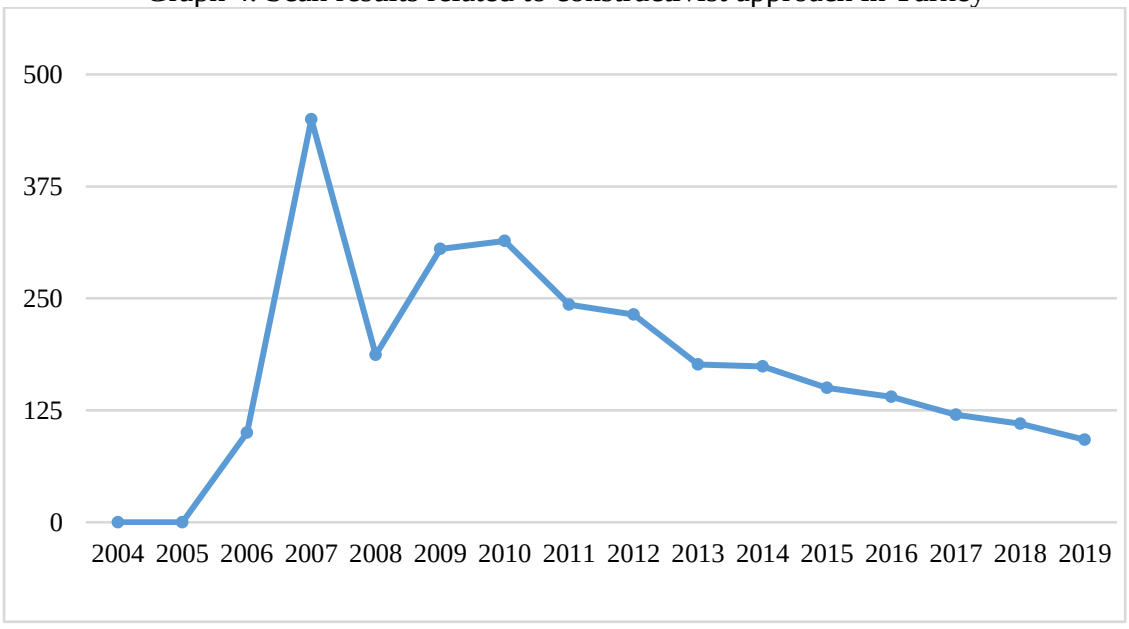
As a result, although there is an increase in the number of scientific publications in the field of education in Turkey, it can be said that there are dramatic decreases in the number of studies on constructivism and this decrease will continue in the following years. Red line was computed through regression prediction. Within the scope of the study, scanning results in this approach were analyzed using the trending Google app. The findings are as follows.

Graph 3. Scan results of the constructivist approach around the world



As it is seen in Graphic 3, the number of researches done on Google using the keywords "constructivist and constructivism" is the highest in the world in 2004 and there is a dramatic decline towards 2016.

Graph 4. Scan results related to constructivist approach in Turkey

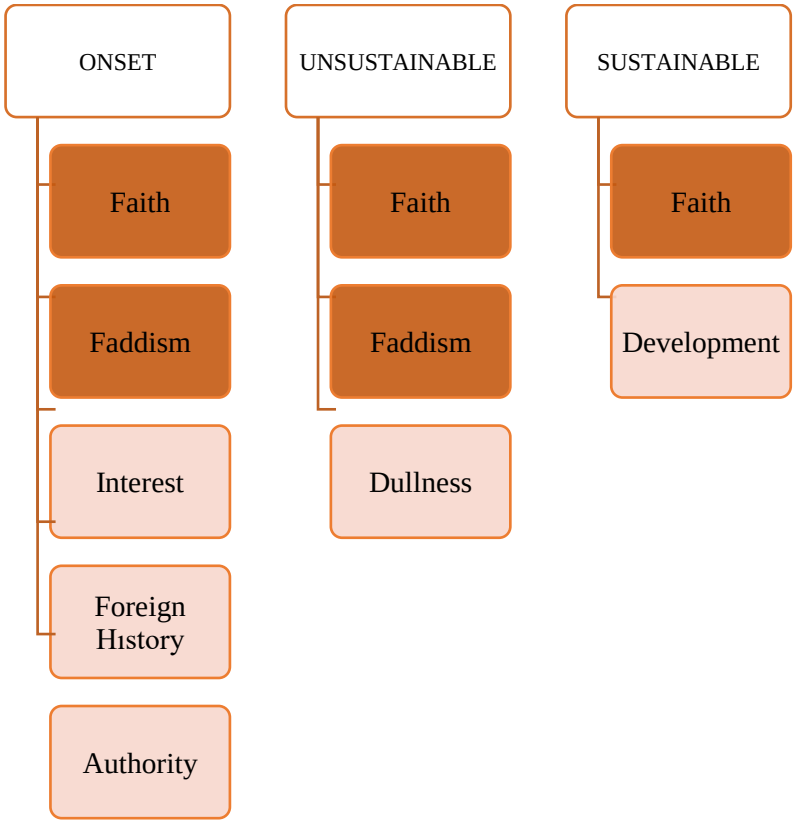


When the level of scanning made using the word "constructivist" in Turkey was examined, it was seen that there was no scanning to be included in the index in 2004-2005, but it was seen to increase very rapidly from 2006 to 2007. It was understood that there was a decline again in 2008, but it was understood that there was a rise between 2009 and 2010 again and then it dramatically decreased towards 2019. As a result, when the findings related to the number of studies related to this subject in the database and the findings related to the Google scanning indexes

were examined, it can be said that the constructivist approach had a rising popularity initially and then it decreased, or its popularity decreased.

The reasons why researchers started scientific studies on an approach and why they studied on this subject – the status and the reasons whether they continued studying on this subject were investigated. As a result of the analysis of the findings, the following themes and codes related to these questions were obtained.

Figure 2. The themes related to the reasons why scientists study on the constructivist approach, the reasons why they continue or not the studies



Loss of faith, faddism, intellectual curiosity, external history, and authority as reasons for the scientists to start study on the constructivist approach. The reasons for not continuing the studies related to the constructivist approach were found to be Loss of faith, faddism, and dullness as well as the Loss of faith and development themes related to the reasons for continuing the studies. Based on an approach, it is seen that the theme of Loss of faith is common in the dimensions of starting study, continuing the study or not. Faddism is also one of the reasons to start studying and not to continue studying. These themes and codes are explained in detail below. The findings of participants' reasons for starting the study using the constructivist approach are given below.

Table 5. Themes and Codes Related to the Reasons for Doing Constructivist Approach Studies

Theme	Code	Example Quotation
Intellectual curiosity and interest	- Curiosity - Being related to study field	*… This approach aroused my interest. For this reason, I studied on it because I was wondering … (A16)* *... I started to study because this approach is directly related to my work area … (A1)*
Faddism	-It is a new approach - Trendy - Everyone is studying on this issue - To enjoy studying current topics - To be most studied work after Literature review - To be a subject studied abroad - To be the newest approach	*I started studying on this subject because everyone in my field studied on this topic ... (A3)*
External history	- The Ministry has started to implement this approach since 2005 - Problems in implementation of the Ministry regarding the constructivist approach - To determine the degree of availability of the approach - Identifying the problems of the approach in practice - To determine the effectiveness of the approach -There are not enough studies on the implementation of this subject	*... When the Ministry of Education began to implement this approach, various problems arose. I started to work on this subject to contribute to the better implementation of this approach. (A35)*
Loss of Loss of faith	- Solving existing education problems - Problems that cannot be solved in the current level (Malformation) - Relative advantage - Suitability to today's requirements and needs - Results can be observed by everyone	*... this approach is better than the classical approach. (A23)* *I believe this approach will contribute to the problems in our country's education system. (A21)*
Authority-Guidance	- Guidance of people in authority	*.. I had to do this study because my adviser wanted me to work on this issue. (A18)*

Participants in the title of "Intellectual curiosity" theme seemed to indicate that they are working on studies based on a constructivist approach because of being newly emerged approach, curiosity about this approach and being close to study subjects they previously studied.The second theme of the participants' reasons for starting study on the constructivist approach was defined as "faddism". Many people in the field of education have made this approach popular by working on this approach.

Some participants stated that they decided to study because of reasons such as everyone has started to study on this approach, having a high trend, being in the most studied topics in the literature review. As a result of the analysis of the findings within the scope of the research, another theme was defined as "external history". Each science field has internal and external history. External history is about the relationship of problems which a country experiences with scientific activities in that country. In a country, there is "a" problem in the education system, and if there are researches on "a" in scientific fields, there is an external history of scientific activities. This indicates that the relationship between the needs of the society and scientific production has been established (Tekeli, 2012). When findings were examined in the Table 5, it was understood that some participants started to study on this

approach because of reasons such as the Ministry of Education putting this approach into practice, problems in practice, solutions to the problems in practice, and reaching the results of how to implement the approach best. In the scope of the study, the fourth theme was called "Loss of faith". Some participants stated that this approach would solve current educational problems and that their positive aspects were more favorable than other approaches (relative advantage), and that they started working on this approach because of the Loss of faith that it was appropriate for today's educational conditions and that their outcomes could be observed in a concrete way by everyone.

The final theme of the participants' reasons for starting the study on the constructivist approach was called "authority". Especially postgraduate researchers declared that they started to study on this approach because of the guidance of their advisors. In the study, the reasons that the participants continue or not their studies on the constructivist approach were searched. The findings obtained as an analysis of the collected data for this purpose are presented below.

Table 6. The Themes and Codes Related to the Status and Reasons for Resuming Work on the Constructivist Approach

Theme	Code	Example Quotation
Elaboration	- The necessity of continuing the studies to apply the approach - Good understanding of the matter - The necessity of longitudinal studies on such approaches	Further different study on the constructivist approach needs to be pursued. (A16) …I do not think this approach has been understood enough yet. Therefore, studies on this subject should continue. (A21
Loss of faith	-The approach having solved the problems	I continue to study because I believe that the study should be continued, as this approach can bring solutions to criticism in our country's education system. (A38)

According to findings of Table 6, it was determined that the views of participants who continue studies on this approach focus on 2 themes such as "development and Loss of faith". Participants seem to have continued studying on this approach because of the "Loss of faith" that it should be studied constantly, by this way the practice can be "developed" and that this approach brings solutions to the problems in the education system to be able to apply this approach effectively.

When the findings were examined within the scope of the research, it is seen that most of the participants are not carrying on their studies on this approach. As a result of our analysis of why they did not carry on their studies, 3 themes were created as "dullness, faddism, and Loss of faith" (Table 7).

It is stated that studies on this approach have not been carried on because of the reasons such as the fact that many studies related to this approach have been perceived under the theme of "dullness", the works are now perceived as being all the same, and the satisfaction given by many studies related to this approach.

It is understood that some participants stopped studying on this approach because they are now heading to more popular topics, this approach has lost its update and that is, they have found new hobbies.

It is seen that they did not study because of the "belief" that this approach could not solve the problems; the approach itself involves problems that arise from itself in practice, structure of education system and failure to implement due to anomalies in the system etc.

Table7. The Themes and Codes Related to the Reasons for not Continuing Studies on the Constructivist Approach

Theme	Code	
Dullness	- Having been studied a lot - Having been studied from all dimensions so no dimensions to study - Satisfaction - Starting to repeat research findings - Nothing new to be able to add to previous studies	I quit because there are so many studies on this approach and there is not a dimension to be investigated. (A11)
Faddism	- Directing attention to other topics - Dealing with more current topics -Having lost actuality of the approach	I directed my attention to other topics because more recent topics emerged. (A18)
Loss of fatih	- Cannot bring solutions to the problems - Anomaly in the system - Consisting problems in practice - Contextual practice of approach not being possible (political-economic etc.) - Continuation of old practices - Teachers not using this approach by focusing on exams - Inability to apply in the conditions of our country Anomaly in system	This approach has not brought solutions to the problems in our education system. So, I started to work on different subjects. (A23) Although this approach looks good, it is very difficult to implement because of the structure of our education system.

DISCUSSION AND CONCLUSION

The following results were obtained from this study in which the reasons and the extent of the increase and decrease of the popularity of an approach were researched.

As a result of the analysis of the data obtained from the survey, it was found out that there were very few studies on the constructivist approach in Turkey until 2004-2005, the number of studies started to increase rapidly after 2005, reached its peak in 2013 and it started to fall very quickly afterwards. As a result of the regression analysis carried out, the change in the constructivist approach in the databases showed a statistically linear trend and it came to conclusion that the decrease in the study numbers could continue in the next years. In the study data collected from Trend Google application reveals that the number of searches related to the constructivist approach shows a rapid increase in the world and then a decrease but the rise and fall in Turkey is more dramatic. So this approach in Turkey has a faster rise and fall. It is seen that the number of publications related to the constructivist approach has increased since 2004-2005. Blessinger, Reshef and Sengupta (2018) states that “Paradigm shifts may be the result of new knowledge being introduced into the domain through new evidence or as a result of new ways of conceptualizing or thinking about a problem or as a result of fundamental changes occurring in society”. With the implementation of the programs created by the Board of Education in 2005 based on the constructivist approach, the number of studies carried out in this regard seems to increase very rapidly. The results obtained above support the argument that the claim that "the paradigms rise rapidly but fall slowly" differed in Turkey at the beginning of the research by the researcher. As can be seen from the results, an approach rises and falls very rapidly in Turkey. This may be because of Loss of faith, faddism and losing intellectual curiosity about constructivism in Turkey.

An attempt has been made to search for an answer to why an approach begins to settle in a field. In this context, the question why the study on the constructivist approach started was asked. As a result of the analysis of the data, it has been understood that scientists started to study on this approach because of the reasons such as "intellectual curiosity, faddism, external history, Loss of faith and guidance of authority".

One of the most important characteristics that a scientist should possess is "intellectual curiosity and interest". Isaac Newton said that “I do not

know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary."An intellectual curiosity, an experimental skill, and in Ball's own words (2014),' it was defined as "The belief that you can start from anywhere to understand everything." It is noteworthy in this work that very few scientists emphasize that they have begun to work on constructivist approach by curiosity motive which is defined as a virtue and the main factor of the development of science and scientific thought. In the research, "external history" is the main reason for scientists to start working based on constructivist approach. Every science field has its own internal and external history. External history is about the relationship of problems in a country where scientific activities are living in that country. In a country, there is "a" problem in the education system, and if there are researches on "a" in scientific fields, there is an external history of scientific activities. This indicates that the relationship between the needs of the society and scientific production has been established (Tekeli, 2012).

With the preparation of programs in the field of educational sciences in Turkey based on constructivist understanding, there has been a great increase in the studies carried out on this subject. It can be explained in this way that the participants have started to study on the constructivist approach because of the implementation start of this program from 2005, problems in the implementation of this approach, and so on. What is interesting and expected here is that the educational system is influenced by the developments in the academic world, while the academic field in Turkey is influenced by the education system. Scientists should research and find out the suitability of the conditions of Turkey and apply them in education systems. However, after the application starts, the rightness or wrongness of it is researched and revealed.

One of the most remarkable results in the research is that scientists are "faddism" among the reasons to start working on a scientific approach. Under this theme, it has been determined that scientists started to work on this approach because of being new, trendy, everyone's working on this subject, being the most sought theme in review of literature, and having pleasure in studying new topics. Hallinger (2003) states similar thoughts about academic faddism that "Leadership models in education are subject to the same faddism that is apparent in other areas of education. Today's favourite brand is soon replaced by another". He says instructional leaderships at schools shaped much of thinking without critics in 1980s. As one of our biggest deficiencies as a country, we make "importation of information" in the field of information as it is in every area.

Another theme among the reasons for starting studies on the constructivist approach is "Loss of faith". Tellis (2017) states that Darwin evolution theory is still in impact because many people believe that theory could explain many things. In this study, it was found out that scientists believe that the constructivist approach can bring solutions to the problems and the anomalies in the education system and that it is more appropriate for today's conditions. In addition, some scientists have a belief in Rogers' view (1995) that this approach is better than the other approaches (relative advantage). Defining scientific revolutions as the replacement of the tradition of making an old science, Kuhn (1970) suggests that the choice between opposing views of science is largely a socio-psychological process. According to Thomas Kuhn (1970), the direction of scientific progress can change with the beliefs and socio-cultural structures of scientists. From this point of view, the scientific process we claim to create unquestionable results is in fact can change direction with our subconscious, attitudes, and decisions.

In the research, "development and belief" themes were found as reasons for the scientists to continue their study on the constructivist approach. Some scientists who do constructive approach-based research have the perception that this approach should be developed, and study should be continued in order to better understand the approach. Others continue studying on this approach, since they sustain the belief that this approach solves the problems after they have studied on this approach. The views of scientists on the need to continue their study on an approach they believe will bring solutions to the problems are appropriate behaviors for the perpetual structure of science.

All social scientists want to produce interesting and influential studies (Gray & Wegner, 2013). But by the times passed research articles run the risk of turning into a commodity: standard, mass-produced and ultimately boring and dull (Grey, 2010). Most scientists have found that they do not continue their study on the constructivist approach and the reasons for this are “dullness, faddisms and Loss of faith for not sustaining it. The most notable theme among the reasons why scientists quit working on the constructivist approach is "dullness”. The fact that many studies have been done about this approach and the research findings have almost reached saturation, and the addition of something new to previous studies draws the scientist to dullness thus they study other subjects because of being satisfied enough with these studies. When the studies on constructivism are analyzed (some research results), it seems that there are many similar results. “Faddism” theme is also among the reasons for the abandonment of work based on an approach. The tendency of scientists to turn to other issues and the view that the approach has lost its update are among the reasons for abandoning an approach. According to Kuhn (1970), it is necessary for a person to have a tradition that he knows well enough to oppose to be able to innovate.

Whether it is in art or in science, innovation cannot be created in the void; it is done by opposing old traditions. From this point of view, those who are deeply committed to a certain mode of science can make radical changes ... this is the paradox or "dialectic" friction of the foundation of science… successful research requires deep commitment to the status quo. Considering this view, it is not anticipated that scientists who are enthusiastic about constantly studying in different fields because they are current and who are constantly considering scientific studies as hobbies can do effective studies. It has not been a coincidence that scientists changed study subjects constantly as a hobby in a system that changed 76 education ministers in 93 years between 1923 which was the declaration date of the Republic and 2016, and 15 structural changes in education system in 13 years.

Other theme which is among one of the reasons for not continuing studies on an approach is “Loss of faith”. Concerns over the quality, objectives and ends of many scientific outputs and increase research overload in terms of scientific outlets and research publications (Donsbach, 2006) could be changed the beliefs of the researchers about the paradigm. Scientists stated that they quitted studying due to fact that this approach which they studied did not solve the problems, that the anomalies in the system prevented this, that the approach was theoretically appropriate, but it involved problems in practice and that the old approaches remained effective in the education system. In the study, in which teachers' beliefs about learning were analyzed by Bay and others (2013), they found that even though teachers adopted the constructivist approach, they still had to resort to behavioral approaches in practice. In other words, although the constructivist approach seems to be applied, it has been determined that this approach cannot be applied due to reasons such as the examination system, teachers' epistemological beliefs, etc.

The same processes are valid for those who worked by applying a constructivist approach. The fact that there are problems in practice despite the belief as being theoretically effective may prevent the studies from being carried out in this respect. Despite the increase in scientific research, the decrease in the studies on constructivism is proportionally higher than in the previous year. This shows us that the number of studies on constructivism has declined dramatically compared to the increasing number of scientific studies.

Consequently, an approach in Turkey does not show a rapid rise and then a slow decrease, contrary to what is expressed theoretically; it can be said that it shows a very rapid uptrend and a very strong downward trend. And in future we can predict the decrease will continue in coming years.

Recommendations

By comparing this study with different cultures, identities, similarities, and differences can be revealed. This study can be expanded with wider participants and considering different variables or phenomenon. It can be better to understand if the future researchers study a different phenomenon

in education in the context of paradigm shift. It can also be studied interdisciplinary.

LIMITATIONS OF THE STUDY

In this study, only "Constructivism" phenomenon was studied. The research data are limited to the publications related to the case between 2000 and 2016. The publications in the research are limited to the studies in the specified databases.

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THE RELATIONSHIP BETWEEN GRIT AND EMOTIONAL INTELLIGENCE IN UNIVERSITY STUDENTS

Abstract: The purpose of this research is to explore the relationship between grit and emotional intelligence among university students. The study group was composed of 230 students studying at Konya Selçuk University during the 2017-2018 academic year. Among them, 22 were female students, 208 were male students, 123 were students in the first year and 107 were students in the second year. The Short Grit Scale (Sarıçam, Çelik & Oğuz, 2015) and the Trait Emotional Intelligence Scale-Short Form (Deniz, Özer & Işık, 2013) are part of the study. These were methods of data collecting. The Pearson Product Moment Correlation Methodology has examined whether grit and emotional intelligence have a significant connection. Multiple regression analysis tested emotional intelligence's predictive value. It has been determined that there is a significant and constructive correlation between grit and emotional intelligence, according to the findings. The significance of the coefficients of regression is tested and it is shown that emotional intelligence's total score, self-control and emotionality are important predictors on grit.

Keywords: Grit, emotional intelligence, university students, the pearson product moment correlation methodology.

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INTRODUCTION

While emotions are common to all individuals, people express, organize and use their emotions differently (Petrides & Furnham, 2003). In various emotional intelligence definitions, properties such as understanding and using emotions to facilitate thoughts and manage emotions for emotional development stand out (Brackett, Mayer & Warner, 2004). In the explanation of emotional intelligence, two separate models are commonly used. Salovey and Mayer's mental capacity model is the first of these models (1990). According to this model, emotional intelligence is defined as the ability to process information about the thoughts and emotions of others. It is also the ability to use this understanding as a reference for the thoughts and acts of one (Salovey & Mayer,1990). The other model is the model of traits. As for features, emotional intelligence mainly deals with the understanding of the emotional environments and personal skills of individuals. The traits of emotional intelligence (EQ) are understood as emotion-related self-perceptions and are rooted in the concept of personality. In the use of perception, manipulation, and control, the attribute of EQ emphasizes personal tendencies and also involves characteristics that contribute to one's own internal assessment. Revealing itself in those actions or traits, such as consistent attitudes, confidence, assertiveness, self-expression and empathy in various situations (Petrides & Furnham, 2001).

Individuals with a high EQ have the personal knowledge required to identify their important aspects and have a range of mechanisms to deal with challenging circumstances in terms of the analytical and evaluative features of EQ. High EQ allows people to select adaptive methods and minimize and substitute negative emotions with positive emotions (Mikolajczak & Luminet, 2008). Individuals with high emotional maturity are more capable of acquiring, using, knowing, and handling the emotions of their own and others and promoting life satisfaction and subjective well-being. In addition, people with higher EQ are better able to regulate their emotions, evaluate social signals, and establish social relationships, and are more welcomed by others (Mavroveli, Petrides, Sangareau, & Furnham, 2009). In addition, high EQ people are excellent at stress management and assessment, as well as describing and controlling their emotions (Petrides & Furnham, 2001). Emotion management skills is related with a tendencey to get an experimentally induced pozitive mood which has obvious impkicatios for preventing burn out (Alnaggar,2014). Individuals with high EQ are people that are more effective in demonstrating their results and have more satisfaction with life and less dissatisfaction (Petrides & Furnham, 2000).With regard to emotional intelligence in some studies done, it has been found that emotional intelligence is related to psychological resilience (Özer & Deniz, 2014), forgiveness and perfectionism (Kaya & Peker, 2016), core self-evaluation and life satisfaction (Özer, Hamarta & Deniz, 2016), domain specific creativity (Şahin. Özer & Deniz, 2016), stress and coping styles in university students (Deniz & Yılmaz, 2006), burn out (Alnaggar,2014), problem solving abilities (Karabulutlu, Yılmaz & Yurttaş, 2011), communication skills (Çetinkaya & Alparslan, 2011), Managing Stress and Anxiety (Demershdah,2012), job performance (Mohammed, 2015), Perfectionism (Saracaloğlu, Saygı, Yenice, & Altın, 2016). There are also studies determined to the mediating role of emotional intelligence. For example, perceived social support and cyberbullying victimization (Elkady, 2019),conscious awareness and psychological well-being (Deniz, Erus, & Büyükcebeci, 2017). In terms of their emotional intelligence, the purpose of this study is to analyze the grit variable in university students.

Together, the EQ trait and holding on to a target build an interrelated method. The features of people with high emotional intelligence, such as making every effort to be efficient and effective, who do not hesitate to do more challenging tasks, to deal with the difficulties they face, are very similar to the features found in gritty people. In Positive Psychology, Grit, a significant term, is characterized as a trait that corresponds to the strength of patience and perseverance. Duckworth, Peterson, Matthews, & Kelly (2007) modelled grit and described it as a successful personality attribute.

As a definition, grit implies the determination by individuals of long-term ambitions, and the engagement and dedication they sustain in achieving the future they want to have, translating this ambition into action without giving up on

their goals. Grit is important as a characteristic of attitudes and behaviors of an individual (Duckworth and Quinn, 2009).

Grit consists of two blocks of buildings:

1- Passion: the desire of a person in a particular job to conquer obstacles; desire, eagerness and determination; a special reason to which one is committed; and excitement for long-term goals (patience and perseverance). Grit comprises the long-term interests of a person and the associated short-term purposes and behavior.

2- Persistence: goal-oriented efforts, continuity of efforts (to make sacrifices for this purpose, even in difficult times, and to devote time and energy to long-term objectives), to work hard and to sustain effort and interest, to complete the work begun, and to gain pleasure from missions accomplished.

Determined people (those with grit) have good self-control, can resist their impulses and concentrate on their future objectives, and are persistent in pursuing long-term personal, academic and professional objectives. In addition, these types of people concentrate heavily on their task at hand, pay great attention to actively working, and assume that high-quality work and goods should be made (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011). In the absence of constructive feedback, highly determined individuals set long-term targets and do not give up on them (Duckworth et al., 2007).

In addition, these people reflect on the elements that they can improve in their lives rather than on those they can not, and they aspire to achieve their goals, become more inspired by participating in events, find purpose in life as opposed to pleasure, and have a high sense of gratitude (Kleiman, Adams, Kashdan, & Riskind, 2013), life satisfaction (Li, Fang, Wang, Sun and Cheng, 2018).

They are people who, instead of ignoring or delaying them, prefer to deal successfully with ongoing stressful circumstances and strive to address these situations directly and proactively (Burkhart, Tholey, Guinto, Yeo, & Chojnacki, 2014). In tough times and circumstances, they strive hard towards their long-term goals and maintain their promises. People with long-term ambitions and values that can fulfill them have more optimistic attitudes towards themselves (Maddi, Erwin, Carmody, Villarreal, White and Gundersen, 2013).

personality, in that it affects the manners, A new definition in positive psychology was Grit, which is a component in this research, which was studied for a relatively short period. There are also small numbers of studies with university students, conducted in Turkey. It was concluded that grit is significantly related to life satisfaction (Akbağ and Durmuş, 2017), depression, anxiety and stress (Özhan and Boyacı, 2018), academic success and motivation (Reraki, Çelik and Sarıçam, 2015; Beyhan, 2016), the level of happiness (Ekinci & Hamarta, 2020), strengths, self-efficacy and psychological resilience (Çelik, Sarıçam & Sönmez, 2018).

As the literature is reviewed, no study has been seen to establish that the two factors that are grit and emotional intelligence are examined together. In terms of their emotional intelligence, this present research is to analyze the grit variable in university students and to contribute to the literature. Within the scope of this aim, examining the relationship between the sub-dimensions of the grit variable – "Consistency of Interest (CI)" and "Perseverance of Effort (PE)"– and the sub-dimensions of the trait emotional intelligence variable – "Well-being (WB)", "Self-Control (SC)", "Emotionality (EM)" and "Sociability (SOC)" – was tested.

METHOD

RESEARCH DESIGN

This study was designed as a correlational study to establish the relationship between the related variables using quantitative methods (Karasar, 2005). Correlation studies analyze the relationship between two or more variables (Fraenkel, Wallen, & Hyun, 2011; Karasar, 2005). This research examined the relationship between grit and EQ variables.

STUDY GROUP

The study group was made up of 230 students studying at Konya Selçuk University during the 2017-2018 academic year. Among them, 22 were female and 208 were male, with 123 being first year students and 107 being second year students.

Table 1. Demographic Information of the Participants

		Number
Gender	Woman	22
	Men	208
Class	1st year students	123
	2nd year students	107
Total		230

DATA COLLECTION

In this study the Short Grit Scale (Grit-S) developed by Duckworth and Quinn (2009), translated by Sarıçam, Çelik and Oğuz (2016) and Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF) developed by Petrides and Furnham (2000, 2001) and adapted by Deniz, Özer and Işık (2013) to Turkish were used as methods for data collection.

THE SHORT GRIT SCALE:

The Short Grit Scale (Grit-S) was developed by Duckworth and Quinn (2009). This scale encompasses 8 items and two subscales; consistency of interest (four items; e.g. "I often set a goal but later choose to pursue a different one") and perseverance of effort (four items; e.g. "I am a hard worker"). Each item was rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). It was adapted to Turkish by Sarıçam, Çelik & Oğuz (2015). The goodness of fit index values of the model were (χ 2 /df=2.06, RMSEA= .046, CFI=.95, GFI=.94, AGFI=.93, SRMR=.047).

Significant relationships (r=.68) between the Motivational Persistence Scale (Constantin, Holman & Hajbota, 2011) and the Short Grit Scale was investigated in the concurrent validity. Cronbach's alpha internal consistency coefficient was found as .83 for the whole scale, .80 for sub-dimension of consistency of interest, .71 for sub-dimension of the perseverance of effort. The test-retest reliability coefficient was .69 for the whole scale. Corrected item-total correlations ranged from .33 to .65 (Sarıçam, Çelik & Oğuz, 2015).

Trait Emotional Intelligence Questionnaire–Short Form (SF): Trait Emotional Intelligence Questionnaire-SF form was developed by Petrides and Furnharm (2000) and it was adapted to Turkish by Deniz, Özer and Işık (2013). This form can be applied within groups and independently to determine the degree of perception of the person related to emotional

competence. The high point of the total scale shows that emotional skills are perceived to be high and the low points mean that emotional skills are perceived to be low. Positive correlations were backed by the language validity and equivalence of scale through the points obtained from Turkish forms.

In order to test the structure validity of the scale, a four-factor structure (well-being self-control, emotionality and sociability) with 20 elements was obtained as a result of explanatory factor study. The results of the confirmatory factor analysis to understand whether this structure was nicely obtained on the basis of the sample data showed that the sample agreement in which the scale was used was fine. The all of the internal consistency

reliability coefficient scale of TEQue-SF was founded as 0.81 and test-retest reliability coefficient was found as 0.86 (Deniz,Özer & Işık,2013).

DATA ANALYSIS

A number of different rules govern the determination of sample size; these include the following: it should be at least 200 (Kline, 2015); or N> 50 + m (number of independent variables) (Tabachnick & Fidell, 2012); or at least 10 times the number of observed variables (VanVoorhis & Morgan, 2007), or over 200 in large samples, with the chi-square value being at a significant probability level (Schumacker & Lomax, 2010); or the minimum sample size for the maximum likelihood method should be between 100 and 150 (Hair et al., 2006). In the present study, after satisfying the relevant assumptions, the sample size was determined as 230. The data group was tested to determine whether there was any missing data. Completion of the end value analysis

showed that there were no missing data in the study group. After determining extreme values, the z-scores were checked to identify whether any data were deviating beyond the +3 or -3 data points.

"Mahalanobis Distances" were calculated to determine the multivariate extreme values. Only one missing value without a multivariate extreme value was removed from the research data set. Univariate and bivariate normality tests were used to test multivariate normality. The Kolmogorov Smirnov (KS) test was applied for univariate normality. A significance level above .05 indicates that normality is not achieved. If the KS test results do not show normality, then the skewness and kurtosis coefficients are examined, and if the skewness coefficient is between +1 and -1, this indicates that univariate normality is achieved. Except for the SOC variable, which the KS test results showed not to have significance when the coefficients of skewness were examined (CI=-.11 PE=-.97, SC=-.27, EM=-.22, S0C=-.12, WB=-.41), univariate normality was observed, as these values were within the range of +1 and -1. In the scattered diagram matrix created to confirm bivariate normality, a linear relationship was observed between the pair of variables. Variance inflation factor (VIF) and tolerance values were examined under the control of the multicollinearity assumption (Cohen, Cohen, West, & Aiken, 2013). Given that the VIF value was not equal to or greater than 10 and the tolerance value was not smaller than .10 (CI=-1.298/.770, PE=-.1.361/.735,SC=-1.503/.665, SOC=1.236/.809,
EM=1.216/.822,SOC=1.224/.817,
WB=1.269/.788) it was confirmed that there was no multi collinearity problem in the study.

RESULTS

The Pearson Product Moment Correlation Technique has tested whether there is a positive connection between grit and emotional intelligence. Table 2 provides the results of the monitoring of these relationships.

Table 2. Pearson's Correlation Levels Regarding the Relationship Between Grit and Emotional Intelligence

		Well-being	Self-control	Emotionality	Sociability	EQ Total
Grit	r	.333***	-.015	-.001	.225**	.274***
Total	p	.000	.828	.984	.001	.000
Score	N	230	230	230	230	230

***p<.001

It has been determined that there is a significant and positive relationship between the variables of well-being (r = .333, p <.001), sociability (r = .225, p <.01) and emotional intelligence total score (r = .274, p <.001), and the varible of the grit total score. Accordingly, it is understood that while the total scores of well-being, sociability and emotional intelligence increased, the total score of grit also increased. Multiple regression analysis evaluated the predictive power of emotional intelligence, and the findings are given in Table 3.

Table 3. Multiple Regression Analysis Results Regarding the Determination Power of Emotional Intelligence

Variable	B	Standart Error	β	t	p	Binary	Partial Error
Constant	20.612	2.132	-	9.670	.000	-	-
Well being	-.057	.122	-.058	-.469	.639	.307	-.034
Self control	-.446	.133	-.378	-3.363	.001	-.038	-.236
Emotionality	-.309	.124	-.239	-2.488	.014	.026	-.177
Sociability	-.141	.147	-.116	-.962	.337	.232	-.069
EQ Total	.277	.088	.748	3.138	.002	.274	.221

$R=.410, R^2=.168, F(5,192)=7.770, p=.000$

When Table 3 is examined, it is seen that the variable of emotional intelligence has a high level and significant relationship with grit (R=0.41, R2=0.17, p<.001). Accordingly, emotional intelligence explains 17% of the total variance in grit. The relative significance order of predictor variables on grit is as follows, according to the standardized regression coefficient (β); total score of emotional intelligence, self-control, emotionality, sociability, well-being. When the t-test findings on the significance of the regression coefficients are tested, it is shown that total score, self-control and emotionality of emotional intelligence are important (significant) predictors on grit.

DISCUSSION AND CONCLUSION

In terms of their emotional intelligence, the main aim of this research is to analyze the grit variable in university students. The results of the study showed that in university students there is a connection between grit and emotional intelligence (EQ). There are a few studies in the literature that explicitly examine the relationship between emotional intelligence and grit (Hamilton, 2020; Brown, 2017).

It was concluded that there is a connection between emotional intelligence and grit in the study conducted by Hamilton (2020). The path of emotional intelligence and grit can be established with applications, guidance and training (Hamilton, 2020). Furthermore, the finding of a significant relationship between grit, growth attitude and emotional intelligence confirms the study's results (Brown, 2017).

The results of this study are consistent with different research findings that explore the relationship between grit and self-control, which is the EQ sub-dimension. The findings of the current research showing a close link between "self-control" and grit are confirmed by the results of the Duckworth et al. study (2007). Their studies have shown that highly gritty people set long-term goals and do not give up on them, even in the absence of constructive feedback (Duckworth et al., 2007). It is an anticipated outcome that these individuals with grit have features such as strong self-control, emphasis on their future goals, and are vigilant in pursuing long-term personal, academic, and professional goals.

In addition, these types of people concentrate heavily on their tasks at hand, pay great attention to working tirelessly and feel that high-quality work and goods should be made (Duckworth, Kirby, Tsukayama, Berstein & Ericsson, 2011). Gritty individuals strive tirelessly toward their long-term ambitions and, in times and circumstances of hardship, keep their promises. People with long-term objectives and values that will fulfill them have more optimistic attitudes toward themselves (Maddi, Erwin, Carmody, Villarreal, White & Gundersen, 2013). The results of another study are close to these outcomes. Gritty people concentrate on the elements they can improve in their lives rather than on those they can not, and they are more inspired by participation in events to achieve their goals (Kleiman, Adams, Kashdan and Riskind, 2013). Other study results have supported this inference. Individuals with long-term ambitions and values have a more optimistic outlook towards themselves to

accomplish this, which has a positive effect on their satisfaction with life (Özhan and Boyacı, 2018). Similar research findings have shown that grit is one of the important predictors of young adults' subjective well-being (Akbağ and Ümmet, 2017). Findings from other research, such as a significant positive relationship between the levels of grit and happiness (Hamarta & Ekici, 2020), a significant positive relationship between the confidence in self-efficacy and the level of grit of individuals (Çelik, Sarıçam, Sönmez, 2018), a positive relationship between emotional intelligence and character strength (Morente, Mora, Nadal, Belled and Berenguer, 2018), are close to the study findings. Gritty people who prefer to deal successfully with ongoing difficult circumstances rather than avoiding or delaying them, and who strive directly and proactively to overcome these situations (Burkhart et al., 2014). In people with high emotional intelligence, similar characteristics are seen. High EQ individuals are excellent at stress control and assessment, as well as describing and controlling their emotions (Petrides & Furnham, 2001). Individuals with high EQ have a good propensity to see the better sides of the situation in the event of unpleasant circumstances. Besides, they have insight into how to deal with the negative situation in question. High EQ helps people select coping strategies and minimize and substitute negative emotions with positive emotions. Similarly, gritty people when dealing with a negative situation use adaptive coping strategies.

SUGGESTIONS

Such research adds to the area in which a positive relationship has been formed between EQ and grit. Although these two variables are being evaluated together, there have been no other instances of such studies like this. Therefore, this outcome can be extended both theoretically and functionally to literature. Based on the findings, implementations can be arranged to increase awareness of the importance of sub-dimensions of emotional intelligence (self-control, sociability, emotionality, and well-being). The literature claims that grit can be produced as a characteristic (Duckworth, 2016). For preventive and therapeutic purposes of psychological counselling, different services and practices can be designed for grit. Activities can be coordinated to raise awareness among students of the significance of sub-dimensions of emotional intelligence (self-control, sociability, emotionality and well-being) in grit. To improve self-control skills, which are very important for their academic, social and emotional development, various motivating strategies can be used.

There are certain drawbacks to this study. As this thesis is being carried out with students studying at a university in the province of Konya, the generalizability of the analysis may be at issue. Therefore, related studies involving students from various universities and faculty are suggested.

Grit was a new concept in positive psychology, one of the variables in this research, which was researched for a relatively short period of time. In Turkish culture, there is also a small amount of grit-covering research carried out. It is therefore considered important to equate the results with studies to be carried out in various cultures.

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INVESTIGATING EDUCATION FACULTY STUDENTS' VIEWS ABOUT ASYNCHRONOUS DISTANCE EDUCATION PRACTICES DURING COVID-19 ISOLATION PERIOD

Abstract: In this study it has been aimed to evaluate the asynchronous distance education practices applied during the Covid-19 isolation period in an education faculty. Research sample was constituted of 1444 undergraduate students studying at an education faculty in a state university. Data have been collected with "Questionnaire for evaluation of distance learning applications". The obtained data were subjected to descriptive statistics and chi-square analysis. As a result of research, it was determined that undergraduate students were partially satisfied with asynchronous distance education and that there was a positive correlation with the satisfaction of having computer and internet. In the research it was seen that students considered it to be insufficient for distance learning to enable motivation and permanent learning. Besides, it was determined that students preferred face-to-face learning to distance learning and that after the isolation period they expected to proceed with face-to-face learning. Based on the results of the research, it was suggested that distance education should be carried out by blending synchronous and asynchronous application, increasing interaction and paying attention to the workload.

Keywords: Covid-19, asynchronous distance education, students' views.

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INTRODUCTION

Humans who have their place in communal life as a social being, live together with other people and have continuous interaction with them. This situation causes for people to share same physical environments, to benefit from tools and equipment which are shared more and to have more physical contact. As originating from interaction had among people who share the same environment and have various contacts with each other, various diseases can be seen in communities. By means of developments had in education, technology and health areas, diseases seen in communities are treated and it is avoided for them to be spread. However even though it is rare, developments experienced in the era lived do not always reveal same impact in the treatment of diseases and may not avoid their spreading. Epidemic diseases spreading of which can not be avoided are considered as pandemic.

Pandemic defines contagious, epidemic diseases that can affect very wide geographies and all people and cause deaths in animals or humans (Aslan, 2020). Covid-19 virus that was first seen in Wuhan, China at the end of 2019 turned into a pandemic, created a danger all over the world, prompted the administrations to take some measures and caused people to stay at home for a while. Education sector is one of the most affected by this pandemic (Telli Yamamoto and Altun, 2020). Covid-19 made it difficult to realize face-to-face education and put all education administrators in the world in a difficult situation (Özer, 2020). In this context, in order to reduce the spread of the virus, face-to-face education has been suspended almost all over the world and the learning style of more than 1.5 billion students has been changed (Erkut, 2020; OECD, 2020; Telli Yamamoto and Altun, 2020). In this respect, distance education has been introduced in terms of not completely interrupting education during the pandemic process, maintaining education and especially complying with social distance. So much so that even countries that did not establish or use the necessary infrastructure before had to switch to distance education. In fact, distance education has become the only option in most countries in this process, and these countries have aimed to use distance education more actively and make it compulsory due to the possibility of not being able to start face-to-face education again (Telli Yamamoto & Altun, 2020). Thus, the way teaching is carried out, teacher-student interaction and communication has changed (Kırmızıgül, 2020).

Distance education, which dates back to the 19th century, is a teaching system where teachers and students do not have to be in the same environment, can be present in different environments, physically far from each other and where information technologies are used at the highest level (Adıyaman, 2002; Akdemir, 2011; Barış, 2015; İşman, 2011). In this respect, distance education is bringing teachers and students in different environments together with information technologies, interacting with learning with video and audio, and sharing content and material (Al and Madran, 2004; Ally, 2008; İşman, 2011; Simonson, Smaldino, Albright and Zvacek, 2009). In other words, distance education is an education system that removes the space and time limitation by using information communication technologies and multimedia applications and provides individuals with global communication and learning independently from these (Akdemir, 2011; Çelik and Perçin, 2020; Etlioğlu and Tekin, 2020; Gülbahar, 2009; İşman, 2011). In brief, distance education is seen as an alternative way in education in terms of learning environment, usage of educative and technical tools and materials (Akbaba, Kaymakcı, Birbudak, & Kılcan, 2016). In this context, it sometimes supports formal education and sometimes becomes an education system on its own (Al & Madran, 2004). Geographical distances, disadvantaged groups and social imbalance have caused this education to become widespread (Kan & Fidan, 2016). Distance education is used as a basic teaching model especially in extraordinary situations such as the Covid-19 pandemic.

Distance education has many benefits for educational processes. The most important of these is that regardless of a specific place and time, students are enabled to use of resources and materials easily to the extent they want, teach lessons with new and different teaching methods, and report the effectiveness of students and teachers within the system (Al and Madran, 2004; Belcheir and Cucek, 2002; Gaebel, Kupriyanova, Morais and Colucci, 2014; Kırık, 2004; Kocatürk Kapucu and Uşun, 2020; Solak, Ütebay and Yalçın, 2020; Uzun, 2013). In this respect,

distance education provides education opportunities to more individuals of all ages, individuals with disabilities, who have limited educational opportunities or have difficulty in reaching this opportunity, and provides education according to individual pace (Adıyaman, 2002; Altıparmak, Kurt and Kapıdere, 2011; Çelik and Perçin , 2020; Kırık, 2004; Yenal, 2009). In addition, lessons can be watched and reinforced in distance education (Kan and Fidan, 2016). In addition, by establishing virtual classrooms and laboratories, the physical deficiencies of the education system can be overcome, and qualified teachers can be brought together with a large number of students (İşman, 2011). Thus, distance education ensures that education spreads throughout the society (Hızal, 1983), reaches all members of the society (Durnalı & Koşar, 2019), lifelong learning and equality of opportunity in education is achieved (Adıyaman, 2002; Yenal 2009). In addition, distance education is one of the most active and enriching learning environments (Miltiadou & Yu, 2000). It provides learners with rich resources and enjoyable lesson environments (Odabaş, 2004) and reinforces the subject visually and aurally (Kırık, 2004). According to Al and Madran (2004), distance education has advantages such as customization, student-centered management and low cost. According to Isman (2011), distance education allows students to work independently, individually and in cubic form. In this context, it makes students realize the responsibility of their learning and enables them to gain more (Odabaş, 2004; Öztaş & Kılıç, 2017).

Distance education has both advantages and disadvantages. The most frequently stated disadvantages are technical problems and the inability to open the system due to this, poor quality of teaching, not being suitable for applied subjects, and the scarcity of courses, lack of interaction, communication and internet (Altıparmak et al., 2011; Birişçi, 2013; Doğan & Tatık, 2015; Ilgaz, 2014; Kalelioğlu, Atan and Çetin, 2016; Kan ve Fidan, 2016; Karatepe, Küçükgençay and Peker, 2020; Kurtüncü and Kurt, 2020; Öztaş and Kılıç, 2017; Sümer, 2016). However, in distance education, students' participation in classes, their regular follow-up (Akbaba et al., 2016), and their concentration level are low (Kalelioğlu et al., 2016). On the other hand, Can (2020) stated that participation in live lessons is low and students use more written materials. In this respect, it can be stated that students sometimes find distance education time consuming and boring (Powers & Mitchell, 1997). In addition, communication and sense of community are reduced in distance education, immediate support and feedback cannot be provided, and students cannot be supported by pre-learning on issues they are inadequate (Akbaba et al., 2016; Etlioğlu & Tekin, 2020). In this case, students are worried about using the process, cannot follow up regularly (Yıldız & Seferoğlu, 2020) and have difficulty in adapting to the process (Telli Yamamoto & Altun, 2020).

In order for distance education to reach its purpose and be effective, it must have some features. In this context, students should be provided with an easy-to-use system, access to computer and internet, enriched instructional design, teacher, peer and technical support (Beaudoin, Kurtz, & Eden, 2009; Concannon, Flynn, & Campbell, 2005; Güney, 2011; Kalelioğlu et al., 2016; Kan ve Fidan, 2016; Selim, 2007; Soong, Chan, Chua, and Loh, 2001; Venkatesh and Davis, 1996). In addition, students' interest in technology and their use skills should be increased (Telli Yamamoto & Altun, 2020) and their cognitive, affective, physical and social characteristics should be taken into account (Smith & McNelis, 1993). Erkut (2020) stated that distance education should be student-centered, triggering active learning, and include different techniques, practices, examples, and games. In addition, the interactive lesson environment should be increased, and lesson times should be shortened (Beaudoin et al., 2009; Kalelioğlu et al., 2016; Kan and Fidan, 2016). Thus, students should be able to participate more actively in the lessons in distance education (Karaman, Özen, Yıldırım, & Kaban, 2009). Hence, the instructors should be pedagogically and technically equipped (Kalelioğlu et al., 2016) and have sufficient knowledge and skills about information communication technologies (Sae-Khow, 2014). During distance education, especially teachers should fulfill various essential pre-requisites and they must be fully familiar with all distance education technology (Mallik & Mallik, 2017). In addition, pedagogical support should be provided to them for creating, using and presenting content for distance education (Telli Yamamoto & Altun, 2020). In addition, teachers and students should care about communication, work in a disciplined way and complete their studies on time (Kalelioğlu et al., 2016) and

should have self-confidence towards using relevant technology in this era (Demirdag, 2016).

As a result of the rapid development of information and communication technologies, the increasing individualization of education, the increase in the number of individuals who want to receive education, and the differentiation of educational needs, distance education is demanded more (Kan & Fidan, 2016). As a result, distance education is spreading rapidly in higher education (Akdemir, 2011). Today, there is distance education research and training center in 120 universities in Turkey (YOK, 2020) and many universities benefit from distance learning (Steel and Rivet, 2020). In the Covid-19 pandemic, rapid decisions and measures were taken and distance education was introduced in most of the higher education institutions in Turkey (Telli Yamamoto & Altun, 2020). However, in the first plan, asynchronous teaching was used especially because synchronous application was more difficult in the transition to distance education (Telli Yamamoto & Altun, 2020). Considering the advantages and disadvantages of distance education, it is considered important to evaluate this application in higher education. Because, in order for distance education to be effective and to increase its quality, students' opinions about the process should be taken, the deficient aspects of the process should be determined and arrangements should be made regarding this (Sae-Khow, 2014; Uzun, 2013).

In this context, in this study, it was aimed to evaluate the asynchronous distance education applications in higher education during the Covid-19 isolation period. In this respect, it can be stated that this research will contribute to the literature and will be important in terms of revealing the effectiveness of the process, results and recommendations for improvement. In line with this purpose and importance of the research, the following questions were sought:

1. What are the perceptions of undergraduate students regarding asynchronous distance education applications?
2. What is the education preference of undergraduate students regarding the post-Covid-19 isolation period?

METHOD

In the study, it was aimed to evaluate the distance education applications carried out asynchronously in higher education during the Covid-19 isolation period. To achieve the purpose of the research; in this research structured in accordance with the quantitative research approach, singular survey model, which is one of the general survey models, was used. The general survey model, which is expressed as the surveys made on the sample taken from the entire universe or a part of the universe, is carried out to reach a general judgment and conclusion about a universe consisting of many elements. The singular survey model under the title of general surveys model is a model in which variables belonging to the unit and situation such as the event of interest, group are tried to be described separately. These descriptions may be limited to the past or present, or they can be developmental as a function of time. As a matter of fact, in the singular survey model, besides instantaneous situation determinations, process changes and developments can also be determined (Karasar, 2004). In this study, the views of undergraduate students studying at a faculty of education about the asynchronous distance education practices applied in the Covid-19 process were tried to be determined by survey method by reaching a large sample. In the study, the relationships of independent variables with student views were also examined.

SAMPLE

The universe of the research consists of 4214 undergraduate students studying at a faculty of education in a state university in the spring semester of the 2019-2020 academic year, in Turkey. The sample was determined from within this population by using simple random sample selection among the probabilistic sample choices. Since the sample is chosen randomly in this method, the probability of selecting each element is equal (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2016; Çepni, 2010; Ekiz, 2015). Thus, the sampling represents the universe in the best way, it allows generalizations about it, and therefore this method can be used primarily in survey studies (Büyüköztürk et al., 2016; Creswell, 2016). In this respect, the sample of the study consisted of undergraduate students who were randomly accessed from the universe and completed the "Evaluation of Distance Education Applications Questionnaire" online voluntarily. Sampling information is given in Table 1.

Table 1. Background Information of Participants

Variables	Categories	N	%
Gender	Female	1140	78,9
	Male	304	21,1
Subject Area	Primary Education	194	13,4
	Pre-School Education	183	12,6
	Science Education	123	8,5
	Mathematics Education	59	4,1
	English Teaching	81	5,6
	Special Education Needs	180	12,5
	Social Sciences	164	11,4
	Turkish Teaching	125	8,7
	Arts Education	179	12,4
	Music Education	68	4,7
	Psychological Guidance and Counselling	73	5,1
	Computer and Instructional Technologies Teaching	15	1,0
Grade Level	First year	235	16,3
	Second year	396	27,4
	Third year	431	29,8
	Fourth year	382	26,5
	General Total	1444	100,0

As seen in Table 1, the sample consists of 1444 students studying in 12 different programs in the faculty of education. Considering the margin of error (.05), it can be stated that the sample size is quite appropriate considering that the sample should be at least 322 in the population of 2000 (Çıngı, 1994). As can be seen from the table, there are participants from all grade levels and different branches. Most of these participants (78.9%) are women. In addition, most of the students have their own computer (67.7%) and internet connection (76.7%). Participants were found to be partially satisfied (48.3%) with the university's distance education application in general.

DATA COLLECTION AND ANALYSIS

The data of the study were collected through the "Evaluation of Distance Education Applications Survey" developed by the researchers. While developing this questionnaire, firstly the literature was comprehensively reviewed and questionnaires and scales evaluating distance education were reached. In line with the detailed examination of these data collection tools; Question items were created regarding the undergraduate students' views on the emergence of Covid-19, how they spent their time during the isolation period, their asynchronous distance education and post-isolation learning preferences. Subsequently, it was decided that the items should be in triple rating type as "agree, undecided, disagree". The questions prepared in this way were presented to the opinion of three experts and necessary arrangements were made in line with their feedback. In the final survey; there are a total of 30 items such as; 3 regarding the emergence of Covid-19, 7 on how time was spent during the isolation period, 14 on asynchronous distance learning applications and 6 on post-isolation learning preferences.

The research data were collected on the internet. In this regard, first of all, the final questionnaire was transferred to the internet and transformed into an electronic questionnaire. Then the questionnaire was shared with the students and the data of the research was obtained with voluntary participation. These data obtained were subjected to descriptive statistics and chi-square analysis. The data are presented with frequencies and percentages by using descriptive statistics the chi-square analysis was used to determine the relationship between the participants' having their own computer and internet and their distance education satisfaction. As a result of these analyzes, the data are presented under six headings and in tables.

FINDINGS

In this section, the views of education faculty students on the emergence of Covid-19, how they spend time at home during the isolation process, their assessment of asynchronous distance education, the relationship of distance learning satisfaction with having a computer and internet, and the results of the analysis conducted to determine their learning preferences after the isolation period and comments on them are included.

IMPACT OF ISOLATION PERIOD ON THE TIME SPENT BY EDUCATION FACULTY STUDENTS AT HOME

The data about the effects of the Covid-19 isolation period on the time spent by education faculty students at home is presented in Table 2.

Table 2. Impact of Isolation Period on the Time Spent by Education Faculty Students at Home

Actions	Increased		Non-changed		Decreased		N	%
	f	%	F	%	f	%		
Reading books	613	42,5	683	47,3	148	10,2	1444	100
Listening to music	759	52,6	505	35,0	180	12,4		
Watching TV	648	44,9	573	39,7	223	15,4		
Listening/watching news	1157	80,1	224	15,5	63	4,4		
Playing computer game	289	20,0	883	61,1	272	18,9		
Studying lessons	727	50,3	348	24,1	369	25,6		
Personal development works (Foreign language, computer)	536	37,1	678	47,0	230	15,9		

It is understood from Table 2 that the time spent by students for listening to music (52.6%), watching TV (44.9%) and listening / watching news (80.1%) during the Covid-19 isolation period has increased. Especially the increase in students' listening / watching the news can be explained by the fact that they follow the developments regarding the pandemic process. It can be stated that the increase in TV viewing also supports this situation. As seen in Table 3, students stated that they studied more during the process (50.3%). This situation can be explained by the asynchronous conduct of the distance education process and more time spent following the lecture notes of the students and carrying out their research assignments. In addition, it is seen in Table 3 that the time spent by students for reading books (47.3%), playing computer games (61.1%) and self-improvement activities (47.0%) does not change. In summary, it can be stated that the time spent by students to follow the developments regarding the pandemic and to study due to distance education has increased, but there is not much change in the duration of other daily activities.

EVALUATIONS OF EDUCATION FACULTY STUDENTS RELATING WITH DISTANCE LEARNING

The evaluations of the education faculty students regarding the asynchronous distance education applications applied during the Covid-19 isolation period are presented in Table 3 below:

Table 3. Evaluations of Education Faculty Students on Distance Learning

Opinions	I agree		I am indecisive		I don't agree		N	%
	f	%	F	%	f	%	1444	100
Distance learning is more effective than face-to-face teaching.	120	8,3	167	11,6	1157	80,1		
Distance Education is not motivating enough to follow the lesson.	1097	76,0	177	12,2	170	11,8		
It is advantageous for the student as the distance education material can be viewed repeatedly.	796	55,1	274	19,0	374	25,9		
Since materials can be used repeatedly in distance education, the need for educators decreases in the medium term.	451	31,2	380	26,3	613	42,5		
While distance learning offers advantages, it cannot be a better alternative than face-to-face education.	1192	82,6	135	9,3	117	8,1		
The reliability of measurement and evaluation activities in distance education is low.	969	67,1	262	18,1	213	14,8		
Distance education makes the student more active in terms of its applications.	388	26,9	285	19,7	771	53,4		
Distance learning provides a good learning opportunity for students.	252	17,5	337	23,3	855	59,2		
Distance education ensures that learning is	173	12,0	303	21,0	968	67,0		

permanent.								
Success in distance education depends more on the student's efforts.	1018	70,5	218	15,1	208	14,4		
Distance education is more effective than traditional education.	140	9,7	263	18,2	1041	72,1		
If there was a distance education option in my department, I would prefer it.	161	11,1	149	10,3	1134	78,6		
Face-to-face interaction is required for the best training.	1207	83,6	145	10,0	92	6,4		
Distance education increases success.	130	9,0	292	20,2	1022	70,8		

It can be seen from the Table 3 above that most education faculty students do not find distance education conducted asynchronously more effective than face-to-face teaching. As a matter of fact, the students stated that distance education cannot be an alternative to face-to-face teaching (82.6%), they would not prefer it if there was a distance learning option (78.6%) and that face-to-face interaction was required for effective learning (83.6%). The participants stated that distance education could not provide motivation (76.0%), could not enable them to be active in the course (53.4%), could not provide effective learning opportunity (59.2%), permanence of learning (67.0%) and could not increase success (70.8%). they think. In addition, students think that the reliability of measurement and evaluation in distance education is low (67.1%) and students should make more effort (70.5%). Participants think that distance education has the advantage of being able to watch the teaching material over and over again (55.1%). However, they stated that this situation would not decrease the need for teachers (42.5%). In summary, it can be stated that education faculty students find asynchronous distance education behind face-to-face education in many aspects.

LEARNING PREFERENCES OF EDUCATION FACULTY STUDENTS FOLLOWING ISOLATION PERIOD

The learning preferences of the education faculty students after the Covid-19 isolation period are presented in Table 4.

Table 4. Learning Preferences of Education Faculty Students Following Isolation Period

Opinions	I agree		I am indecisive		I don't agree		N	%
	f	%	f	%	f	%	1444	100
Distance education should not be used unless it is compulsory.	988	68,4	235	16,3	221	15,3		
The classical system should be essential, distance education should only be used as a supportive one.	1122	77,7	192	13,3	130	9,0		
All of the theoretical courses should be conducted with distance education, applications and exams should be done face to face.	265	18,3	287	19,9	892	61,8		
Theoretical lessons and exams should be done remotely and applications should be done face to face.	329	22,8	272	18,8	843	58,4		
Theoretical and possible practical courses and exams should be done remotely.	374	25,9	197	13,6	873	60,5		
Distance education should continue after the corona	215	14,9	177	12,3	1052	72,8		

When Table 4 is examined, it is understood that the education faculty students expect discontinuation of distance education (72.8%) after the Covid-19 isolation period. Students also consider distance processing of theoretical lessons or theoretical topics of lessons and exams in a negative way. Even, the participants stated that distance education should not be used unless it is compulsory (68.4%). However, teacher candidates stated that distance education should only support face-to-face education (77.7%). In summary it can be stated that education faculty students consider face-to-face education as fundamental education form and they will prefer it to distance learning

and they consider distance learning as supportive to face-to-face education in required cases.

In general, the participant student teachers were asked that whether they are satisfied with asynchronous distance education given by the university overall. Responses given to this question are presented in the Table 5 below:

Table 5. Participants' Satisfaction About Distance Education Overall

Are you satisfied with the distance education application of the university?	Responses	n	%
Are you satisfied with the distance education application of the university?	Yes	250	17,3
	Partially	698	48,3
	No	496	34,4

As can be seen from Table 5 above that most of the students (48.8%) expressed that they were "partially" satisfied with asynchronous distance education service provided by the university. In addition, a considerable number of participants (34.4 %) responded that they were not satisfied at all while only 17.3% of participants were happy with the application of asynchronous education.

DISCUSSION, CONCLUSION AND SUGGESTIONS

In the study, it was revealed that undergraduate students stated that the time they spent to study during the isolation period increased and they put in more efforts for their lessons. It can be stated that this situation is related to the asynchronous execution of the distance education process and students spend more time following their lecture notes and doing their homework. As a matter of fact, the most negative aspect of distance education according to undergraduate students is that it takes more time than face-to-face learning (Belcheir & Cucek, 2002). Powers and Mitchell (1997) also found that students find distance learning time consuming. In this context, although it provides independence from time and makes the process practical, it can be stated that students spend more time than face-to-face teaching, especially due to the workload of asynchronous distance education. Hence, majority of undergraduate students think that distance education increases the workload (Keskin & Özer Kaya, 2020). In addition, it was determined in this study that undergraduate students watched more TV and news during their isolation period. Keskin and Özer Kaya (2020) also revealed that undergraduate students' watching time for television doubled during the pandemic process and that they followed the process related to the pandemic. Hayır Kanat and Görgülü Arı (2020) determined that television is the most used media tool to get news about the pandemic process. In this context, the fact that students watch more TV and news during the isolation process can be explained by following the developments regarding the process.

In the research it was determined that students considered distance learning as being less effective than face-to-face teaching and would not prefer it if they had options, and they thought that this teaching could not be an alternative to face-to-face teaching. In some studies examining the effectiveness of distance education applied during the Covid-19 isolation period (Erkut, 2020; Karadağ & Yücel, 2020; Karatepe et al., 2020; Keskin & Özer Kaya, 2020), undergraduate students were not satisfied with this practice, their motivation for this application was low and it was found that they had negative attitudes in this respect. This situation can be explained by a sudden decision and an unprepared transition to distance education. Because effective distance education requires long preparation (Erkut, 2020). Hence, Covid-19 isolation period has shown that distance learning infrastructures of universities in Turkey are not prepared for extraordinary processes and effective learning and they need to be developed and that they have not met criteria specified by Higher Education Board for years (Can, 2020; Erkut, 2020; Karadağ and Yücel, 2020). It can be stated that undergraduate students are not satisfied with the distance education applied before the isolation period. For example, according to Barış (2015), undergraduate students' attitudes towards distance education are low. Baran, Kılıç, Bakar, and Çağıltay (2010) determined that very few undergraduate students want to study only by distance education. Dick, Case, and Burns (2001) found that undergraduate students were distance from distance education and saw this teaching as a second option. This

negative opinion of undergraduate students about distance education can also be associated with the asynchronous execution of the process. Because undergraduate students think that there should be more live lessons for qualified distance education (Duban & Şen, 2020; Karahan, Bozan, & Akçay, 2020; Uzun, 2013). As a matter of fact, it has been determined that students look more positively and adapt easily to distance education supported by synchronous applications (Drennan, Kennedy and Pisarski, 2005). In this context, it can be stated that distance education should be carried out in a blended manner using both synchronous and asynchronous methods in order to achieve its purpose and be effective (Bozkurt, 2020; Karahan et al., 2020; UNESCO, 2020).

In the study, it was determined that undergraduate students thought that effective learning would be through face-to-face interaction, that distance education was insufficient in this regard, that it could not provide effective and permanent learning, could not make themselves active and could not improve their success. In various studies (Akbaba et al, 2016; Birişçi, 2013; Kalelioğlu et al, 2016; Karatepe et al, 2020; Kan and Fidan, 2016; Keskin and Özer Kaya, 2020; Kürtüncü and Kurt, 2020; Sümer, 2016) deficiency of distance learning regarding face-to-face interaction, discussion of students with their teachers and peers were emphasized. In this context, for effective distance education, the learning environment should be improved, more interaction, support and feedback should be provided (Beaudoin et al., 2009; Kalelioğlu et al., 2016; Yıldız and Seferoğlu, 2020). Expectation of undergraduate students is also in this direction (Karahan et al., 2020; Uzun, 2013). In this respect, this expectation of students should be taken into account in the distance education process. Because this situation can also affect students' motivation. As a matter of fact, it was determined in this study that distance education could not provide the motivation of undergraduate students. Karatepe et al. (2020) also revealed that prospective teachers' motivation for distance learning courses is low. In addition, Kalelioğlu et al. (2016) found that students had difficulty in concentrating and distracted in distance education. It can be stated that the fact that students find distance education insufficient and that this teaching is mostly conducted asynchronously has an effect on this situation.

As a result of the research, it was determined that undergraduate students found the reliability of measurement and evaluation in distance education low. Kürüncü and Kurt (2020) also found that almost all undergraduate students do not trust exams in distance education. In addition, in this study, it was determined that undergraduate students would not prefer to take the exams remotely. Solak et al. (2020) determined that associate degree students would prefer face-to-face exams to distance exams. It can be stated that the way the exams are conducted and the controllability of the exams in distance education are effective in the students' thinking in this way. As a matter of fact, it has been determined that students are generally not satisfied with the way distance education is conducted. The students were satisfied that only the learning material of distance education could be watched repeatedly. Kan and Fidan (2016) also drew attention to this situation and stated that the lessons can be watched and reinforced in distance education. In this context, it can be stated that repeatability provides convenience for students and is the preferable feature of distance education.

In the study, it was determined that undergraduate students do not look positively towards distance education after the isolation period and they want to continue with face-to-face teaching. Perhaps in higher education students need more time for web-based instruction in order to develop self-regulated learning skills (Uysal & Gündoğdu, 2019). In addition, it has been determined that undergraduate students think that distance education should not be used unless it is compulsory. Students think this way for both theoretical and applied courses. This result of the research supports the literature. As a matter of fact, Karatepe et al. (2020) determined that teacher candidates do not think distance education will be the main education of the future and are not willing to use this teaching in the future. However, it was determined that undergraduate students would prefer face-to-face education to distance education (Kalelioğlu et al., 2016), they consider distance education as a second option (Dick et al., 2001), and very few of them want to study with this education (Baran et al., 2010). Even undergraduate students expect an accelerated repetition of applied courses after the isolation period. (Kürtüncü and Kurt, 2020). In the research, it was determined that undergraduate students see distance education as a supporter of face-to-face

teaching. Orhan (2008) also determined that most of the students want distance education to be conducted together with face-to-face education. Because distance education is not a competitor of face-to-face education but a supporter of it (Al & Madran, 2004). In this respect, it can be stated that distance education is seen by undergraduate students as a system that will support face-to-face education and be used in compulsory situations. In line with these results of the research, the recommendations can be made as follows:

- Possibly, more synchronous applications and interactive environments in distance education should be provided.
- Care should be taken not to increase the workload of students in distance education applications.
- The reliability of measurement and evaluation activities in distance education should be increased.
- By contacting the relevant institutions, students can be supported in providing computers and internet.
- Research can be conducted in which synchronous distance education applications are evaluated. Thus, it can be compared with this and different research results and more convincing evaluations can be made regarding the application of distance education.

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THE EFFECTIVENESS OF SOMATIC EXPERIENCE BASED STABILIZATION PROGRAM FOR REFUGEE WOMEN'S POST-TRAUMATIC STRESS, MINDFULNESS AND SOCIAL SUPPORT LEVEL

Abstract: This quasi-experimental study examines the effects of the Somatic Experience Stabilization Program (SESP) on post-traumatic stress, mindfulness, and social support levels among refugee women. This study was conducted with 22 women who applied to a non-governmental organization for social and psychological support. Impact of Event Scale Revised (IES-R), Mindfulness Attention Awareness Scale (MAAS) and Multidimensional Scale of Perceived Social Support (MSPSS) were utilized for pre-test, post-test, and follow-up tests. While experimental group received a six-session SESP intervention developed by the researcher, control group received no intervention. SESP for refugee women was found to be significantly effective in decreasing post-traumatic stress and increasing mindfulness and social support levels. The effects of the program persisted during the follow-up test.

Keywords: Somatic experience, trauma, refugees, mindfulness, social support

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INTRODUCTION

The issue of refugees has been seen as a problem for many countries in light of the various civil wars and turmoil taking place in the Middle East in recent years (Kap 2014). Since the start of the Syrian Civil War in 2011, 6.7 million people have escaped the country seeking protection (UNHCR 2019). Most of these (approximately 3.7 million) have since remained in Turkey for temporary protection (Directorate General of Migration Management 2020). Refugees are at high risk in terms of developing mental health problems due to pre, peri and post-migration distress and traumatic experiences, such as torture, impoverishment etc. (Heeren et al. 2012; Ibrahim and Hassan 2017). The magnitude of these traumatic experiences varies in terms of gender, age, education and self-esteem. In other words, being a female with low self-esteem and having less education puts one at greater risk to post-traumatic stress disorder (Buhmann 2014; Pumariega et al. 2005). Many studies indicated that women's vulnerabilities are so much during times of traumatic events such as war and natural disasters etc. (Bradshaw and Fordham 2015; Mondal 2014). In addition, it is reported that refugees have 10 times more post-traumatic stress disorder than normal populations (Fazel et al. 2005). Syrian refugees in Turkey show a higher rate of post-traumatic stress disorder (Acartürk et al. 2018; Kaya et al. 2019).

Refugees with post-traumatic stress experience an intense sense of loss including a loss of security, identity and future, and lack an ability to look back and predict the future, control their own lives, and lack hope, personal strength; in short, whatever belongs to them is considered fleeting (Figley and Kiser 2013; Kalmanowitz 2016). In addition to these, trauma experienced by refugees is often described as complex trauma due to the long-term effects and multiple threats faced by refugees (Courtois 2008). Thus, refugees with complex trauma have a higher degree of external control (Koch and Weidinger-von der Recke 2009) and they do not wish to talk about their experiences (Van der Kolk 2006), showing somatic distress, such as pain (McGrath et al. 2020; Rometsch et al. 2020). Furthermore, they carry the trauma of their experiences in their bodies (Fuchs 2004; Kandel 2006). In line with this, trauma is described as a psychophysical experience, even when the traumatic event does not harm one physically (Rothschild 2000; Van der Kolk 2015).

To understand the body, it is important to understand how the brain functions. The brain, from bottom to top, consists of three parts: the reptilian brain, limbic system and neocortex. The reptilian, located in the brain stem, is responsible for survival actions such as sleeping, breathing, bodily sensations, pain, perceiving danger and determining a danger response, or "fight, flight and freeze." While the limbic system is responsible for emotions and emotional experiences, the neocortex is responsible for thought and verbal expression, executive functioning, and self-awareness. In secure situations, all parts of the brain work harmoniously and hierarchically. In the case of danger, the neocortex is shut off, and the reptilian brain and limbic system are activated. That is why traumatic events are recorded in implicit memory. Thus, to understand trauma and its effects on the lives of refugees, the somatic approach must be understood (Ament-Lenke 2018; Van der Kolk 2015) as the best way to deal with the trauma. One somatic-based approach is 'Somatic Experiencing®' (SE®).

SE® is a short-term, body-centred, flexible psycho-biological approach developed to reduce negative effects and symptoms of trauma and chronic stress (Levine and Frederick 1997). The approach is psychobiological in the SE works with the nervous system and especially autonomic nervous system (ANS) (Levine 2010, 2015; Payne et al. 2015). According to Levine and Frederick (1997), in a threatening life situation, the ventral path of the parasympathetic system of ANS first comes into play and individual tries to regulate nervous system by seeking social relations/help. However, if the stimulation of the threat experienced by the individual is high and the ventral path of the parasympathetic system of ANS cannot cope with this threat through social interaction, the sympathetic system of the individual is stimulated in the ANS and the ANS turns to the fight/flight response depending on the type of life they have experienced. However, sometimes the sympathetic system of ANS of the individual may not be able to give the fight/flight responses because the trauma is very sudden or social conditions will not allow it. In this case, the ANS goes into an emergency alarm state to

protect the body and can show the freezing response in the dorsal line of the parasympathetic system, which is the most primitive response. The freezing response protects the individual at that moment but causes the energy of the individual's reactions to the threat to accumulate and become trapped in various parts of the body. Thus, trauma and chronic stress cause the individual to experience a loss in the self-regulation capacity of the nervous system. Losses in self-regulation capacity cannot provide discharge due to the energy stimulation in the nervous system, and the energy that does not discharge affects our nervous system as well as causes disruptions and an integrative failure in the three brains in our central nervous system; reptile, limbic system and neocortex (Levine 2010, 2015).

In this context, SE® directs chronic stress and trauma experienced by the individual to the internal sensations (internal organs, musculoskeletal system) in terms of their conscious awareness, completing the reactions that the body cannot complete in a stressful situation and enabling the discharge of the accumulated energy and re-integrative operation of the three brains in the central system and the nervous system. It aims to regain its self-regulatory capacity (Levine 2010, 2015; Payne et al. 2015).

In SE®, to be aware of the body, inner sensations and experiences, individuals monitor and recognize body stimulus (numbness), experience them (resolution of numbness) and accompany them. These experiences of body awareness are also related to the mindfulness levels of the individual (Mehling 2016; Tihanyi et al. 2016). Mindfulness, defined as monitoring inner experiences in the present moment, paying attention to what is happening here and now, noticing the nature of one's awareness and responding to the environment without judgment (Kabat-Zinn 2003), includes the continuous and repetitive observation of whole inner body sensations (Bishop et al. 2004). The observation of inner body sensations leads to body awareness (Kattenstroth 2009; Tihanyi et al. 2016). In addition, both mindfulness and body awareness can increase self-regulation (Levine 2010, 2015). Previous studies showed mindfulness-based therapy decreases post-traumatic stress disorder and increases the mindfulness level of refugees (Kalmanowitz and Ho 2016; Reebs et al. 2020). Moreover, social relations are also crucial for self-regulation in SE® (Levine 2010, 2015). Social support provides traumatized individuals with social resources and reduces the feeling of loneliness and post-traumatic stress (Cryder et al. 2006; Tedeschi and Calhoun 2004). Also, many studies that have shown that social support decreases the post-traumatic stress level in refugees (Palic and Elklit 2011; Stewart et al. 2010). In particular, strength-based group programs studying with refugees meet the need for community healing among the refugee population (Drozdek and Bolwerk 2010; Im and Rosenberg 2016) as refugees come from collective cultures and feel a loss of their communal identity due to trauma. It has been stated that group programs for refugees provide to rebuild group identity (Drozdek and Bolwerk 2010; Verreault 2017). In line with this, some research has shown that group programs for refugees are more effective compared to the individual therapy (Bass et al. 2011; Block et al. 2018). Furthermore, many studies that show the effectiveness of the SE® approach working individually in various traumatic experiences such as following the 2004 tsunami (Parker et al. 2008), war (Brom et al. 2017), tornados (Leitch et al. 2009), earthquakes (Leitch and Miller-Karas 2009), specialists working with post-traumatic stress disorder (Winblad et al. 2018) and those with painful disorders (Andersen et al. 2017). Several studies working with SE have shown that group programs are effective in decreasing post-traumatic stress (Briggs et al. 2017; Taylor and Saint-Laurent 2017). In SE® group programs, individuals firstly must deepen focus on tracking felt sensations and their nervous system then they meet others. Group professionals monitor the nervous system on the multiple levels of the group organism and support both individuals and groups to enlarge their capacity for traumatic experiences (Taylor and Saint-Laurent 2017). Some studies based on different types of somatic-based therapies, such as dance movement therapy (Arroyo 2018; Koch and Weidinger-von der Recke 2009), the somatic-focused approach (Hinton et al. 2006) and body awareness therapy (Nordbrandt et al. 2020) indicated the effectiveness of somatic approach working individually in decreasing the post-traumatic stress level of refugees. A few somatic-based group programs working with refugees,

particularly women, have had an effective role in decreasing post-traumatic stress levels (Verreault 2017). All somatic-based approaches working with trauma start to work on stabilization. Stabilization is the prerequisite to working on traumatic experiences (Levine 2015; Verreault 2017).

In all the studies mentioned above, there has not been one that show the effectiveness of SE in refugees, particularly female refugees except one qualitative study interviewing four psychotherapists trained in mind-body based approach that worked with adult refugees (Ament-Lenke 2018). Thus, this study is the first to show the effectiveness of SESP among refugee women. The programs based on the somatic approaches (non-verbal and resource oriented) were cross-culturally adapted to conduct with refugees easily (Gray 2011; Koch and Weidinger-von der Recke 2009; Zehetmair et al. 2018). Moreover, the program of the study is structured and is open for the benefit of specialists working in the field, including those based in non-profit organizations, training centres, and guidance centres. Thanks to its holistic perspective and refugee-focus, the program provides a unique contribution to the literature. With this in mind, the current study aimed to examine the effects of SESP for refugee women's post-traumatic stress, mindfulness and social support level. The study tested the following hypotheses to reach these aims.

HYPOTHESES

H_1: The SESP for refugee women will be significantly more effective in decreasing the post-traumatic stress levels of experimental group than the post-traumatic stress levels of control group, and this effect will be sustained in two months following the completion of the program.

H_2: The SESP for refugee women will be significantly more effective in increasing the mindfulness level of experimental group than the mindfulness levels of control group, and this effect will be sustained in two months following the completion of the program.

$H_{3:}$ The SESP for refugee women will be significantly more effective in increasing social support of experimental group than the social support levels of control group, and this effect will be sustained in two months following the completion of the program.

METHOD

RESEARCH DESIGN

This quasi experimental study examines the effects of SESP on refugee women's post-traumatic stress, mindfulness, and social support levels. In the Table 1, the first factor shows the independent functional groups (experiment and control), while the other factor shows repeated measurements (pre-test, post-test, follow-up test) in different conditions related to the dependent variable (Sani and Todman 2006).

Table 1. Research pattern

Groups	Pre-Test	Intervention	Post-test	Follow Up Test
Experimental	IES-R MAAS MSPSS	(SESP)	IES-R MAAS MSPSS	IES-R MAAS MSPSS
Control	IES-R MAAS MSPSS	No intervention	IES-R MAAS MSPSS	IES-R MAAS MSPSS

PARTICIPANTS

Ethical permission was acquired from İstanbul Medeniyet University in Social Ethics Committee. In this study, refugee women were applied psychological support into a non-governmental organization (NGO), between 2019-2020. The convenience sampling method was used. Before application, informed consent was obtained from the women. IES-R, MAAS, and MSPSS were used. Twenty-two women were randomly placed in the experimental and control groups upon their acceptance of voluntary participation. Participants in the experimental and the control groups were matched in terms of demographic variables and their scale scores. In particular, all participants were living in a state shelter-in-place. The control group underwent SESP after the study was completed. The age range of the experimental group was 25-52 ($\bar{X}$=36.82 Sd=9.1) and the control group was 22-53 ($\bar{X}$=37.09, Sd=9.5). In addition, 45.5% of the participants in the experimental group and 54.5%

of the control group had graduated from secondary school. All the participants were not working. Both experimental and control group had at least 2 children. The demographic characteristics were given in Table 2.

Table 2. Demographic features of participants in experimental and control groups

	Age Range	Age μ	Age Sd	Education Level	n	%	Number of Children	n	%
Experimental Group	25-52	36.82	9.14	Primary School	1	9.1	2	5	45.5
				Secondary School	5	45.5	3	5	45.5
				High School	3	27.3	4	1	91.1
				University	2	18.2			
Control Group	22-53	37.09	9.58	Primary School	1	9.1	2	7	63.6
				Secondary School	6	54.5	3	3	27.3
				High School	3	27.3	4	1	9.1
				University	1	9.1			

DATA COLLECTION INSTRUMENTS

IMPACT OF EVENT SCALE REVISED (IES-R)

This scale was developed by Horowitz, Wilner, and Alvarez (1979), revised by Weiss and Marmar (1997) and adapted into Turkish by Corapcioglu, Yargic, Geyran, and Kocabasoglu (2006). This self-report scale consists of 22-item with 5-Likert type. The scale has three sub-dimensions: intrusion, avoidance, and hyperarousal. The correlation of the scale and its sub-scales with the CAPS scale were handled by Spearman analysis and as a result of the evaluation, the total score (r=.70), the intrusion score (r=.69) and hyperarousal score (r=.63) and the avoidance score (r=.49) were stated. The internal consistency coefficient of the scale was found to be .94 for the whole group. In this study Cronbach alpha coefficient was 84.

MINDFULNESS ATTENTION AWARENESS SCALE (MAAS)

This scale was developed by Brown and Ryan (2003) and adapted into Turkish by Ozyesil, Arslan, Kesici, and Deniz (2011). The unidimensional scale consists of 15 items with 6-Likert type. For original form factor loadings varied between .27 and .78. According to the confirmatory factor analysis of original form was c2=189.57 (Sd=90, p<.01), GFI; 92, CFI: .91, RMSEA: .058. The internal consistency coefficient (coefficient alpha) of the scale was .82. The total correlations of the items obtained ranged from .25 to .72. Test-retest reliability was .81 for four weeks intervals. The scale was thought to be unidimensional as original form. As a result of confirmatory factor analysis for Turkish version, the coherence index was c2=187.811 (Sd=90, p<.01), (c2/Sd)=2.086, RMSEA=.06, standardized RMS=,06, GFI=.93 and AGFI=.91. The item-total correlations for Turkish version were ranged from .436 to .682. The Cronbach's alpha for the reliability of the scale was .80. In this study Cronbach alpha coefficient was .78.

MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MSPSS)

This scale was developed by Zimet, Dahlem, Zimet, and Farley (1988) and was adapted into Turkish by Eker, Arkar, and Yaldız (2001) to measure the adequacy of social support on three different sources, including family, friend, and special person. The self-report scale consists of 12-item with 7 Likert-type. The validity and reliability of the scale were provided from three different groups (psychiatric patients, surgical patients and non-patient group formed by randomly selected patient visitors). The internal consistency ranges from .80 to .90 in both groups' total scores. According to the result of the factor analysis obtained by the three groups, three factors were obtained that explained 75% of the total variance in accordance with the original scale. The internal consistency coefficient of the scale was found to be .91 for the whole group. In this study Cronbach alpha coefficient was .86.

EXPERIMENTAL PROCEDURES

THE SCOPE OF SESP ON REFUGEE WOMEN

The psychological group program was developed by the researcher. The researcher has SE certification and continuing supervision from the SE community. The aim of the SESP is to increase mindfulness and social support and decrease post-traumatic stress of refugee women. Before the program development, theoretical information about post-traumatic stress, social support and mindfulness, and SE programs about refugees was collected (Block et al. 2018; Drozdek and Bolwerk 2010; Kalmanovitz and Ho 2016; Reebs et al. 2020). During the literature search, it was understood that post-traumatic stress was described as a psychophysical experience (Rothschild 2000; Van der Kolk 2015). Refugees, in particular, experience more long-term effects (Courtois 2008) and show more somatic distress without expressing these experiences (Van der Kolk 2006). Thus, in order to understand trauma and its effects on the lives of refugees, the somatic-based approach must be understood (Ament-Lenke 2018; Van der Kolk 2015). In this way, this program was organized in terms of 'Somatic Experiencing®.

All somatic-based approaches, including SE®, have stated that traumatized individuals need to experience stabilization to regulate and to increase the capacity of the ANS. Stabilization is the prerequisite to dealing with traumatic experience on a deeper level (Levine 2015; Verreault 2017). Based on this information, psychological intervention group program consists of stabilization activities based on SE®. Furthermore, the literature states that group programs for refugees are more effective compared to individual therapeutic measures due to the formation of group identity (Block et al. 2018; Drozdek and Bolwerk 2010; Verreault 2017). Thus, the program was organized in group form. The SE® stabilization included core SE elements. These included grounding, finding resources, tracking body sensations, social engagement, and safety mechanism (boundaries) "vu" sounding. All these elements have been embedded into the group activities. Lastly, other studies about the effectiveness of the SE® approach working individually occurs in various traumatic experiences such as the case of the 2004 tsunami (Parker et al. 2008), war (Brom et al. 2017), earthquakes (Leitch and Miller-Karas 2009), among specialists working with post-traumatic stress disorder (Winblad et al. 2018) and those with pain disorders (Andersen et al. 2017), as well as those working SE® informed group programs (Briggs et al. 2017; Taylor and Saint-Laurent 2017) were taken into consideration.

THE CONTENT OF SESP FOR REFUGEE WOMEN

SESP for refugee women is a psychological intervention group program composed of six sessions including eighteen psychological activities. Each session consists of three activities (warm-up, the purpose of session activity, ending with positive feelings and resources), with each activity lasting an average of 20 minutes. One of the warm-up activities is called "Arriving and Grounding." In this activity, the participants notice and sense the ground and armchair they sit in and realize what they observe and perceive in their body. The second of the stabilization activities is called "Stabilized Colourful Ball." The participants think about a stressful event they experienced the previous week, then pick a ball representing this stress among the coloured shrinking balls and observe their senses and feelings while holding the ball in their hand. The same procedure is applied for remembrance of the positive events as well. Then, they hold and sense these two balls in their hand and share what is happening. The third of the activities aimed at leaving the session in a resourceful way and is known as "Finding Resources in Around." The aim of this activity is to focus on the resources available and finding one (object, flowers in around) to regulate themselves. Lastly, the SESP program includes biopsychosocial and awareness of physiological, emotional, behavioural, images, thoughts and spirit. This awareness is also seen in SE® as SIBAM (sensation, image, behaviour, affect, meaning). Table 3 also summarizes the topics in each session.

Table 3. Somatic Experience® Based Stabilization Program (SESP)

Session	
1st	▪ Meeting and group cohesion ▪ Arriving the place to adapt to environment ▪ Arriving into themselves and finding resources to adapt in here and now ▪ Determining group rules and purpose
2nd	▪ Focusing here and now and expressing a daily experience ▪ Experiencing to track their body sensations when expressing daily experiences ▪ Finding body resources in the body to adapt in here and now ▪ Touching their shoulders and their feet of group members to realize the body sources of the group
3rd	▪ Talking about their daily feelings in here and now ▪ Tracking their feelings and listening to what they say ▪ Tracking their breathing when talking about what they are feeling ▪ With lunar breathing exercises containing their feelings and adapting in here and now
4th	▪ Talking about their daily images/or thoughts in here and now ▪ Monitoring their sensations when talking about their images ▪ Containing the images' sensations through the body in here and now ▪ Finding especially imagine resources to adapt in here and now.
5th	▪ Observing their behavior when expressing daily tough experiences in here and now ▪ Being aware of the both individual and group borders that protect themselves against these daily difficulties ▪ Feeling and containing both individual borders and group borders in their body ▪ Regulating daily tough experiences with Vu breathing exercises
6th	▪ Monitoring and experiencing their integrity in here and now ▪ Containing what they have learnt during sessions ▪ Terminating the program with positive group feedback

SESP APPLICATION PROCEDURES (TIME, PLACE)

The program was conducted in the meeting room of an NGO working with refugee women in Istanbul with participants seated in a circle. The researcher with SE certification and continuing supervision guided the program. The translator also graduated from counselling department was attended. And two clinical psychologists were observer in the group. The training program lasted for six weeks, with 90-minute sessions per week.

DATA ANALYSIS

In order to decide which tests (parametric or non-parametric) should be used during data analysis, the pre-test scores of the IES-R, MAAS and MSPSS obtained from the individuals in the experimental and control groups were analysed. According to the preliminary analysis, the data had a homogeneous and normal distribution. Thus, parametric tests could be used in the study. In the study, there were both experimental and control groups. In terms of measures, those taken of the groups themselves as well as between individuals were taken. One of the ways in which the statistical significance of the change in pre-test, post-test and follow-up test measurements was used Two-way ANOVA for repeated measures on a single factor. Thus, a 2 x 3 two-factor ANOVA technique was used for repeated measurements, as suitable for split-plot (mixed) designs (Sani and Todman 2006). As a result of this analysis, data was assessed by the Tukey (HSD) test in order to analyse the difference source. The SPPS 22.00 program was used.

RESULTS

RESULTS ON PRELIMINARY ANALYSIS

To utilize parametric tests in the analysis of the homogeneity, normal distribution, skewness, and kurtosis values were all analysed. According to the parametric test results of the pre-test measurements, there were found no significant differences among the average scores in terms of IES-R ($F_{(1-20)}$=.186, p>.05), MAAS ($F_{(1-20)}$=.011, p>.05) or MBSS ($F_{(1-20)}$=0.04, p>.05). Furthermore, the Kolmogorov-Smirnov test of the IES-R (.114, p>.05), MAAS (.116, p>.05) and MSPS (.127 p>.05) were larger than (p) .05 (Sani and Todman 2006). The Kolmogorov-Smirnov test results indicated normal distribution. The skewness and kurtosis levels gathered from the scores of both the experimental and control groups in pre-test measurements on each of the three scales were between +1 and -1, which showed normal distribution.

RESULTS FOR THE EFFECTIVENESS OF SESP IN POST-TRAUMATIC STRESS

The first hypothesis of the research predicted that: "SESP for refugees will be significantly more effective in decreasing the post-traumatic stress levels of experimental group than control group and this effect will be sustained in two months following the completion of the program." The pre-test, post-test, follow up test, arithmetic averages, and standard deviations of the IES-R scale among participants in both experimental and control groups have been presented in Table 4.

Table 4. The means and standard deviations of IES-R in experimental and control groups

Measurements	Pre-test		Post-test		Follow-up test	
Groups	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*
Experiment (N=11)	61.54	5.14	32.72	5.17	26.27	7.01
Control (N=11)	62.81	8.3	63	7.5	62.45	9.11

In light of Table 4, the pre-test averages for the experimental and control groups were observed to be close, while there were differences between post-test and the follow up test of either group. The IES-R of both groups' measurement scores were tested to see if the averages showed significant differences. This was conducted by a variance analysis (ANOVA). The results were presented in Table 5.

Table 5. Variance analysis results of two factors on IES-R scores in experimental and control groups

Source	Sum of squares	*Sd*	Average of squares	*F*	*p*	Eta square
Between groups	174842.561	21				
Group (E//C)	8409.470	1	8409.470	71.662	.000	.9782
Error	2346.970	20	117.348			
Within groups	8538.000	22				
Measurement (pre-post-follow up)	3921.485	1	1960.742	101.00	.000	.835
Group*Measurement	3840.030	1	1920.015	98.908	.000	.832
Error	776.485	20	19.412			

As shown in Table 5, in the results of the IES-R scale, the group effect was found to be significant ($F_{(1\text{-}20)}$=71.662 p<.01). Without discriminating between the pre-test, post-test and follow-up tests in the experimental and control groups, there were found significant differences between the average scores in the IES-R. Between the average scores of individuals gathered from pre-test, post-test and follow-up test, there were signs of significant differences, irrespective of group discrimination ($F_{(2\text{-}20)}$=101.00 p<.01). Regardless of group discrimination, this result indicated that the post-traumatic stress levels of the individuals varied in terms of the experimental process. Furthermore, it was observed that the value of common effect (group*measurement) was significant ($F_{(2\text{-}20)}$=98.908 p<.01). This indicated that the scores of individuals on the IES-R scale in pre-test, post-test, and follow up measurements in experimental and control groups varied. A Tukey test was used to analyse a significant difference in terms of the measurements between groups. The findings were shown in Table 6.

Table 6. Tukey test results on differences in between and within subjects of measurements of IES-R

Experimental				Control		
	Pre-test	Post-test	Follow-up test	Pre-test	Post-test	Follow-up test
Pre-Test	-	-28.82**	35.27**		-	-
Post-Test		-	6.45		-30.28**	
Follow-up Test		-	-			-36.18**
Pre-Test				-	-.0.19	0.36
Post-Test					-	0.55
Follow-up Test						-

*p<.05 **p<.01

The first hypothesis of the research was verified according to Table 6. A significant difference was demonstrated between the average scores of the IES-R on pre-test obtained from the experimental group compared with the scores gained from post-test and follow up tests. However, the difference between the average scores of IES-R pre-tests of control group and those from post-test, follow up tests were not significant. Thus, the SESP was successful in causing a significant decrease in post-traumatic stress levels for the experimental group.

THE RESULTS FOR THE EFFECTIVENESS OF SESP IN MINDFULNESS

It was theorized that: "SESP for refugee women will be significantly more effective in increasing mindfulness levels of experimental group than control group and this effect will be sustained in two months following the completion of the program." Means and standard deviations (MAAS) of pre-test, post-test, and follow up tests of both experimental and control groups were presented in Table 7.

Table 7. Means and standard deviations of MAAS in experimental and control groups

Measurements	Pre-test		Post-test		Follow-up test	
Groups	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*
Experiment (N=11)	43.81	3.42	67.09	3.33	66.63	4.64
Control (N=11)	44.00	4.77	41.18	5.5	43.27	3.95

Table 7 showed that the pre-test averages of the experimental and control groups were close, while differences emerged in the post-test and follow up-tests scores of both groups. The mean differences in MAAS scores of both groups were examined via a variance analysis (ANOVA).

Table 8. Variance analysis results of two factors on experimental and control groups' MAAS scores

Source	Sum of squares	Sd	Average of squares	*F*	*P*	Eta Square
Between groups	171666.00	21				
Group (E//C)	4418.182	1	1621.929	2.933	.000	.791
Error	1170.485	20	44.571			
Within groups		22				
Measurement (pre-post-follow up)	1666.636	1	1541.99	17.558	.000	.767
Group*Measurement	2276.273	1	1138.126	23.981	.000	.745
Error	1898.424	20	47.461			

As shown in Table 8, the results on the MAAS scale showed a significant effect ($F_{(1\text{-}20)}$=2.93 p<.01). Without discriminating between the pre-test, post-test, and follow-up test of the experimental and control groups, there was a significant difference in the average scores on the MAAS. There were also significant differences in the average scores of individuals gathered from pre-test, post-test and follow-up test ($F_{(2\text{-}20)}$=17.55 p<.01). Without group discrimination,

this result showed that the mindfulness levels of each individual changed over the course of the experimental process. Furthermore, it was seen that the common effect (group*measurement) was significant ($F_{(2\text{-}20)}$=23.98, p<.01). This showed that the scores of individuals from the MAAS scale in the pre-test, post-test, and follow-up measurements in the experimental and control groups varied. A Tukey test was used to analyse any significant difference in terms of the measurements between groups. The findings gathered were presented in Table 9.

Table 9. Tukey test results on differences in between and within subjects of measurements of MAAS versions

Experimental				Control		
	Pre-test	Post-test	Follow up test	Pre-test	Post-test	Follow up test
Pre-Test	-	-23.28*	-22.82*		-	-
Post-Test		-	.46		25.91*	
Follow up Test		-	-			23.26*
Pre-Test				-	2.82	0.73
Post-Test					-	-2.09
Follow up Test						-

*p<.05 **p<.01

The second hypothesis of the research was verified, as shown in Table 9. A significant difference was acquired between average scores of MAAS pre-test of experimental group and those from post-test and follow up-tests. However, the difference between the averages of the MAAS pre-test of control group and those from post-test, and follow-up tests were not significant. Thus, the SESP was significantly efficient in increasing the mindfulness levels of the experimental group.

THE RESULTS FOR THE EFFECTIVENESS OF SESP IN SOCIAL SUPPORT

The third hypothesis stated: "SESP will be significantly more effective in increasing the social support levels of refugee women in the experimental group than control group and this effect will be sustained in two months following the completion of the program." The pre-test, post-test, and follow-up tests, arithmetic averages, and standard deviations (MBSS) of the participants in experimental and control groups are shown in Table 10.

Table 10. Means and standard deviations of MBSS in experimental and control groups

Measurements	Pre-test		Post-test		Follow up test	
Groups	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*	$\bar{X}$	*Sd*
Experimental N=11	25.63	2.80	66.90	6.30	68.45	4.29
Control N=11	25.72	3.92	28.09	6.1	26.27	4.33.

In light of the results presented in Table 10, the pre-test averages of experimental and control groups were close, while differences emerged between post-test and follow-up tests scores of both groups. A variance analysis (ANOVA) was used to determine whether the MBSS of both groups' measurement score averages had significant differences or not. The results of this analysis were presented in Table 11.

Table 11. Variance analysis results of two factors on experimental and control groups' MBSS scores

Source	Sum of squares	Sd	Average of squares	F	p	Eta square
Between groups	106562.182	21				
Group (E//C)	12001.515	1	12001.515	290.957	.000	.936
Error	824.979	20	41.248			
Within groups	3058.667	22				
Measurement (pre-post-follow up)	6938.455	1	3469.227	163.549	.000	.891
Group*Measurement	6072.394	1	3036.197	143.135	.000	.877
Error	-848.485	20	21.212			

As shown in Table 11, in the results on the MBSS scale the group effect was found to be significant ($F_{(1-20)}$=290.957, p<.01). Without discriminating between pre-test, post-test, and follow up of experimental and control groups, significant differences emerged between the groups' average scores on the MBSS.

Between the average scores of individuals gathered from the pre-test, post-test, and follow-up tests, there were also significant differences ($F_{(2-20)}$=163.549 p<.01). Without group discrimination, this result indicated that social support levels of the participants varied, depending on the experimental process. Furthermore, it was observed the common effect (group*measurement) was significant ($F_{(2-20)}$=143.135; p<.01). This outcome indicated that the scores of participants from MBSS in pre-test, post-test, and follow up measurements in both experimental and control groups varied. A Tukey test was used to analyse a significant difference in terms of the measurements between groups. The findings gathered were presented in Table 12.

Table 12. Tukey test results on differences in between subjects and within subjects of measurements of MBSS scores

Experimental				Control		
	Pre-test	Post-test	Follow up test	Pre-test	Post-test	Follow up test
Pre-Test	-	-41.27**	-42.82**		-	-
Post-Test		-	-1.55		38.81**	
Follow up Test		-	-			42.18**
Pre-Test				-	-2.37	-0.55
Post-Test					-	1.82
Follow up Test						-

The third hypothesis of the research was verified and shown in Table 12. Significant differences can be seen between the average scores of the MBSS from the pre-test of the experimental group and those from the post-test and follow-up tests. However, the difference between the average scores of the MBSS pre-test of the control group and those from post-test and follow up-tests was not significant. Thus, SESP was significantly efficient in increasing levels of social support in the experimental group.

DISCUSSION AND CONCLUSION

The aim of this study was to understand the effects of the SESP on the refugee women's post-traumatic stress, mindfulness, and social support level. The results of this study suggested that the 6-week SESP applied to refugee women was significantly effective in decreasing post-traumatic stress and increasing mindfulness and social support levels. Female refugees have been more influenced than males (Buhman 2014; Pumariega et al. 2005) and, in line with the literature, the program was developed for refugee

women. It is also stated that stabilization programs have an effect in traumas (Levine 2015; Verreault 2017). In this regard, the study program was organized according to the stabilization of SE.

The first result of this study showed that SESP was significantly effective in decreasing post-traumatic stress levels among refugee women. The results of this study were parallel with those of previous studies, showing that SE reduces post-traumatic stress in different types of trauma, both individually (Andersen et al. 2017; Brom et al. 2017; Leitch and Miller-Karas 2009; Parker et al. 2008; Winblad et al. 2018) and as a group (Briggs et al. 2017; Taylor and Saint-Laurent 2017). Although some somatic-based studies working with refugees as individuals (Arroyo 2018; Hinton et al. 2006; Koch and Weidinger-von der Recke 2009; Nordbrandt et al. 2020) and as a group (Verreault 2017) support the first result of the study indirectly, there has not been any SE study that works with refugees individually and as a group to reduce post-traumatic stress level. Especially grounding and boundaries exercises in the program may provide individuals to "be present" by distancing themselves from stressful situations and to find some resources to contain their traumatic experiences (Levine 2015). Thus, it can be said that this study is the first SE study working with refugees to decrease post-traumatic stress level.

The second result of this study indicated that SESP was significantly effective in increasing mindfulness levels in refugee women. This is because mindfulness observation of inner body sensations leads to body awareness (Kattenstroth 2009; Tihanyi et al. 2016), which is an important part of SE®. Moreover, mindfulness-based programs like SE® are based on the self-regulation process (Levine 2010, 2015). Although mindfulness-based programs including body awareness increase the mindfulness level of refugees (Kalmanovitz 2016; Reebs et al. 2020) indirectly, this supports the second result of the study and there has been no SE® study working with refugees individually and as a group to monitor mindfulness levels. Especially body tracking and breathing exercises may provide individuals to "be present" by paying attention to their body sensations and increasing the level of mindfulness. Thus, it can be inferred that this study is the first study working with refugees to deal with increasing mindfulness.

The last result of this study has shown that SESP is significantly effective in increasing support levels in refugee women. As Levine (2015) indicated that social relations are also crucial in regulating ANS. A number of studies (Palic and Elklit 2011; Stewart et al. 2010) emphasize the importance of social support, especially group support program (Block et al. 2018; Drozdek and Bolwerk 2010; Im and Rosenberg 2016) in refugees. It is also stated that group programs for refugees are more effective compared to individual programs (Bass et al. 2011; Block et al. 2018). Although SE®-based programs are generally organized individually, considering the result of these studies, SESP program based on SE® was organized for a group of refugee women. In other words, social engagement and touching may provide individuals to feel togetherness. Thus, the social support level of refugee women may be increased.

There was no study that shows the effectiveness of SE® in refugees. Only one qualitive research interviewing four psychotherapists trained in mind-body based approaches that work with adult refugees has been published (Ament-Lenke 2018). Thus, this study is the first study to show the effectiveness of SESP among refugees. The program of the study is based on somatic approaches (non-verbal, and resource oriented) and is cross culturally adapted to suit refugees better (Gray 2011; Koch and Weidinger-von der Recke 2009; Zehetmair et al. 2018). Moreover, the program of the study is structured and open for the benefit of specialists working in the field, including those based in NGOs, training centres and guidance centres.

Despite the contribution of this research, there were some limitations. Firstly, all the scores gathered from the self-report scales. Thus, social desirability may have effect on the research. Secondly, the sample was only refugee women that limits the generalizability of the results. Thus, this research can be tested on diverse and heterogeneous groups. Thirdly, the current study only had experimental and control groups. Therefore, a placebo group could be added to increase the reliability of the results. Fourthly convenience sampling method was used. Thus, randomly sampling methods could be used to represent refugee women population. Finally, the

SE® program was applied to participants with no comparison having been made with a different mind-body based program such as, Body Awareness Therapy, Mindfulness Based Therapy. Thus, a practical comparison with other programs in the literature would boost these findings.

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EXAMINATION OF TEACHER CANDIDATES' LEARNING RESPONSIBILITY

Abstract: This study aims to examine teacher candidates' learning responsibility through goal-setting activities carried out on a weekly basis. The research employed case study method, one of the qualitative research methods. The study group consisted of 36 fourth-year teacher candidates studying at a state university in the spring semester of the 2018-2019 academic year. The data were colected through diaries prepared by the researcher and kept by the participants for 12 weeks. The data were analyzed using the descriptive analysis technique and quantified with frequency distributions and percentage values. The study concludes that setting goals increases teacher candidates' learning responsibility and that Public Personnel Selection Exam (PPSE) and academic achievement concern cause teacher candidates to focus more on cognitive goals rather than other types of goals.

Keywords: Learning responsibilities, setting goals, teacher candidates.

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INTRODUCTION

One of the main goals of contemporary education is to bring up academically successful individuals. Academic success is closely related to students' intrinsic factors. Learning responsibility, among the intrinsic factors, has a significant role in students' academic performance (Tran & Vu 2016). Learning responsibility refers to students' taking responsibility for determining their own educational and research strategies and achieving their academic goals (Jayawardana et. al. 2001). A student who assumes responsibility for his/her own learning knows well him/herself and can guide his/her own learning and development (Harrison 2000). Therefore, it is very important that students take responsibility for self-managing their learning processes, determining learning goals, evaluating their own learning levels and setting learning strategies for themselves (Lunenberg & Volman 1999). Today, the literature emphasizes the need for students to take active responsibility in their own learning process (Euge`ne 2006). It is emphasized that, as in all educational stages, including education at the university, students should be responsible for their own learning processes and that the lecturer should have a limited responsibility (UNESCO 2000). Yıldırım et. al. (2009) stated that students should determine their own learning goals according to their own learning styles and take responsibility in the learning process. Taking these as a starting point, the present study aimed to investigate teacher candidates' learning responsibility through goal-setting activities carried out on a weekly basis.

Teachers are expected to have certain qualifications to achieve responsibilities such as managing and developing the educational setting (Eken & Gündoğdu 2017). Thus, it is crucial to examine teacher candidates' responsibilities, as they are teacher-to-be. When literature was reviewed, it was seen that several studies have been done on learning responsibilities. Devlin (2002) investigated the first year university students' perceptions of taking responsibility for their own learning. Allan (2006) analyzed the relationship between students' understanding of the concept of learning responsibility and their attitudes and behaviors. Gömleksiz, Kılınç and Cüro (2011) examined the effects of instructional activities in students' workbooks on developing learning responsibility of the students by descriptive study. Çam and Ünal Oruç (2014) investigated teacher perspectives on learning responsibility through case study. Cook-Sather and Luz (2015) questioned how students should be encouraged and supported to take responsibility for their own learning. Yakar and Saracaloğlu (2017) tried to improve the learning responsibilities of 6th grade students through the learning tasks performed within the scope of the science lesson in the context of the potential development area through action research design. In addition, Yakar and Saracaloğlu (2017) developed Scale of Responsibility towards Learning, and Erişti (2017) developed Learning Responsibility Scale, too. Hakkari (2020) tried to determine the learning responsibility levels of vocational school students with a descriptive survey model. Unlike the studies above, in this study, teacher candidates' learning responsibilities were examined based on the diaries they kept. In addition, the fact that the study lasted totally 12 weeks with the data collected each week is another factor that makes that study different from the other studies on learning responsibility.

METHOD

The research employed case study method, one of the qualitative research methods. Case studies are studies that aim to study, describe and reveal current situations in real life (Creswell, 2013). Case study is about studying on a case intensely. This case differs from an individual to a community at a village, from an event to a specific curriculum (Glesne, 2013). In the present study, "the case of teacher candidates to fulfill their learning responsibilities" was discussed as the case of the study. There are several types of case studies that are used to provide in-depth information about the truth and to provide practical benefits in practice (Akar Vural & Cenkseven 2005). As the case of the present research was a case in a single classroom (Yin, 2009), the research was designed through a holistic single-case study method.

SAMPLE

The study group was determined using the convenience sampling technique since performing a random assignment was not possible (Yıldırım & Şimşek, 2004). The researcher studied with 36 final-term teacher candidates in a classroom at a state university where the researcher lectured the course of "Effective Learning and Studying Techniques" in the spring semester of the 2018-2019 academic year. Participants were students in the Department of Social Science Teaching at that university. As participants were at their last term, their primary goals were to attain high score at Public Personnel Selection Exam (PPSE) in order to be appointed as a teacher in Turkey. Public Personnel Selection Exam (PPSE) is a prerequisite for starting to work as a civil servant such as a teacher. Participants were generally children of middle or low income families. Their primary goals were to start working as a teacher as soon as possible and to get a regular income. Hence, they would be able to both earn their living and help their families. Thus, most of the participants attend preparatory courses for PPSE. Also, some students worked part time in order to meet their educational needs. On the other hand, teacher candidates were in the last 4 months of their undergraduate education. It was observed that this situation upset them as they would move away from their friends, loved ones and familiar environment and that they had the desire to spend time with their friends and loved ones as much as possible. It was obvious that the study group were responsible for too many things, especially for their own leaning. Thus, they should organize their routine to achieve their tasks. In order to be able to perform the tasks, they should determine their goals and check the degree to which they could achieve their goals.

DATA COLLECTION AND ANALYSIS

In case study method, data are collected to describe the basic structure and value of individuals' experiences (Merriam, 2013). At the research, data was collected by document analysis technique in which researcher examines documents related to the topic of study (Yıldırım & Şimşek, 2004). As document, diaries prepared by the researcher were distributed to the participants. The diaries had a total of 12 lines, one for each week. Each line contained the following three questions for the participants to respond to:

1. What are the goals I want to achieve until next week?

2. Why was I unable to achieve the goals?

3. How could I have achieved the goals?

At the end of each lesson, participants were asked to write down in the diaries the goals they wanted to achieve by next week. Then, the diaries were collected. The following week, the diaries were re-distributed to the participants, who were asked to write in the relevant section whether they had been able to achieve the goals they had set and if they had not been able to, the reasons for not being able to achieve them. They were also asked to explain how they could have achieved the goals in the next column.

This process continued for 12 weeks. The data collected from the diaries were analyzed by descriptive analysis. The main purpose of descriptive analysis is to summarize and interpret the data obtained by various data collection techniques according to predetermined themes (Yıldırım & Şimşek, 2004). The analyzed data were also described by giving their frequency distributions (f) and percentage values (%) (Balcı, 2015).

FINDINGS

The findings obtained from the diaries as a result of descriptive analysis are given according to weeks. After obtaining all the findings, a general interpretation of the activities was made. As can be inferred from Table 1, 30 participants (27.77%) set a goal of making progress for PPSE (Public Personnel Selection Exam), 17 participants (15.74%) preparing for the internship, 13 participants (12.03%) reading a certain number of pages, 12 participants (11.11%) revising the learned topics, and 11 participants (10.18%) doing the assignments. 28.57% of these goals had been achieved.

Table 1. Findings related to goals for week one

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for Public Personnel Selection Examination (PPSE)	30	27.77	Other academic responsibilities (assignments, internship, etc.)	33	33.67	By staying motivated	32	31.37
Preparing for the internship	17	15.74	Achieved	28	28.57	By following a study schedule	14	13.72
Reding a certain number of pages	13	12.03	Social life	8	8.16	By studying effectively	13	12.74
Revising the learned topics	12	11.11	Lack of motivation	6	6.12	By creating a more effective study schedule	12	11.76
Doing the assignments	11	10.18	Poor time management	6	6.12	By effective time management	7	6.86
Catching up on studies	8	7.4	Physical causes (fatigue, illness, etc.)	5	5.1	By feeling physically well	5	4.9
Spending time with friends	6	5.55	Distraction	3	3.06	By less involvement in social events	4	3.92
Conducting scientific research	3	2.77	Lack of a suitable study environment	2	2.04	By stopping going into too much detail	3	2.94
Helping my parents	2	1.85	Part-time job	2	2.04	By spending less time on the Internet	3	2.94
Learning something new each day	2	1.85	Trivial stuff	2	2.04	By studying on a daily basis	3	2.94
Watching a documentary	1	.92	Online games	2	2.04	By spending less time on playing online games	2	1.96
Doing sports	1	.92				By spending less time on watching TV	2	1.96
						By creating a suitable study environment	2	1.96
Total	108	100		98	100		102	100

On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (33.67%), social life (8.16%), lack of motivation, (6.12%), poor time management (6.12%), and physical causes (fatigue, illness, etc.) (5.1%). The suggestions for achieving these goals were stated as staying motivated (31.37%), following a study schedule (13.72%), studying effectively (12.74%), creating a more effective study schedule (11.76%), effective time management (6.86%), and feeling physically well (4.9%).

Quotations from participants for the first week were given below: Participant 12: *"To read 20 pages a day, revise the learned topics, complete the subject of 'The First Turkic States' in the history lesson, study the definition and history of geography, watch videos on topics, take notes."* Participant 25: *"I will finish four geography and 3 history topics. I will read 50 pages a day. I will complete a paragraph test every day. I will wake up at 7 o'clock every morning and do sports. I will do my weekly internship and school lessons."*

Table 2. Findings related to goals for week two

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making a progress for PPSE	27	24.77	Other academic responsibilities (assignments, internship, etc.)	27	24.1	By staying motivated	24	23.76
Preparing for the internship	22	20.18	Achieved	21	18.75	By studying effectively	18	17.82
Revising the learned topics	13	11.92	Lack of motivation	19	16.96	By effective time management	13	12.87
Doing the assignments	13	11.92	Poor time management	16	14.28	By following a study schedule	12	11.88
Reading a certain number of pages	11	10.09	Social life	10	8.92	By creating a more effective study schedule	9	8.91
Catching up on studies	11	10.09	Distraction	9	8.03	By spending less time on the Internet	5	4.95
Spending time with friends	7	6.42	Physical causes (fatigue, illness, etc.)	3	2.67	By stopping going into too much detail	5	4.95
Conducting scientific research	5	4.58	Trivial stuff	2	1.78	By spending less time watching TV	4	3.96
			Too many goals	2	1.78	By feeling physically well	4	3.96
			Part-time job	2	1.78	By less involvement in social events	3	2.97
			Adverse weather conditions	1	.89	By studying on a daily basis	2	1.98
						Other	2	1.98
Total	109	100		112	100		101	100

As can be inferred from Table 3, 23 participants (22.11%) set a goal of making progress for PPSE, 17 participants (16.34%) revising the learned topics, 16 participants (15.38%) preparing for the internship, 16 participants (15.38%) doing catch up on studies, 12 participants (11.53%) doing the assignments, and 9 participants (8.65%) reading a certain number of pages. 23.58% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (21.69%), distraction (16.03%), poor time management (13.2%), and lack of motivation (12.26%). The suggestions for being able to achieve these goals were stated as staying motivated (18.91%), effective time management (16.21%), studying effectively (15.31%), spending less time watching TV (10.81%), and following a study schedule (8.1%). Quotations from participants for the third week were given below: Participant 14: *"No matter what I do, I cannot motivate myself to study, which is upsetting me. If I had studied effectively, I could have achieved (the goals)."* Participant 30: *"The additional resource for citizenship lesson was not available at the stationer, I could not reach it."*

Table 3. Findings related to goals for week three

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	23	22.11	Achieved	25	23.58	By staying motivated	21	18.91
Revising the learned topics	17	16.34	Other academic responsibilities (assignments, internship, etc.)	23	21.69	By effective time management	18	16.21
Catching up on studies	16	15.38	Distraction	17	16.03	By studying effectively	17	15.31
Preparing for the internship	16	15.38	Poor time management	14	13.2	By spending less time watching TV	12	10.81
Doing the assignments	12	11.53	Lack of motivation	13	12.26	By following a study schedule	9	8.1
Reading a certain number of pages	9	8.65	Social life	5	4.71	By stopping going into too much detail	7	6.3
Spending time with friends	6	5.76	Physical causes (fatigue, illness, etc.)	4	3.77	By creating a more effective study schedule	7	6.3
Conducting scientific research	2	1.92	Missing the class	2	1.88	By spending less time on the Internet	6	5.4
Helping my parents	2	1.92	Part-time job	2	1.88	By studying on a daily basis	5	4.5
Learning something new each day	1	.96	Lack of source	1	.94	By feeling physically well	3	2.7
						By less involvement in social events	3	2.7
						By studying collaboratively	2	1.8
						By spending less time playing online games	1	.9
Total	104	100		106	100		111	100

As can be inferred from Table 4, 28 participants (29.47%) set a goal of making progress for PPSE, 23 participants (24.21%) preparing for the internship, 13 participants (13.68%) doing catch up on studies, and 11 participants (11.57%) reading a certain number of pages. 31% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (23%), lack of motivation (14%), distraction (9%), and social life (6%). The suggestions for being able to achieve these goals were stated as staying motivated (25.21%), studying effectively (16%), creating a more effective study schedule (11.3%), and effective time management (11.3%). Quotations from participants for the forth week were given below: Participant 23: *"To read books for at least half an hour a day, to revise the topic of ancient history, to study the first part of political geography, to study classroom management in educational sciences, to solve tests related to the topics."* Participant 34: *"To study final lessons, to solve 400 questions, to read articles."*

Table 4. Findings related to goals for week four

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	28	29.47	Achieved	31	31	By staying motivated	29	25.21
Preparing for the internship	23	24.21	Other academic responsibilities (assignments, internship, etc.)	23	23	By studying effectively	16	13.91
Catching up on studies	13	13.68	Lack of motivation	14	14	By effective time management	13	11.3
Reading a certain number of pages	11	11.57	Distraction	9	9	By creating a more effective study schedule	13	11.3
Doing the assignments	6	6.31	Social life	6	6	By stopping going into too much detail	8	6.95
Revising the learned topics	5	5.26	Physical causes (fatigue, illness, etc.)	4	4	By spending less time watching TV	5	4.34
Conducting scientific research	4	4.21	Trivial stuff	4	4	By following a study schedule	5	4.34
Spending time with friends	3	3.15	Too many goals	4	4	By studying on a daily basis	3	2.6
Helping my parents	1	1.05	Poor time management	3	3	By less involvement in social events	3	2.6
Learning something new each day	1	1.05	Family issues	2	2	By resolving personal problems	2	1.73
						By spending less time on the Internet	2	1.73
						By feeling physically well	2	1.73
Total	95	100		100	100		115	100

As can be inferred from Table 5, 30 participants (34.09%) set a goal of making progress for PPSE, 20 participants (22.72%) preparing for the internship, and 10 participants (11.36%) reading a certain number of pages. 25.42% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (22.88%), poor time management (14.4%), lack of motivation (13.55%), and distraction (12.71%). The suggestions for being able to achieve these goals were stated as staying motivated (27.71%), studying effectively (16.86%), creating a more effective study schedule (16.86%), and effective time management (15.66%). Quotations from participants for the fifth week were given below: Participant 2: *"When I get home after classes or internship, I am (usually) tired (and) don't want to do anything; that's why I didn't read (this week)."* Partipant 35: *"Whatever happened, I could be confident and prepared for the drama.*

Table 5. Findings related to goals for week five

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	30	34.09	Achieved	30	25.42	By staying motivated	23	27.71
Preparing for the internship	20	22.72	Other academic responsibilities (assignments, internship, etc.)	27	22.88	By studying effectively	14	16.86
Reading a certain number of pages	10	11.36	Poor time management	17	14.4	By creating a more effective study schedule	14	16.86
Revising the learned topics	7	7.95	Lack of motivation	16	13.55	By effective time management	13	15.66
Catching up on studies	7	7.95	Distraction	15	12.71	By following a study schedule	6	7.22
Doing the assignments	6	6.81	Social life	5	4.23	By stopping going into too much detail	3	3.61
Helping my parents	3	3.4	Physical causes (fatigue, illness, etc.)	3	2.54	By less involvement in social events	2	2.4
Spending time with friends	2	2.27	Trivial stuff	3	2.54	By spending less time watching TV	2	2.4
Getting prepared for undergraduate exams	2	2.27	Part-time job	1	.84	By spending less time on the Internet	2	2.4
Conducting scientific research	1	1.13				By being self-confident	2	2.4
						By feeling physically well	1	1.2
						By studying on a daily basis	1	1.2
Total	88	100		118	100		83	100

Table 6. Findings related to goals for week six

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Getting prepared for undergraduate exams	32	31.06	Achieved	33	39.75	By staying motivated	27	32.92
Revising the learned topics	23	22.33	Other academic responsibilities (assignments, internship, etc.)	17	20.48	By studying effectively	15	18.29
Making progress for PPSE	21	20.38	Distraction	8	9.63	By effective time management	13	15.85
Preparing for the internship	15	14.56	Lack of motivation	7	8.43	By following a study schedule	6	7.31
Doing the assignments	5	4.85	Poor time management	7	8.43	By spending less time watching TV	5	6.09
Reading a certain number of pages	4	3.88	Social life	6	7.22	By studying on a daily basis	5	6.09
Catching up on studies	2	1.94	Trivial stuff	3	3.61	By spending less time on the Internet	4	4.87
Spending time with friends	1	.97	Physical causes (fatigue, illness, etc.)	1	1.2	By creating a more effective study schedule	4	4.87
			Part-time job	1	1.2	By feeling physically well	2	2.43
						By less involvement in social events	1	1.21
Total	103	100		83	100		82	100

As can be inferred from Table 6, 32 participants (31.06) set a goal of getting prepared for undergraduate exams, 23 participants (22.33%) revising the learned topics, 21 participants (20.38%) making progress for PPSE, and 15 participants (%14.56) preparing for the internship. 39.75% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (20.48%), distraction (9.63%), lack of motivation (8.43%), and poor time management (8.43%). The suggestions for being able to achieve these goals were stated as staying motivated (32.92%), studying effectively (18.29%), and effective time management (15.85%).

Quotations from participants for the sixth week were given below: Participant 11: *"I was not motivated to study due to my health problem. For this reason, I could not study."* Participant 35: *"I could repeat and summarize the lecture notes I wrote at home."*

Table 7. Findings related to goals for week seven

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	32	28.31	Achieved	33	37.93	By staying motivated	22	28.94
Preparing for the internship	19	16.81	Other academic responsibilities (assignments, internship, etc.)	18	20.68	By studying effectively	13	17.1
Revising the learned topics	17	15.04	Lack of motivation	9	10.34	By effective time management	12	15.78
Catching up on studies	15	13.27	Distraction	8	9.19	By creating a more effective study schedule	7	9.21
Doing the assignments	13	11.5	Social life	7	8.04	By following a study schedule	7	9.21
Reading a certain number of pages	7	6.19	Trivial stuff	4	4.59	By stopping going into too much detail	3	3.94
Spending time with	4	3.53	Too many goals	4	4.59	By spending less time	3	3.94

friends						watching TV		
Helping my parents	3	2.65	Poor time management	2	2.29	By spending less time on the Internet	3	3.94
Conducting scientific research	3	2.65	Part-time job	1	1.14	By feeling physically well	3	3.94
			Physical causes (fatigue, illness, etc.)	1	1.14	By studying on a daily basis	2	2.63
						By less involvement in social events	1	1.31
Total	113	100		87	100		76	100

As can be inferred from Table 7, 32 participants (28.31%) set a goal of making progress for PPSE, 19 participants (16.81%) preparing for the internship, 17 participants (15.04%) revising the learned topics, 15 participants (13.27%) doing catch up on studies, and 13 participants (11.5%) doing the assignments. 37.93% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (20.68%), lack of motivation (10.34%), distraction (9.19%), and social life (8.04%). The suggestions for being able to achieve these goals were stated as staying motivated (28.94%), studying effectively (17.1%), and effective time management (15.78%). Quotations from participants for the seventh week were given below: Participant 7: *"It would have been difficult even if I had wanted to (achieve the goals that I had set). During exam weeks, you cannot do anything but prepare for exams."* Participant 35: *"I could study my lessons regularly, every day after class, without making excuses."*

Table 8. Findings related to goals for week eight

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	29	29.89	Achieved	35	38.46	By staying motivated	22	32.83
Preparing for the internship	21	21.64	Other academic responsibilities (assignments, internship, etc.)	21	23.07	By studying effectively	8	11.94
Revising the learned topics	11	11.34	Lack of motivation	11	12.08	By studying on a daily basis	8	11.94
Reading a certain number of pages	9	9.27	Distraction	9	9.89	By effective time management	7	10.44
Catching up on studies	8	8.24	Poor time management	7	7.69	By creating a more effective study schedule	5	7.46
Doing the assignments	7	7.21	Trivial stuff	2	2.19	By spending less time watching TV	4	5.97
Spending time with friends	5	5.15	Physical causes (fatigue, illness, etc.)	2	2.19	By spending less time on the Internet	4	5.97
Helping my parents	4	4.12	Social life	2	2.19	Other	3	4.47
Learning something new each day	2	2.06	Spending time with friends	1	1.09	By less involvement in social events	2	2.98
Conducting scientific research	1	1.03	Part-time job	1	1.09	By following a study schedule	2	2.98
						By feeling physically well	2	2.98
Total	97	100		91	100		67	100

As can be inferred from Table 8, 29 participants (29.89%) set a goal of making progress for PPSE, 21 participants (21.64%) preparing for the internship, and 11 participants (11.34%) revising the learned topics. 38.46% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as other academic responsibilities (assignments, internship, etc.) (23.07%) and lack of motivation (12.08%). The suggestions for being able to achieve these goals were stated as staying motivated (32.83%), studying on a daily basis (11.94%), and studying effectively (11.94%).

Quotations from participants for the eighth week were given below:Participant 31: *"To solve the test on the subject of 'Turkish-Islamic scholars', memorize the rivers in Turkey, summarize the topic of the population in Turkey, get ready for the internship, finish the paragraph test."* Participant 1: *"I achieved a little bit as it will take a lot of time."*

Table 9. Findings related to goals for week nine

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	29	30.2	Achieved	38	46.91	By staying motivated	17	37.77
Preparing for the internship	23	23.95	Other academic responsibilities (assignments, internship, etc.)	19	23.45	By effective time management	8	17.77
Revising the learned topics	16	16.66	Social life	6	7.4	By studying effectively	5	11.11
Reading a certain number of pages	7	7.29	Distraction	5	6.17	By creating a more effective study schedule	5	11.11
Doing the assignments	6	6.25	Lack of motivation	3	3.7	By spending less time watching TV	3	6.66
Spending time with friends	5	5.2	Poor time management	3	3.7	By spending less time on the Internet	2	4
Catching up on studies	5	5.2	Physical causes (fatigue, illness, etc.)	3	3.7	By feeling physically well	2	4
Conducting scientific research	3	3.12	Trivial stuff	2	2.46	By less involvement in social events	2	4
Helping my parents	1	1.04	Too many goals	1	1.23	By studying on a daily basis	1	2.22
Learning something new each day	1	1.04	Lack of a suitable study environment	1	1.23			
Total	96	100		81	100		45	100

As can be inferred from Table 9, 29 participants (30.2%) set a goal of making progress for PPSE, 23 participants (23.95%) preparing for the internship, and 16 participants (16.66%) revising the learned topics. 46.91% of these goals had been achieved. On the other hand, the reason most frequently stated for not being able to achieve these goals was other academic responsibilities (assignments, internship, etc.) (23.45%). The suggestions for being able to achieve these goals were stated as staying motivated (37.77%) and effective time management (17.77%).

Quotations from participants for the ninth week were given below: Participant 17: *"I could not read because I had to spend the time that I had allocated to reading on my internship topic."* Partipant 2: *"I could not study mathematics since my internship was intense."*

Table 10. Findings related to goals for week ten

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	35	29.41	Achieved	41	52.56	By staying motivated	10	32.25
Preparing for the internship	27	22.68	Other academic responsibilities (assignments, internship, etc.)	16	20.51	By studying effectively	7	
Revising the learned topics	16	13.44	Lack of motivation	6	7.69	By effective time management	6	19.35
Reading a certain number of pages	13	10.92	Distraction	6	7.69	By studying on a daily basis	2	6.45
Catching up on studies	13	10.92	Poor time management	3	3.84	By spending less time watching TV	2	6.45
Spending time with friends	6	5.04	Trivial stuff	3	3.84	By spending less time on the Internet	2	6.45
Doing the assignments	6	5.04	Physical causes (fatigue, illness, etc.)	1	1.28	By creating a more effective study schedule	2	6.45
Conducting scientific research	2	1.68	Social life	1	1.28			
Helping my parents	1	.84	Part-time job	1	1.28			
Total	119	100		78	100		31	100

As can be inferred from Table 10, 35 participants (29.41%) set a goal of making progress for PPSE, 27 participants (22.68%) preparing for the internship, 16 participants (13.44%) revising the learned topics, 13 participants (10.92%) reading a certain number of pages, and 13 participants (10.92%) doing catch up on studies. A majority of these goals (52.56%) had been achieved. On the other hand, the reason most frequently stated for not being able to achieve these goals was other academic responsibilities (assignments, internship, etc.) (20.51%). The suggestions for being able to achieve these goals were stated as staying motivated (32.25%), studying effectively (22.58%), and effective time management (19.35%). Quotations from participants for the tenth week were given below: Participant 21: *"If I had studied according to a certain study schedule, I could have studied more regularly and found time to read."* Participant 8: *"I couldn't because I decided to take a break from studying and to go out with my friends."*

Table 11. Findings related to goals for week eleven

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	37	33.33	Achieved	40	54.79	By staying motivated	18	48.64
Preparing for the internship	25	22.52	Other academic responsibilities (assignments, internship, etc.)	13	17.8	By studying on a daily basis	6	16.21
Revising the learned topics	16	14.41	Lack of motivation	6	8.21	By studying effectively	3	8.1
Reading a certain number of pages	13	11.71	Distraction	5	6.84	By spending less time on the Internet	2	5.4
Spending time with friends	6	5.4	Poor time management	4	5.47	By less involvement in social events	2	5.4
Doing the assignments	6	5.4	Trivial stuff	2	2.73	By studying at the library	1	2.7
Catching up on studies	5	4.5	Technical issues (Internet outage)	1	33.33	By stopping going into too much detail	1	2.7
Helping my parents	2	1.8	Physical causes (fatigue, illness, etc.)	1	33.33	By effective time management	1	2.7
Watching a documentary	1	.9	Social life	1	33.33	By spending less time watching TV	1	2.7
						By creating a more effective study schedule	1	2.7
						By following a study schedule	1	2.7
Total	111	100		73	100		37	100

As can be inferred from Table 11, 37 participants (33.33%) set a goal of making progress for PPSE, 25 participants (22.52%) preparing for the internship, 16 participants (14.41%) revising the learned topics, and 13 participants (11.71%) reading a certain number of pages. A majority of these goals (54.79%) had been achieved. On the other hand, the reason most frequently stated for not being able to achieve these goals was other academic responsibilities (assignments, internship, etc.) (17.8%). The suggestions for being able to achieve these goals were stated as staying motivated (48.64%) and studying on a daily basis (16.21%).

Quotations from participants for the eleventh week were given below: Participant 20: *"To complete the topic of history for PPSE, revise other sciences in 'Teaching Field Knowledge,' get ready for the internship, and get prepared for the 'Guidance' lesson."* Participant 16: *"By motivating myself to think of the possibility of failing."*

Table 12. Findings related to goals for week twelve

Goals to be achieved by next week	f	%	Reasons for not being able to achieve them	f	%	Suggestions for achieving them	f	%
Making progress for PPSE	35	30.7	Achieved	45	45.45	By staying motivated	15	45.45
Preparing for the internship	21	18.42	Graduation processes	16	16.16	By creating a more effective study schedule	4	12.12
Getting prepared for undergraduate exams	16	14.03	Other academic responsibilities (assignments, internship, etc.)	15	15.15	By studying effectively	3	9.09
Reading a certain number of pages	14	12.28	Social life	8	8.08	By spending less time on the Internet	3	9.09
Catching up on studies	13	11.4	Lack of motivation	5	5.05	By studying on a daily basis	3	9.09
Revising the learned topics	5	4.38	Distraction	4	4.04	By less involvement in social events	2	6.06
Spending time with friends	3	2.63	Poor time management	3	3.03	By feeling physically well	2	6.06
Helping my parents	2	1.75	Trivial stuff	2	2.02	By following a study schedule	1	3.03
Doing the assignments	2	1.75	Physical causes (fatigue, illness, etc.)	1	1.01			
Conducting scientific research	2	1.75						
Learning something new each day	1	.87						
Total	114	100		99	100		33	100

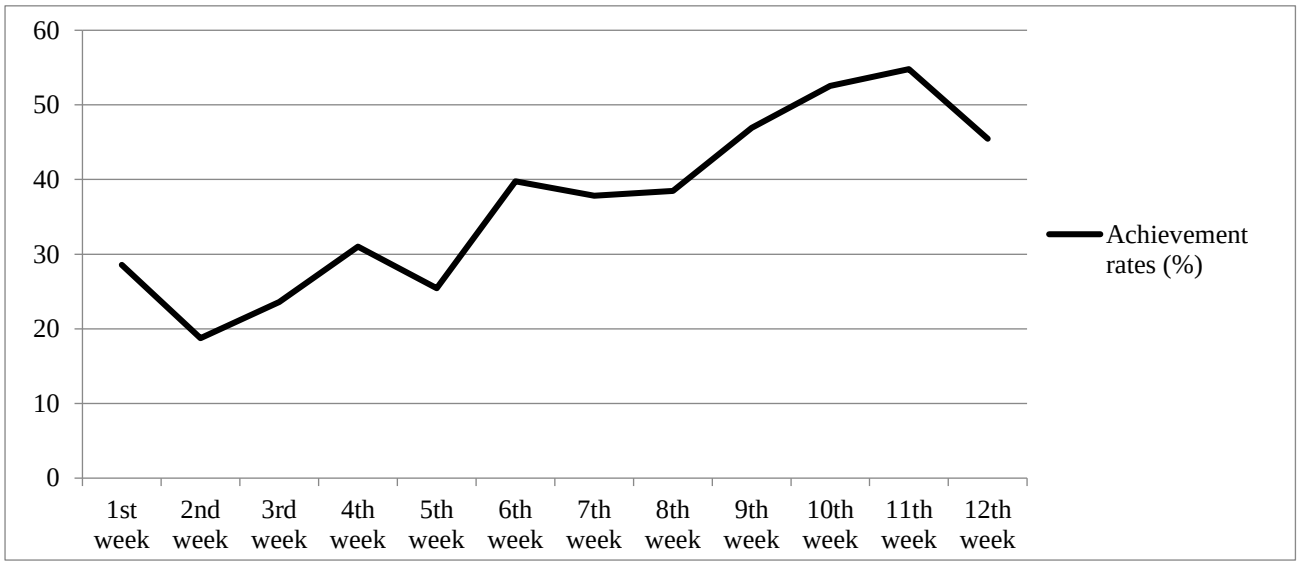
As can be inferred from Table 12, 35 participants (30.7%) set a goal of making progress for PPSE, 21 participants (18.42%) preparing for the internship, 16 participants (14.03%) getting prepared for undergraduate exams, 14 participants (12.28%) reading a certain number of pages, and 13 participants doing catch up on studies. 45.45% of these goals had been achieved. On the other hand, the reasons for not being able to achieve these goals were stated as graduation processes (16.16%) and other academic responsibilities (assignments, internship, etc.) (15.15%). The suggestion most frequently stated for being able to achieve these goals was staying motivated (45.45%). Quotations from participants for the twelfth week were given below:

Participant 25: *"If I hadn't attended the spring festivals, I could have achieved my goals."*

Partipant 18: *"Studying and solving problems in geography, educational sciences, mathematics and field courses."*

When the findings obtained from all the data were examined, it was seen that teacher candidates mostly focused on academic cognitive goals such as "making progress for PPSE" and "preparing for the internship". It is probably said that teacher candidates focus on such goals due to their test and academic achievement concern arising mainly from their desire to be appointed as teachers to public schools. It was observed that during the exam weeks (see Table 6 and Table 12), the goals of preparing for the tests and revising the learned subjects were stated more frequently. The graph about the change of the achievement rates of the goals determined by the teacher candidates on the basis of weeks is given in Figure1.

Figure 1. The graph about the change of the achievement rates of the goals determined by the teacher candidates on the basis of weeks



When Figure 1. was examined, it was seen that the achievement rates (in range 18.75-54.79) of the goals increased week by week. The decrease at the 12th week was due to graduation processes such as preparation for graduation ceremony (see Table 12). This can be interpreted as that once the participants set goals for themselves, they started to feel more responsible for their own learning. Moreover, it can be said that with this goal-setting activity, they got to know their learning styles better and were able to set more achievable goals for themselves. The graph about the change of the suggestion frequencies for achieving the goals on the basis of weeks is given in Figure 2.

Figure 2. The graph about the change of the suggestion frequencies for achieving the goals on the basis of weeks

When Figure 2 was examined, it was seen that the number of suggestions (in range 31-115) for achieving the goals on decreased week by week. As the rate of achieved goals increased week by week (see Figure 1), teacher candidates stated fewer reasons for not being able to achieve the goals and fewer suggestions for achieving the goals, espeacially towards the last weeks.

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

Based on the findings, two important conclusions were achieved:

1. *Setting goals increases learners' learning responsibility*. It was observed that through goal-setting activities carried out on a weekly basis, the participants were able to achieve more learning goals. The teacher candidates made a progress in line with the goal of "taking responsibility for one's own learning process" (Yıldırım et. al., 2009), which is specified as one of the learning outcomes of the "Effective Learning and Studying Techniques" course. The sense of responsibility is not an innate feature, and in order to be learned, people must be in environments where they can take responsibility (Aydoğan & Gündoğdu 2015). Gömleksiz et. al. (2011) and Yakar and Saracaloğlu (2019) concluded that activities carried out with the active involvement of students increased students' learning responsibility. On the other hand, in their study, Cook-Sather and Luz (2015) explored the relationship between students' redefining their perceptions of themselves and their learning responsibility.

2. *Test and academic achievement concern cause teacher candidates to focus more on cognitive goals rather than other type of goals*. Since the participants were on the brink of the Public Personnel Selection Examination (PPSE), the majority of their goals were academic cognitive goals such as "making progress for PPSE" and "preparing for the internship". Dalkıran (2012) concluded that students were not able to spare any time for non-academic activities due to the necessity to prepare for the exams. Wittmaier (1972; as cited in Mertol İlgar, 1996) stated that test anxiety affected students' goals and study habits. The study concluded that through goal-setting activities carried out on a weekly basis, the participants were able to achieve more learning goals. For this reason, the courses relatedto effective studying techniques and creating an effective study schedule can be increased and, as Senemoğlu (2010) stated, in each lesson, activities aimed at developing effective studying techniques and creating effective study schedules can be carried out to enable students to get to know themselves better and to take more responsibility for their own learning. This study was carried out with fourth-year undergraduate students. A similar study can be carried out with undergraduates in various grades to compare their goals and the level of achievement of the goals.

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ADAPTATION OF TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE SCALE INTO TURKISH CULTURE WITHIN THE SCOPE OF 21ST CENTURY SKILLS

Abstract: The purpose of this study was to test the validity and reliability of Turkish version of the 21st century skills-oriented TPACK scale, developed by Valtonen et al., (2017). The participants of the study selected with using the convenient sampling included 339 pre-service teachers who enrolled in the teacher education faculty of a state university located in the western part of Turkey. Confirmatory factor analysis was performed for the construct validity of the scale, and Rasch analysis for its validity and reliability. Rasch person and item reliability coefficients for the TPACK were around .90. Rasch analysis showed that infit and outfit mean values were in the acceptable fit range. In addition, correlations between the factors showed a strong relation in the theoretical model, indicating a good construct validity. Also, all dimensions of the scale were significantly related to teaching self-efficacy of pre-service teachers. Examination pre-service teachers' responses, it was found that they believed that they had adequate knowledge at content and pedagogic matters, but their knowledge at technology and integrating it with pedagogic and context knowledge were at satisfactory level. Educational implications and future directions were discussed.

Keywords: 21st century skills, pre-service teacher education, Rasch analysis, self-efficacy, TPACK

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INTRODUCTION

In today's world digital technologies have begun to spread in every area of life in light of the rapidly growing information and therefore personal development and transformation needs emerge. In order to keep up with this development and transformation, it becomes inevitable for individuals to acquire new knowledge and skills. This situation leads to the formation of new competence and skill concepts. These include creative and innovative thinking, problem solving, and 21st century skills including communication and collaboration (Voogt & Roblin, 2012). Pre-service and in-service teachers are expected to have new skills (Organization for Economic Co-operation and Development [OECD], 2018). In this context, new education policies and educational standards have been created (Binkley et al., 2012; Geisinger, 2016).

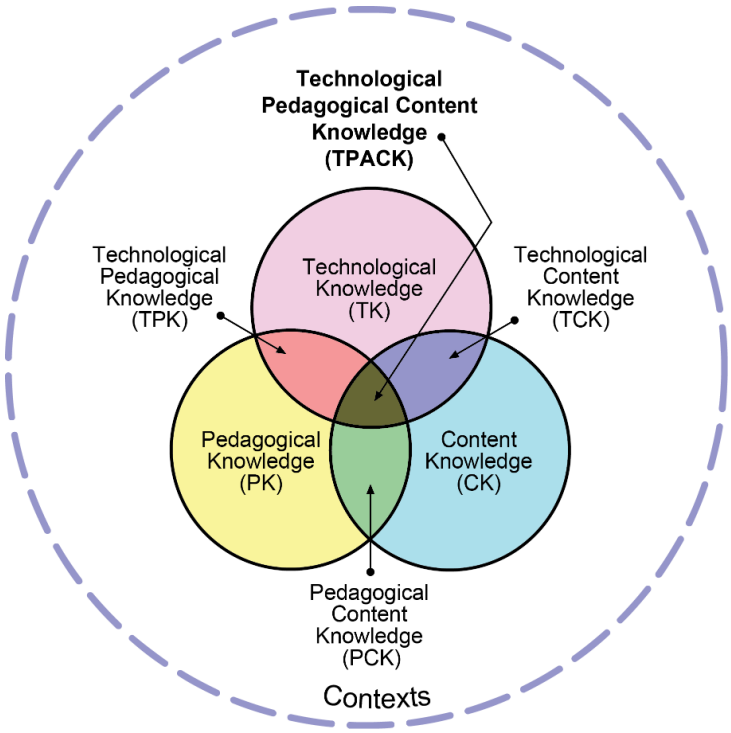
Teacher education has an important stand in the training of 21st century teachers and pre-teachers. Teachers must embrace various pedagogical approaches to benefit from information communication technologies (ICTs) in an efficient and effective manner and to support the development process of 21st century skills of students (Voogt et al., 2013). Accordingly, it can be said that 21st century skills should be included in teacher education. From this point on, it was aimed to examine 21st century skills of educators within the scope of technological pedagogical content knowledge (TPACK) that focuses on pedagogical, professional and ICT competences of educators.

TPACK

TPACK, built on Shulman's (1986) "Pedagogical Content Knowledge" idea, is one of the leading models for effective technology integration in education. TPACK is a theoretical approach put forward by Mishra and Koehler (2006), which tries to identify the skills that teachers need for technology adaptation while dealing with complex and versatile issues in the content knowledge subjects (Figure 1).

Three basic knowledge forms, Content Knowledge (CK), Pedagogy Knowledge (PK), and Technology Knowledge (TK) are located at the center of the TPACK framework. In addition, TPACK emphasizes the interactions between these components beyond the technological, pedagogical and field knowledge components. It is located in a common intersection area where technological, pedagogical and content knowledge are interactive with each other. In other words, the model which is the intersection of these three components, contains Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPACK). Accordingly, considering the contents of the knowledge types that form the TPACK model; the CK includes knowledge that covers the concepts, theories and ideas related to the subject to be learned or taught. PK mainly covers teaching and learning practices or methods, including classroom management skills, lesson planning and assessment. TK covers a broad understanding of information technologies, tools and resources. On the other hand, PCK expresses the understanding that supports the determination of the most appropriate method for the content to be taught and the best teaching of the content. TCK refers to providing richer and more flexible content with the most appropriate technology for the content in the field. TPK includes the understanding of how teaching and learning can be improved when certain tools are used in certain ways. Finally, TPACK expresses the understanding of how to teach content using various technologies and always take this process to a higher level in order to improve previous experiences (Koehler, Mishra & Cain, 2013).

Figure 1. TPACK model proposed by Mishra and Koehler (2006).



21ST CENTURY SKILLS

21st century skills have been defined by various international or national institutions, organizations and academic research. Some examples can be Partnership for 21st Century Learning (P21), ATC21S skills framework the OECD skills framework, and International Society for Technology in Education (ISTE) skills framework (Griffin and Care, 2015; ISTE, 2016, 2017; OECD, 2018; P21, 2019,). For instance, P21 is defined in four main titles and 17 subtitles that students need to be successful in professional and daily life in addition to the 21st century learning outcomes. The main title of "learning and innovation skills" covers creative thinking and innovation, critical thinking and problem solving, communication and collaboration skills. The main title of "Information, media and technology skills" covers information literacy, media literacy and information communication technologies literacy skills. On the other hand, the main title of "life and career skills" refers to flexibility and adaptability, entrepreneurship and self-direction, social and intercultural skills, productivity and leadership and responsibility skills. In addition, the main title of "major topics and 21st century themes" states English, language arts, world languages, art, mathematics, economics, science, geography, history, management and citizenship as the basic subjects that should be taught in schools. Also 21st interdisciplinary themes are indicated as global awareness, financial, economic, business and entrepreneurship literacy, citizenship literacy, health literacy and environmental literacy (P21, 2019). On the other hand, the competencies required for today's students to adapt to an ever-evolving technological environment, according to ISTE standards, are handled in the form of digital literacy, innovation, computational thinking, communication and global collaboration skills.

Despite different definitions, all these standards aim to provide students with basic skills such as collaboration, technology literacy, social and cultural competencies, creativity, critical thinking and problem solving. Another characteristic feature of these definitions is that they emphasize the importance of ICT skills. In particular, students are expected to use ICTs as an efficient vehicle in areas related to 21st century skills such as the students' learning, collaboration, problem solving, and creative and innovative thinking (Sanger and al., 2018). ICTs are reported to have common ground with other 21st century qualifications components. In other words, ICT skills are an important place in the 21st century skills(Voogt et al., 2013).

TPACK MEASUREMENT

It is very important to use valid and reliable measurement tools in the development of TPACK knowledge and skills of in-service and pre-service teachers. In the literature related to TPACK studies, there are many measurement tools used by the researches which help us better understand the TPACK developments of pre-service teachers. Meta-synthesis studies in the literature indicate that the most used self-report measurement tools are among five different research models generally (self- report, open-ended questions, performance evaluation, observation and interview) in the field of TPACK (Koehler, Shin, and Mishra, 2012; Wang, Schmidt-Crawford, and Jin, 2018). From these studies, Koehler et al. (2012) examined 66 studies conducted between 2006 and 2010. Koehler et al. (2012) stated that the most important problem in the studies examined was reliability and validity. Also, they stated that the TPACK area is in continuous development, and more specific scales should be used. Similarly, Wang et al. (2018) analyzed 88 TPACK studies published between 2007-2014. They stated that the self- report scales used in the TPACK area generally focused on the definition of seven areas of knowledge defined by Mishra and Koehler (2006), and emphasized that scales for the integration of technology into educational practices, enrichment of teaching and learning have gained importance in recent years.

The development of scale by combining the TPACK competencies with 21st century skills, description of the TPACK competences of teachers comprehensively is important to meet today's skills and expectations better. Furthermore, reproduction and renewal are important stages in the development of scientific knowledge (National Academies of Science, Engineering and Medicine, 2019). The validity and reliability of a self- report scale, testing the validity and reliability of the scale in different cultures is a requirement in generating new and effective information. Moreover, face-to-face education has been transformed into distance education in many countries with the COVID-19 pandemic process. This pandemic process created an opportunity to review the readiness level of countries in terms of educational technologies, to evaluate teachers' and students' technology literacy, ability to use educational technologies, their interests and attitudes. The distance education process requires teachers to continue their education by using the technological infrastructure provided to them. For this reason, it is important to determine and develop the 21st century skills-supported TPACK and skills of pre-service teachers by blending the technology, pedagogical and content knowledge of the teachers, the teaching knowledge of the students and 21st century skills. In line with this rationale, the purpose of this study was to test the validity and reliability of the 21st century skills-oriented TPACK scale (TPACK-21) developed by Valtonen et al., (2017) by adapting into Turkish culture. Accordingly, the research questions were sought:

1. Is the factor structure of TPACK-21 scale confirmed in Turkish culture?

2. What are the reliability results of the TPACK-21 scale?

METHODS

RESEARCH MODEL

This study was a descriptive study, which aimed to test the validity and reliability (Psychometric properties) of the TPACK-21 developed by Valtonen et al. (2017). Therefore, a quantitative survey model was employed.

CONTEXT OF THE STUDY

Teacher education in Turkey has been constantly changing since 1848, when the initial teacher education was established. Teacher education includes a 4-year university-level education period and students are placed according to their scores they gain from the test, Higher Education Institutions Exam, conducted by the Student Selection and Placement Center. In order to enroll in any teacher education program a student must be among the first 300 thousand at the test. Furthermore, the curriculum in education faculties has been updated since 2018. This update was made according to research and new economic, social and cultural needs in the field. In the new teacher program, pre-service teachers must take courses within the scope of content knowledge, professional knowledge and general culture. Content knowledge courses include content knowledge and pedagogical content knowledge courses. Professional knowledge

courses include general professional courses and technological pedagogical courses. General culture courses include general qualification courses and elective courses according to the needs and interests of the students.

Participants

The participants of the study selected with using the convenient sample included 339 pre-service teachers who enrolled in the teacher education faculty of a state university located in the western part of Turkey. There is a total of 93 education faculties in Turkey. The selected education faculty is a medium level faculty based on the 2019 Higher Education Institutions Exam base scores. Therefore, the findings of this study from the selected sample can be generalized to the population. Participants are 11 different teaching area including German, Physical Education, Instructional Technologies and Computer Education, Science, English, Mathematics, Preschool, Psychological Counseling and Guidance, Primary, Social Studies and Turkish Language teaching. 226 of the participants were female and 113 were male. Since pedagogical content knowledge and technological pedagogical content knowledge courses are usually taught in the third grade, only the third and fourth grade preservice teacher were invited to participate in the study. While 154 participants were fourth year students, 185 participants were third year students. Recommended sample size for polytomous items in Rasch analysis were 250 participants (Linacre, 2002). A sample of 339 pre-service teachers would be enough for robust item estimations.

Instruments

Technological Pedagogical Content Knowledge Scale

TPACK-21 is a 38-item six-point Likert type developed by Valtonen et al. (2017) (1 = I have too many knowledge gaps, 6 = My knowledge level is very good). The scale consists of seven sub-dimensions defined by Mishra and Koehler (2006). The scale aims to measure the knowledge level of pre-service teachers in the relevant field by integrating the 21st century skills and TPACK skills that pre-service teachers should have. The measurement tool covers reflective thinking, problem solving, creative thinking, critical thinking and information and communication technology competence as 21st century skills. Reflective thinking is one's ability to think consciously about their own education, learning and skills. Problem solving is the ability of solving new tasks that the individual does not know beforehand, by combining previous knowledge and experiences in a new way. Creative thinking is defined as using own skills to create something new and comparing different sources of information. Critical thinking is the ability to comprehensively process information, evaluate the reliability of information, and compare different sources of information. Finally, the information and communication technologies competence is expressed as an effective and efficient use of web-based applications and software, social media services and online learning environments as well as different devices such as computers, tablets and smartphones. Sample items, number of items and reliability levels reported by Valtonen et al. (2017) were given in Table 1.

Table 1. Information on the sub-dimensions of TPACK-21

Sub-dimension	Sample item	Item number	Reliability coefficient *
PK	I can guide students' discussions in group work (2-5 students)	7	.93
CK	I have sufficient knowledge to improve the content of my specialty	4	.92
TK	I am familiar with new technologies and their features	4	.88
PCK	In my specialty, I know how to guide students to think critically	6	.95
TPK	I know how to use ICT as a tool for students to share their thoughts and ideas	6	.95
TCK	I know websites with online materials for my specialty	4	.89
TPACK	In my specialty, I know how to use ICT as a tool to develop students' reflective thinking skills	7	.96
*Reported by Valtonen et al. (2017)			

Valtonen et al. (2017) reported fit index (CFI= 0.98, TLI= 0.98, RMSEA= 0.063 [0.057; 0.069]) after removing technological pedagogical content knowledge sub-dimension as the result of the confirmatory factor analysis using the least squares prediction method weighted according to the mean and variance.

TEACHER SELF-EFFICACY SCALE

Studies in the literature have showed that there is a relationship between TPACK and teaching self-efficacy. For instance, Joo, Park and Lim (2018) showed in their study that there was a moderate relationship between teachers' self-efficacy and TPACK level of Korean pre-service teachers (r = .49, p <.01). In another study, Keser, Karaoglan-Yilmaz, and Yilmaz (2015) examined the technology use self-efficacy and TPACK levels of Turkish pre-service teachers and stated that there was a high level relationship between these variables (Spearman's rho=. 78, p <. 001). In this context, it was expected that there was a relationship between TPACK level and teachers' self-efficacy. The Teacher Self-Efficacy Scale developed by Schmitz and Schwarzer (2000) was used to determine teachers' self-efficacy. The scale was adapted to Turkish by Yilmaz, Koseoglu, Gercek, and Sonran (2004). The scale, which is a 4-point Likert type (1: not suitable for me, 4: completely suitable for me), consists of two sub-dimensions and 10 items. The management behavior sub-dimension consists of six items and measures teachers' ability to cope with stress and emotions when faced with a difficult situation. The innovative behavior dimension consists of four items and measures the self-efficacy of displaying innovative behavior. Each item was removed from the coping behavior and innovative behavior sub-dimensions since they had a low factor load in the study of Yilmaz et al. (2004). With this process, the scale consists of a total of eight items. Reliability value Cronbach's alpha was reported as .79 for eight items.

PROCEDURES IN THE SCALE ADAPTATION PROCESS

The adaptation study of the TPACK-21 into Turkish culture was carried out by following process specified by Çapik et al. (2018). First, the scale was translated from English into Turkish by researchers. Conceptual and semantic deductions were made while translating. Then the opinions of two Turkish and two English education experts were evaluated. Modifications were made in line with their opinions. Later, two experts independently made back-translation. The translations of the experts were examined and it was determined that the translations were semantically compatible with each other. Opinions of pre-service teachers were taken in order to examine the comprehensibility of the scale. At the final stage of the translation process, translators and experts gathered in a panel session to check the translations. In the next step, field experts evaluated the relevance of the scale for culture, comprehensibility and the purpose. It was sent to determine whether the scale was understood by pre-service teachers in the target audience. The Turkish version of the TPACK-21 was finalized in line with the feedback of pre-service teachers. Finally, to make the TPACK available for all pre-service teacher disciplines, "the natural science" phrase was replaced with "in my field of expertise" because the TPACK-21 was originally developed for the science teacher field.

DATA ANALYSIS

Confirmatory factor analysis was performed using the MPLUS program for the construct validity of the data, and Rasch analysis for its validity and reliability. Rasch analysis method is a method of testing validity and reliability, which is generally used on Likert type scales considering the latent trait theory (Ilhan & Guler, 2017). In the Rasch model, which was first developed by George Rasch, instead of the classical test theory, the abilities of individuals and the difficulty levels of the items are determined and the possibilities of individuals to respond to the items are taken into consideration (Rasch, 1961). In the classical test theory, statistical values such as mean value and standard deviation are calculated from the raw scores obtained from the answers given by the individuals in the scale of Likert type. However, not all items are equally difficult in tests that measure attitude, knowledge and skills (Bond & Fox, 2015). In addition, although the researcher assumes that the range between the options is equal in Likert type scales, it is relative (Elhan & Atakurt, 2005). For example, expressions such as 1: strongly disagree, 2: disagree, which are found in most Likert- type scales, are semantically relative although one or two numerical expressions are given. Therefore, Rasch analysis argues that this type of ranking is not really equally ranged-internal scale, but rather it is

ordinal type scaling. Therefore, in such scales, before calculating statistics such as mean value, etc. from the data, they must be converted into interval-ranged or ratio-proportion units (Bond & Fox, 2015).

In the Rasch analysis, the unit defined as logit is used and it indicates the natural logarithm of the individual's probability of success (Elhan & Atakurt, 2005). In Rasch analysis, considering the ability and item difficulty values of the individual in calculating this natural logarithm, the possibility of the individual to answer a question correctly is expressed (Yildiz & Uzunsakal, 2018). Rasch analysis combines people's ability and item difficulty on a common axis.The conversion to this axis converts scores into interval scores (Bond & Fox, 2015).

In this study, Rasch analysis was performed in Winsteps 3.80 software. First, the reliability coefficient of individuals and items was calculated. Then, item measurement indices (Infit and Outfit) values were examined. In addition, confirmatory factor analysis was performed in the MPLUS software to test the construct validity. In confirmatory factor analysis, the adjusted weighted least squares parameter estimation method by mean and variance weighted least squares mean and variance [WLSMV]) were used as the scale is considered a ordinal type. The good fit values are considered to be lower than RMSEA= .06 and greater than CFI= .95 for good fit (Hu & Bentler, 1999). Finally, within the scope of criterion validity, correlations with self-efficacy beliefs were examined. Structural equation model was also used with WLSMV estimation method to determine the correlations.

RESULTS

In this part of the paper, the findings related to the Rasch analysis and validity analyses were included. While Rasch person reliability coefficient for the TPACK was found to be .90, the item reliability coefficient was .91. These values were higher than the cut-off value .70, indicating that sample and items were reliable (Bond & Fox, 2015). The fit indices of Rasch analysis were given in Table 2. The fit indices include important information about the psychometric properties of the PACK-21. The first column of the Table 2 showed the total score of each item. Based on this, while the pre-service teachers reported that they needed the most information on Item 8 (I can solve problems related to ICT), they rated that they had sufficient knowledge on Item 21 ("I know how to guide students' creative thinking in my field of expertise). In the second column, the measurement score presented the Rasch measurement value of the items.

The high measurement score indicated a lower agreeability of the item (difficult item). In other words, the high measurement score showed that the participants tend to choose 1 (I have a lot of information deficiency) in the Likert scale of 6. Similarly, a low Rasch analysis score indicated the agreeability of that item was high (easy item). In other words, participants tend to choose “my level of knowledge is very good” for items with low measurement scores. These results indicated that while pre-service teachers stated that they needed more information for Item 8, they stated that they had sufficient information in Item 21. Moreover, pre-service teachers generally stated a need for more information about the items related to technological knowledge, whereas they believed that their knowledge level in the pedagogical knowledge was sufficient.

The infit and outfit values in Table 2 give information about the fit values of the items. These fit values show the residual amount between the data obtained and the values estimated by the Rasch model. The infit value shows that weighted mean residuals based on the low variance while the outfit value gives the average mean score. Zstd value gives the z-standard score status of the fit values. The negative value of the Z standard value indicates a good overlap between the actual value and the estimated value, while a positive value indicates that there is a difference between the estimated value and the actual value.

Bond and Fox (2015) stated that the z-standard score less than -2.00 shows very good to be the true. If this value is higher than 2.00, it can be said that there is a misfit between the model and the predicted value. Therefore, Bond and Fox (2015) recommend that the average of infit and outfit values be between 0.6 and 1.4 for a good fit for Likert type scales. As seen in Table 2, infit and outfit mean values and z scores were in the acceptable fit range. In the last column, point serial correlation values were displayed. Since these values were greater than .30, this indicates that a correlation between the scale items were stronger than medium level.

Table 2. Rasch analysis results

Total	Model		Infit		Outfit		Pt/mea	Items
Score	Measure	SE	Mnsq	Zstd	Mnsq	Zstd	Corr.	
1293	1.13	0.14	1.14	0.92	1.13	0.81	0.64	Tpack8
1322	.62	0.14	1.36	1.08	1.40	1.30	0.54	Tpack9
1330	.58	0.14	1.32	1.88	1.36	1.11	0.54	Tpack11
1332	.57	12.16	0.69	-1.11	0.69	-1.13	0.82	Tpack26
1333	.55	12.16	0.56	-1.22	0.55	-1.33	0.84	Tpack37
1344	.52	12.16	0.65	-1.49	0.63	-1.62	0.83	Tpack34
1345	.52	12.16	0.54	-1.47	0.54	-1.50	0.82	Tpack35
1345	.52	12.16	0.63	-1.66	0.63	-1.67	0.85	Tpack38
1357	.40	12.16	0.89	-0.65	0.89	-0.70	0.82	Tpack30
1359	.40	12.16	0.47	-1.09	0.46	-1.21	0.86	Tpack36
1378	.34	12.16	0.55	-1.35	0.54	-1.41	0.83	Tpack25
1379	.34	12.16	0.73	-1.79	0.71	-1.02	0.81	Tpack32
1380	.34	12.16	0.70	-1.03	0.71	-1.01	0.85	Tpack33
1404	.33	0.14	1.30	1.77	1.49	1.20	0.62	Tpack15
1409	.29	0.14	0.91	-0.51	0.93	-0.4	0.70	Tpack1
1412	.29	12.16	1.03	0.26	0.96	-0.18	0.75	Tpack24
1426	.27	12.16	0.89	-0.63	0.87	-0.79	0.80	Tpack22
1428	.24	12.16	0.79	-1.36	0.79	-1.39	0.80	Tpack29
1437	.24	12.16	1.09	0.62	1.05	0.38	0.77	Tpack31
1440	.22	12.16	0.91	-0.55	0.88	-0.7	0.79	Tpack23
1449	.21	0.14	0.86	-0.86	0.89	-0.68	0.76	Tpack12
1466	.19	12.16	0.93	-0.42	0.88	-0.75	0.77	Tpack27
1473	.16	12.16	1.34	1.95	1.47	1.61	0.67	Tpack28
1483	.02	0.14	0.78	-1.43	0.77	-1.54	0.77	Tpack14
1510	-.02	0.14	1.37	1.11	1.33	1.93	0.50	Tpack10
1520	-.04	0.14	0.83	-1.04	0.83	-1.09	0.71	Tpack4
1523	-.39	12.15	0.70	-1.01	0.72	-1.87	0.74	Tpack2
1525	-.39	12.15	0.70	-1.05	0.69	-1.15	0.82	Tpack13
1534	-.48	12.15	0.66	-1.34	0.65	-1.44	0.77	Tpack3
1535	-.48	12.15	0.97	-0.14	0.98	-0.06	0.76	Tpack6
1543	-.59	12.15	0.77	-1.53	0.75	-1.67	0.80	Tpack5
1551	-.69	12.17	1.18	1.09	1.23	1.35	0.58	Tpack16
1570	-.75	12.17	1.34	1.32	1.49	1.10	0.49	Tpack19
1573	-.77	12.15	0.91	-0.54	0.87	-0.80	0.78	Tpack7
1586	-.97	12.17	1.36	1.94	1.52	1.79	0.55	Tpack20
1590	-1.03	12.17	1.46	1.8	1.41	1.58	0.51	Tpack17
1598	-1.27	12.17	1.43	1.81	1.45	1.45	0.53	Tpack18
1601	-1.42	0.18	1.43	1.79	1.47	1.52	0.59	Tpack21
MEAN	1446.7	12.15	0.99	-0.3	0.98	-0.3		
P. SD	26.6	12.01	0.40	1.4	0.38	2.4		

In order to test the construct validity of the scale, confirmatory factor analysis was performed in Mplus 6.12 program using WLSMV estimation the fit values of the scale as χ^2 (644) = 1131.07, RMSEA= .047 (CI: 042, .052), CFI= .98 and TLI= .98. These fit indices showed that the data fit well with the theoretical structure of the scale. In addition, the WRMR value calculated in the WLSMV estimation method was found to be 0.96. A value less than 1.0 is good indicators of method. WLSMV estimation method is a prediction method generally used for ordinal type scales. Confirmatory factor analysis resulted in the fit (Yu, 2002). Factor loads of the items, given in Table 3, were higher than .30 cut-off value. That indicated that the items had a good correlation with the latent factor. In addition, correlations between the factors showed a strong relation, as expected in the theoretical model, indicating a good construct validity.

Table 3. Factor loads of items

Factors	Items	Factor loadings
PK	Tpack1	0.73
	Tpack2	0.78
	Tpack3	0.77
	Tpack4	0.81
	Tpack5	0.71
	Tpack6	0.77
	Tpack7	0.77
TK	Tpack8	0.73
	Tpack9	0.84
	Tpack10	0.83
	Tpack11	0.75
CK	Tpack12	0.80
	Tpack13	0.77
	Tpack14	0.80
	Tpack15	0.78
PCK	Tpack16	0.75
	Tpack17	0.77
	Tpack18	0.77
	Tpack19	0.77
	Tpack20	0.78
	Tpack21	0.77
TPK	Tpack22	0.80
	Tpack23	0.78
	Tpack24	0.81
	Tpack25	0.82
	Tpack26	0.80
	Tpack27	0.81
TCK	Tpack28	0.80
	Tpack29	0.88
	Tpack30	0.81
	Tpack31	0.86
TPACK	Tpack32	0.81
	Tpack33	0.74
	Tpack34	0.78
	Tpack35	0.82
	Tpack36	0.72
	Tpack37	0.82
	Tpack38	0.83

Criterion Validity

In order to test the validity of the TPACK-21, the pre-service teachers' relationship with self-efficacy perception was examined. Structural equation modeling with WLSMV estimation method were used. Fit values of the analysis were in good fit (χ^2(953) =1449.73, RMSEA= .039 (CI: .035, .043), CFI= .98 and TLI= .98. WRMR value was found as .93. The correlations between TPACK-21 factors and self-efficacy factors were displayed in Table 4.

Table 4. Correlation values between factors

No.	Factors	1	2	3	4	5	6	7	8
1	PK	1.00							
2	CK	.49	1.00						
3	TK	.61	.45	1.00					
4	PCK	.63	.43	.59	1.00				
5	TPK	.49	.62	.52	.53	1.00			
6	TCK	.52	.68	.63	.57	.71	1.00		
7	TPACK	.51	.59	.60	.58	.69	.71	1.00	
8	Management	.50	.26	.50	.53	.34	.42	.38	1.00
9	Innovative behavior	.51	.32	.49	.58	.30	.33	.31	.55
Note. All correlation values are statistically significant at the .01 level.									

All correlations were a medium or high level between the factors. The correlation among the factors in the instrument can be an indicator that the scale provides construct validity (Thompson, 2004). The high correlations among technological pedagogical knowledge, technological content knowledge and technological pedagogical content knowledge compared to other factors indicated that these three factors were very close to each other. This result is reasonable because all of them includes integrating technology, pedagogy and content knowledge with teaching purposes. All TPACK sub-dimensions were related to self-efficacy perception. Among them, the strongest relation was between pedagogical content knowledge and innovative behavior ($r= .58$, $p<.001$) whereas the weakest one was between the content knowledge and management ($r= .26$, $p<.01$). Overall, as expected, all dimensions were significantly related to teaching self-efficacy of pre-service teachers, which indicated that the instrument had the validity.

DISCUSSION

In this study, the 21st century skills integrated Technological Pedagogical Content Knowledge Scale, developed by Valtonen et al. (2017), was adapted to Turkish culture and tested its validity and reliability. In the analysis, first, Rasch analysis was invoked to measure its person and item reliability. Next, for the construct validity of the TPACK-21, confirmatory factor analysis with WLSMV estimation method suggested for ranking and classification type scales was performed. The analysis resulted in the fit values of the scale as $\chi^2(644) = 1131.07$, RMSEA = .047 (CI: .042, .052), CFI = .98 and TLI= .98. The ratio of chi-square to degree of freedom was 1.75. This value is less than 3.0 good fit cut-off value (Jöreskog & Sörbom, 1993; Kline, 2005). This result indicated that the model fitted well with the data. RMSEA is another fit index commonly reported in CFA. The cut-off value for the RMSEAindex is .05, and less than that value is an indicator of good fit (Browne and Cudeck, 1993; Hu and Bentler, 1999; Vieira, 2011). A .047 value of the RMSEA, the confidence interval between .042 and .052, indicated that the model had a good fit with the data. In the confirmatory factor analysis, the CFI (Comparative Fit Index) and TLI (Tucker-Lewis ndex) values of .95 and above are indicative of perfect fit of the model (Hu and Bentler, 1999; Şimsek, 2007). Analysis resulted in .98 values of CFI and TLI, indicating that the model fit well with the data. The factor loading values of the scale were between .71 and .86. The factor loading is the correlation between the latent factor and the item. According to Kline (1994), factor loading values over.60 are high values. As the factor loadings were above.70, this showed that all items were highly correlated with their corresponded latent factors. A high factor loading increases the average variance extracted value, which is another way to test the validity. Therefore, a higher value than .70 for confirmatory factor analysis and .50 for exploratory factor analysis point out that the variance explained by the items is higher than error variance. Overall, it can be concluded that the data fit well with the theoretical structure of the scale. Valtonen et al. (2017), found fit indices

(CFI=.98, TLI= .98, RMSEA= .063 [.057; .069]). Compared to the fit values, it can be said that similar results were found. In fact, it can be stated that the RMSEA value was better in the Turkish TPACK-21. Also, Valtonen et al. (2017) excluded the technological pedagogical field knowledge dimension in confirmatory factor analysis and there were six dimensions in the original of the TPACK-21. Yet, results of confirmatory factor analysis in this study showed that seven-factors structure of the TPACK-21 was valid. The results of this study suggest that cultural and social factors may be influence the structure of an instruments and thus, the factor structure of any adapted instrument should be checked before using it in a study. As for reliability, while the TPACK scale's Rasch person reliability coefficient was found to be .90, the item reliability coefficient was.91. It can be said that the scale is reliable because its reliability values are .70 and above (Büyüköztürk, 2003; Özdamar, 2013). Valtonen et al. (2017) found the Cronbach Alpha values of the scales between .88 and .96, which were close to the results of this study. These values show that the adapted scale is reliable.

As a criterion validity, the relations of TPACK-21 with the self-efficacy perception of teacher candidates was examined by utilizing structural equation modeling with WLSMV estimation. As a result of the analysis, fit indices were found as (χ 2 (953)= 1449.73, RMSEA= .039 (GA: .03, .04), CFI= .98 and TLI= .98., and WRMR value were as .93 . Studies have showed that self-efficacy and TPACK are highly correlated (Joo, Park and Lim, 2018; Keser, Karaoğlan-Yilmaz and Yilmaz, 2015). For instance, Joo, Park and Lim (2018) showed that there was a moderate correlation between self-efficacy and TPACK (r=. 49; Cohen et. al., 2003). In this study, the correlation coefficients between sub-dimensions of TPACK-21 and self-efficacy varied from moderate (e.g., r=.26 between content knowledge and management) to high (e.g., r= .58 between pedagogic content knowledge and innovative behavior). This variation can be due to the multidimensional nature of TPACK. Results of this study showed that the Turkish version of the TPACK-21 displayed almost the same item-factor structure with the original TPACK-21. Hambleton, Merenda and Spielberger (2005) state that translation of a scale means more than one language to another. Adaptation of a scale to another culture is the adaptation process carried out in cultural change. The results showed that Finn and Turkish teachers candidates had similar experiences in terms of technological and pedagogical content knowledge. In this context, the validity and structure of the TPACK-21 should be explored with teachers in the different countries because the experiences of pre-service teachers in different geographies are different.

21st century skills include the skills such as critical thinking, creativity, innovative thinking, and collaboration. To be a qualified teacher, it is very important for teacher candidates to have these skills and use ICT tools efficiently (Sanger et. al., 2018). ICT skills have an important place in the 21st century skills (Voogt et. al., 2013). Therefore, pre-service teachers should integrate the ICT skills with the 21st century skills. The adapted measurement tool has an important role in determining teacher candidates' 21st century and TPACK skill levels so that teacher education programs can design for the elimination of the shortcomings of the teacher candidates in the related field in accordance with the requirements of the age.

In the results of Rasch analysis, the highest average score was in pedagogical content knowledge. This result indicated that pre-service teachers believed that they could foster students to think critically, to use their thoughts and ideas, to reflect reflectively and to think creatively. Based these results, it can be said that the teacher education taken by teacher candidates at faculty of education is qualified and their pedagogical content knowledge is at a good level. However, the lowest averages of teacher candidates were in technology knowledge. This shows that teacher candidates are not familiar with new technologies, cannot use new technologies, and therefore cannot solve problems related to ICT. In teacher education undergraduate programs, it can be said that the courses such as computer and instructional technologies and material design, which are expected to help pre-service teachers improve their technology competencies, are insufficient.

When the high and low scores of pre-service teachers are considered together, it can be said

that they cannot integrate pedagogical field knowledge and technology knowledge. This problem may make it difficult for pre-service teachers to meet the requirements of their professions in the future because the formal education could not be carried out face-to-face during the COVID-19 process and distance education made it compulsory. During Covid-19, many countries has started distance education for formal education. The results of this study suggest that teachers with insufficient technology knowledge are more likely to have difficulties in this process. Insufficient technology knowledge of pre-service teachers may cause problems regarding the quality of education from pandemic processes that exist now and may occur in the future. In order to overcome this problem, the technology education in universities may need to be made more qualified and functional in accordance with the requirements of the age. By focusing on the technology knowledge of pre-service teachers, the focus should be on how to make the technology compatible with education. Koehler et al. (2012) states that program designs for adaptation of technology to education will be beneficial. Thus, pre-service teachers should be provided more courses to harmonize pedagogical knowledge with technology knowledge (Saubern, Henderson, Heinrich, & Redmond, 2020). Findings suggest that teacher education programs should explicitly target pre-service teachers' TPACK knowledge and skills.

In Turkey, all teacher education faculties should follow a national teacher education program, developed by National Higher Education. This program includes courses teaching knowledge (pedagogy knowledge), content knowledge and general culture courses. Courses related to the technology knowledge are given through, general computer course in the first semester, the instructional technology, and instructional technologies and material design courses in the fifth semester. In the existing teacher education program, there is no course that purpose to help teacher candidate integrate technology, content and pedagogic knowledge. Teacher candidates are expected to combine the skills they have gained in other courses in the context of technology and teaching profession and use them in their professions (Çoklar et al., 2007). We believe that the scale adapted is very useful in order to measure how different skills related to teaching profession can work together. Findings of this study suggest that there is a need in teacher education program for a course that are designed to foster TPACK.

SUGGESTIONS FOR FUTURE RESEARCH

Some suggestions can be made in line with the results of this research. The TPACK-21 was originally developed from teacher candidates in Finland. Therefore, the construct validity of TPACK scale in different cultures can be examined. Findings related to the validity of the TPACK-21 in different cultures and other variables can help explore the nature of the TPACK. In the original scale development study, Valtonen et al. (2017) used the MPLUS software to analyze the data. In this study, MPLUS and Winstep 3.0 software for Rasch analysis were used. Considering the limitations of these software and analyzes, the TPACK scale can be analyzed using different techniques, and the results can be compared with previous research results.

In the original development study, carried out by Valtonen et al. (2017), six factors structure gave good fit value, and the seventh factor, technological pedagogical content knowledge, was removed from the original scale because it did not give good fit values. In this study, the seven-factor structure gave very good fit values. Studies comparing the results can be done by analyzing the seven-factor structure in different social structures and cultures.

The original scale was developed for science teachers. In this study, adaptation was made for general teaching areas. Validity and reliability of the TPACK-21 can be done in different samples. Also, studies can be conducted to see if there are differences between the groups in different teaching area.

Findings of this study indicated that pre-service teachers had difficulties in solving problems related to ICT technologies and using new technologies, and websites related to emerging technologies. Qualitative research can be conducted to determine the reasons for the shortcomings of teacher candidates in this regard. In line with the results obtained from the research, updates can be made in teacher education programs. Because when pre-service

teachers start their profession, they will need to use technology intensively. For this reason, deficiencies need to be eliminated. The data were obtained from pre-service teachers. The scale adapted to teacher candidates can also be adapted to teachers. Thus, it can be tested whether the scale will be used for teachers.

LIMITATIONS

Research was conducted at a university located in the western part of Turkey. Even though the data are collected from different teaching fields, it is limited only in one education faculty, and the generalizability of the results is limited. In addition, the data were collected through google docs. Although it is not possible to completely remove the limitations within the scope of the research, it has been tried to minimize the limitations. In this context, necessary measures were taken in the process of collecting data. Data from the volunteers of the pre-service teachers were collected. No student was forced. However, the items related to the independent variables of the scale were designed to be prior to the items related to the dependent variables.

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ACCOMMODATION ACCESS BY SOUTHERN CALIFORNIA COMMUNITY COLLEGE STUDENTS WITH SPECIFIC LEARNING DISABILITIES

Abstract: An increasing number of students with disabilities (SWD) are attending college. Yet, many SWD, including students with specific learning disabilities (SLD), do not access accommodations needed for their academic success (Travis, 2014). To identify barriers and supports that affect access to accommodations, the researcher used a qualitative methodology with a descriptive, phenomenological approach to explore experiences of accessing accommodations for a convenience sample of students who self-identified with SLD and were attending Southern California community colleges. Data collected from semistructured interviews were analyzed through the lenses of self-advocacy theory and self-determination theory. The researcher found and identified three practical themes: (a) assigned advocates, (b) meeting with instructors, and (c) positive school experiences that assist students with SLD on postsecondary campuses access their accommodations. The themes support recommendations to those working with postsecondary students with SLD. Those recommendations include (a) assigning advocates, (b) facilitating meetings with instructors, (c) ensuring all students have positive educational experiences, (d) training and educating all those who encounter SWD on postsecondary campuses, and (e) alleviating stigma and negative perceptions associated with disabilities.

Keywords: Specific learning disability, students with disabilities, postsecondary, college, accommodations, transition, self-advocacy, and self-determination

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INTRODUCTION

The number of students with disabilities (SWD) in higher education has increased over the past decades (National Center for Educational Statistics [NCES], 2016; Williams-Hall 2018), mostly due to legislative mandates, such as the American With Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973 (Section 504), and the Individuals with Disabilities Education Act of 1990 (IDEA; Agarwal Calvo & Kumar, 2014). The NCES (2016) estimated 12% of the U.S. community college student population identified as individuals with disabilites, and U.S. community colleges enroll half of all SWD, more than 1.3 million students (American Association of Community Colleges, 2014).

Despite increases in enrollment, graduation rates of SWD are significantly lower than rates of their peers (Herbert, Welsh, Hong, Kurz, Byun, Soo-yong & Atkinson, 2014). Newman, Wagner, Knokey, Marder, Nagle, Shaver & Wei (2009) found 29% of SWD graduated or completed their postsecondary studies, while 89% of students without disabilities completed their studies. Newman Wagner, Knokey, Marder, Nagle, Shaver & Wei (2011) found the rate of completion for SWD attending 4-year colleges and universities was 34%, compared to 52% of students without disabilities.

In a study of 59 Illinois postsecondary institutions, Williams-Hall (2018) found adequate resources were not available for SWD, and many SWD did not use the office of disability services (ODS), which offers access to accommodations and supports transitions to college. Williams-Hall identified barriers to accommodations, including embarrassment and lack of self-advocacy skills, knowledge of postsecondary institutions, understanding of disabilities, transition planning from high school, self-advocacy skills, study habits, organizational skills, time-management skills, and social skills. These barriers impede accommodations, retention, completion, and success in higher education environments.

The National Center for Learning Disabilities (NCLD, 2014) found approximately 17% of students with SLD received accommodations and support in college, compared to 94% of students with SLD who received assistance in high school. Even though the ADA and Section 504 have granted SWD the legal right to equal access to postsecondary education, many SLD do not access postsecondary services (Agarwal et al., 2014). Students with disabilities shift from structured and guided educational processes in high school to self-directed paths in college (Daly-Cano, Vaccaro, & Newman, 2015). Shifting the responsibility from the school to the student requires SWD to use self-advocacy skills, and many SWD do not know how to engage in self-advocacy skills, such as disclosure, requesting accommodations, or seeking special services. Students with disabilities experience barriers when trying to access accommodations, including not being understood by instructors, instructors' lack of knowledge, and students not knowing how to request services (Travis, 2014). When SWD are assisted in accessing accommodations that support SWD academic progress, they are successful in completing their academic goals (Travis, 2014). Problems SWD face in accessing accommodations in postsecondary education settings create issues of social injustice for individuals with disabilities. Johnson and Parry (2015) suggested social justice as inquiry as an approach to a problem when change may come from many directions. The researcher of the current study used social justice inquiry, highlighting experiences of individuals with disabilities in the college population. The researcher used a social justice lens to explore the phenomenon of SWD accessing their accommodations on postsecondary campuses and used a phenomenological lens based on recommendations in studies by O'Shea and Meyer (2016) and Newman, Madaus & Javitz (2016).

BACKGROUND AND FOUNDATION

Specific learning disabilities are a group of disorders that manifest in difficulties in speaking, reading, writing, reasoning, or performing mathematics. Sometimes referred to as *invisible disabilities*, SLDs have no visible indications (NCLD, 2014) and consist of auditory, visual, sensory, and motor processing disorders. They can be challenging to identify and sometimes go unnoticed (NCLD, 2014). Specific learning disabilities can involve phonological processing, may relate to attention, and can affect areas of learning. Specific learning disabilities do not include low cognitive disabilities but can affect cognitive abilities in association,

conceptualization, and expression. Specific learning disabilities are one of category of disabilities. Along with all disabilities, SLD are protected educationally under legislation.

Section 504 is civil rights legislation that prohibits discrimination toward SWD (U.S. Department of Education, 2015). The IDEA provides free, appropriate, public education to all eligible SWD and ensures special education and related services to SWD. The IDEA was later incorporated into the ADA and applied to any U.S. citizen with a disability (U.S. Department of Education, 2015). Section 504 has been applied to the student population to provide equal access in general education settings (U.S. Department of Education, 2015). Section 504 has broad qualifications and allows for eligibility under *504 plan*s, which provide specific accommodations in classrooms. Legislative acts, such as Section 504 and the ADA, protect SWD during postsecondary enrollment and have provided initiatives and procedures for institutions to support SWD success in higher education (Hadley, 2007).

At the postsecondary level, many responsibilities in providing accommodations for students and complying with mandates of disability legislation are carried out through the ODS. These offices handle specialized services, though structures and processes vary by institution. Processes often require SWD to seek the ODS, self-identify as having a disability through the documentation of a 504 plan, request services from the ODS, and accept services offered (Hadley, 2007).

Requesting services for accommodations at the college level often requires self-advocacy skills and knowledge of available accommodations and how to obtain them (Hengen, 2018). When students want to disclose their disability and ask for services, they are required to provide prior documentation, such as a doctor's report, a 504 plan, or a prior IEP. All needed accommodations are stated there which minimizes the need to negotiate for such services. Although, self-advocacy is necessary for individuals to effectively communicate, negotiate, and assert their interests, desires, needs, and rights (Hengen, 2018). Students need to understand their abilities, their legal rights, how to locate assistance, and what to do if their rights are violated (Hengen, 2018). Many students with SLD lack the self-advocacy skills needed to access accommodations for their disabilities (Daly-Cano et al., 2015).

Students are supported in pursuing accommodations when they have self-advocacy skills (Daly-Cano et al., 2015), self-knowledge (Herbert et al., 2014; Kraglund-Gauthier, Young & Kell, 2014), positive past education experiences (Hengen, 2018; Ramsdell, 2014), transition planning (Hamblet, 2014), knowledgeable instructors (Leyser, Yona, Vogel & Wyland, 1998), and self-determination skills (Herbert et al., 2014; O'Shea & Meyer 2016).

Upon entering college, SWD must self-advocate to receive accommodations for their disabilities (Daly-Cano et al., 2015). Timmerman and Mulvihill (2015) uncovered the need for SWD to demonstrate strong self-advocacy skills, willingness to disclose their disabilities, and positive attitudes. To successfully navigate the process, SWD must use self-advocacy skills, including knowledge of self (limitations, strengths, weaknesses, and rights), their disabilities, and how those disabilities might impact their lives on campus (Daly-Cano et al., 2015). Students with SLD must understand their disabilities, explain them, and know how they affect their learning (Daly-Cano et al., 2015).

The way SWD construct meaning of their disabilities and how motivated students are to access accommodations depends on the cognitive and emotional ways students make sense of their disabilities and their past high school experiences (O'Shea & Meyer, 2016). Students with positive experiences with accommodations in high school are more motivated to disclose their disabilities and seek support services in college (Hamblet, 2014; O'Shea & Meyer, 2016). They understand their disabilities, can navigate services for their disabilities, and understand their disabilities are one part of their comprehensive identities.

Vaccaro, Daly-Cano, & Newman (2015) demonstrated a correlation between SWD social relationships and motivations to use accommodations; they found experiences of SWD were distinctive from other marginalized social groups. A sense of belonging helped advance students' self-advocacy, allowed for positive experiences, and supported social relationships. Positive experiences can assist SWD in forming friendships, finding strategies for self-advocacy, mastering the student role, and fostering a sense of belonging. Emphasizing and

celebrating student strengths and engaging in intentional advising through efforts to support students in mastering the student role can build a sense of belonging (Vaccaro et al., 2015). Positive relationships combine experiences of comfort with being part of the school culture, which help SWD gain confidence in their abilities to experience college life.

Social supports are essential to SWD academic success and can include family (Lux, 2016), faculty and staff (Krug, 2015), peers, and ongoing connections with past special educators (Lux, 2016). When peers include SWD and faculty and staff take time to get to know SWD and their abilities, SWD feel included in the educational processes, leading to accommodation accessibility (Krug, 2015). Faculty and staff who take time to understand SWD needs interact with students positively and accommodate them readily (Krug, 2015). Reciprocally, the more students self-disclose, the more self-efficacy instructors have in making accommodations, as instructors then have more information about SWD and their needs (Wright & Meyer, 2017).

Postsecondary staff need training in working effectively with SWD (McCallister, Wilson & Baker, 2014). Staff training on disability laws and staff responsibilities can improve staff willingness to provide essential services to students (West, Novak & Mueller, 2016). Instructors who learn about special education laws and mandates are more likely to value their roles in supporting SWD and assisting them in the use of ODS (Herbert et al., 2014; West et al., 2016). When faculty have sufficient knowledge, they make comprehensive, informed efforts to implement appropriate accommodations and remove barriers to academic success (Sniatecki, Perry & Snell, 2015).

Philosophical shifts, such as universal design for learning (UDL), can provide foundations for instructors and staff to support SWD contextual and functional needs. Instructional strategies can be paired with supporting components, such as the importance of considering students' needs when providing instruction and accommodations (Seok, Soonhwa, DaCosta, Boaventura, Hodges, & Russ, 2018). Institutions that provide equal access to the letter of the law offer services that may limit accommodations because of a focus on students' disabilities and classroom accommodations (Seok et al., 2018). Institutions that embrace the spirit of the law and provide access to all invest in accommodation processes that consider the entirety of student life, including individual functional needs, cost benefits, and UDL concepts that give all individuals opportunities to learn (Seok et al., 2018).

Transitional planning is an additional way faculty and staff can support SWD. As a result of transition planning, SWD, parents, counselors, and teachers become aware of postsecondary options for SWD (Leyser et al., 1998). Transition planning education is available at the postsecondary level and is necessary for educational success, and plans specific to postsecondary environments assist a broad range of student needs (Newman et al., 2016). Transition planning with specific postsecondary accommodations increase the likelihood of receipt of disability-specific supports in postsecondary schools (Newman et al., 2016).

Students with disabilities are more apt to disclose their disabilities if they had transition planning in high school because they had practice discussing their limitations in the transition planning meetings (Newman et al., 2016). Assistance in providing successful transitional planning starts in secondary education (Newman et al., 2016). The IDEA requires all SWD, ages 16 and over, to have individualized education plans (IEPs) that include appropriate and measurable postsecondary transitional goals and describe the transition services required to assist the student in reaching these goals (U.S. Department of Education, 2015). Students involved in planning their transitions develop self-advocacy skills, learn to value the accommodation process, and report faculty use inclusive teaching practices (Ramsdell, 2014). When SWD discuss disability diagnoses in transition planning meeting, they feel less stigma (Ramsdell, 2014).

Two critical elements of the transition planning process are (a) the relationship between self-disclosure and receiving accommodation and (b) specific student characteristics related to past school experiences and access to accommodations (Newman et al., 2016). When SWD become strong in their self-determination skills, they are able to meet their needs of (a) *competence*: knowing their limitations, (b) *relatedness*: how the accommodations they use relate to their situations, and (c) *autonomy*: each student's individual disability and how their

disability affects them as an individual (O'Shea & Meyer, 2016). Competence, relatedness, and autonomy determine the likelihood of students disclosing their disabilities and actively accessing their accommodations (O'Shea & Meyer, 2016). Students' insights into their competence, relatedness, and autonomy assist in decisions to disclose disabilities and use support services related to accessing accommodations (O'Shea & Meyer, 2016).

Barriers to accessing accommodations include the need for SWD to self-disclose their abilities to the institution (Daly-Cano et al., 2015), SWD lack of self-advocacy skills (Hengen, 2018), SWD lack of knowledge about their disabilities (Hamblet, 2014; Herbet et al., 2014), and SWD lack of knowledge about the accommodation process (Hamblet, 2014).

Students with disabilities encounter negativity and faculty and staff lack of awareness of policies, procedures, and available supports for SWD (Sniatecki et al., 2015; Timmerman & Mulvihill, 2015). Students must navigate negative and uninformed perceptions of the use of accommodations by instructors and peers (Sniatecki et al., 2015; Timmerman & Mulvihill, 2015). Ill-informed instructors can cause SWD to feel they are unimportant or "not normal," hindering SWD accommodation access (Timmerman & Mulvihill, 2015). Students with disabilities often feel they are treated differently once instructors learn they have disabilities. SWD may hide their disabilities. Othertimes, SWD feel humiliated in front of instructors and peers when they are treated differently (Hong, 2015). It can take courage to present accommodation letters to instructors, and SWD may sense cynicism and distrust from instructors (Hong, 2015). The willingness and flexibility of university faculty to comply with and provide accommodations for SWD are critical to SWD academic success (Wright & Meyer, 2017).

On college campuses, the ODS is the hub of services for SWD. Participants may not fully access the ODS, despite the value of support, because SWD are not fully informed. In a study of student experiences using services offered by the ODS, Abreu, Hillier, Frye & Goldstein (2016) explored participants' reported numbers of visits to the ODS, reasons for visits, how ODS had been helpful, and recommendations for improvement. Abreu et al. found the ODS and the support is not fully utilized by SWD on postsecondary campuses.

Williams-Hall (2018) alluded to the importance of SWD interactions with the ODS and accommodation acquisition, highlighting the assistance the ODS provides SWD toward academic achievement. Students with disabilities may need to be urged to go to the ODS (Kendall, 2016). If SWD do not know where to go or have someone to encourage them to seek out services, SWD may forgo accommodation processes. Students with disabilities who have active support systems to motivate or assist them through the process are more likely to use the ODS (Williams-Hall, 2018). Unless students are aware of the ODS and how to access it, they are not able to access the services made available to them (Herbert et al., 2014).

PURPOSE OF THE STUDY

The purpose of this descriptive, transcendental, phenomenological study was to explore SWD experiences of accessing community college accommodations. The researcher focused on students with SLD, due to recommendations by Newman et al. (2016) to study individuals with specific disabilities receiving accommodations in postsecondary settings, and the California Community College environment, as O'Shea and Meyer (2016) recommended research with a small student-to-instructor ratio. Descriptions of the phenomenon of accessing accommodations provided insights to assist SLD in their academic success.

RESEARCH QUESTIONS

The main research question for the study was: *What experiences do college students who self-identify with SLD have in accessing accommodations on campus?* The subquestions were:

1. What experiences do students who self-identify as having SLD in college have using self-advocacy skills to access accommodations on campus?
2. What experiences do students who self-identify as having SLD in colleges have using self-determination skills to access accommodations on campus?
3. How have past K-12 academic experiences affected how students who self-identify as having

SLD access accommodations in postsecondary education?
4. What do students who self-identify as having SLD recommend colleges do to assist in access of desired accommodations?

THEORETICAL FRAMEWORKS

In K-12 education settings, students with SLD do not have to initiate the process to access accommodations; the education provider has processes to locate students and assign designated services to them (Daly-Cano et al., 2015). At the postsecondary level, this process is self-initiated. Students with disabilities or their parents/guardians must use self-advocacy skills to receive services for their disabilities (Daly-Cano et al., 2015). Self-advocacy theory (SAT), developed from Payne's (2005) empowerment theory, is a theory of knowing one's self and one's limitations, strengths, and weaknesses to overcome barriers and achieve one's objectives (Black & Rose, 2002). Self-advocacy skills can help students make decisions to take control of actions in their lives and challenge oppression (Black & Rose, 2002). Self-determination theory (SDT) is a framework for the study of human motivation and personality (Center for Self-Determination Theory, 2019). Self-determination theorists have defined intrinsic and extrinsic sources of motivation and provided understanding of cognitive and social development with a focus on how social and cultural factors facilitate or undermine one's sense of volition and initiative, wellbeing, and behaviors (Center for Self-Determination Theory, 2019). Self-determination skills support the psychological needs of autonomy, competency, and relatedness, which foster motivation and engagement for activities, enhanced performance and persistence, and increased creativity (O'Shea & Meyer, 2016). Self-determination theory provides educators working with SWD instructional guidance related to the cognitive and emotional ways students construct meaning of their limitations and how students' high school experiences have influenced their actions and choices on college campuses. When SWD have determined how their accommodations relate to their disabilities and how accommodations can help them succeed, they are motivated to access their accommodations.

METHODOLOGY

The researcher used a qualitative methodology, as the study was an exploration of a social group and a human problem (Creswell, 2014). To orient to a socially relevant, responsible, and sensitive endeavor, a social justice inquiry was used, so results could yield information for positive changes for participants and the social group of the study (Johnson & Parry, 2015). The researcher of this study used semistructured interviews with a descriptive, transcendental phenomenological approach (Husserl, 1931; Moustakas, 1994; Vagle, 2014), intentionally studying the phenomenon related to the experience to gain a deep understanding of the of students with SLD while accessing their accommodations.

SAMPLE

A convenient, purposeful sample allowed the researcher to find participants who could provide information to allow the researcher to understand the problem. The sample frame consisted of past students with SLD who graduated in the past 5 years from John Muir Charter School (JMCS), where the researcher provides special education services. JMCS is a public charter high school in California for students ages 16 to 26. The most frequently identified group of disabilities at JMCS is SLD, and JMCS graduating IEP and 504 students qualify for 504 plans at postsecondary institutions. Most JMCS graduates attend community college locally, often at Southern California community colleges. Records for recent graduates with special educational needs were made available to the researcher, and the researcher searched for graduates who met the study criteria. The researcher used screening phone call and emails to assess interest in participation and confirm candidates met the criteria. Six participants were chosen to participate in the semistructured interviews (see Table 1). Participants were adults over the age of 18 who graduated between the years of 2013 and 2018.

DATA COLLECTION

Data collection followed Vagle's (2014) steps for transcendental, descriptive, phenomenological data collection. Initial interviews were conducted using a semistructured interview protocol. A follow-up interview was conducted with

Participant 1, as he had not been using accommodations, and the researcher wanted to learn about his progress and if he decided to use his accommodations at a later point. Interviews were audio recorded. The researcher used member checking with participants to check transcript accuracy. Interviews were conducted at a location of each participant's choice. Each interview lasted between 45 minutes and 1 hour and 45 minutes. No compensation was offered. Interviews were recorded with the participants' permission. Upon the conclusion of each interview, a recording of the interview was forwarded to Temi Speech-to-Text Transcriptions. The researcher read transcripts for clarity, making corrections and clarifications where needed.

DATA ANALYSIS

The unit of analysis was the description of the phenomenon—experiences of accessing the accommodations—not the participants themselves. The researcher applied concrete, descriptive analysis with Vagle's (2014) whole-part-whole method: (a) holistically reading entire transcripts, (b) coding individual transcripts and identifying patterns, and (c) reading transcripts again to identify themes. The researcher used a reflexivity journal to bridle biases and preconceptions (Vagle, 2014).

FINDINGS

1. ASSIGNED ADVOCATES

Several participants spoke of how advocates assisted them in obtaining their accommodations. An unassigned counselor assisted Aaron the 504 processes. Lite also discussed an advocate and friend who helped him to navigate the process to receive his accommodations. Lite shared how he was not heard and felt unsuccessful with the 504 processes until his advocate got involved. Alex had a friend who worked on campus who had a 504 plan and directed him where to go to receive services.

All participants had strong self-advocacy skills, yet Alex, Lite, and Aaron found advocates, including friends, helpful in accommodation processes. Lite was unsuccessful on his own to secure services, and Aaron and Alex felt more comfortable with the assistance of someone helping them through the process of securing their accommodations. Advocates assisted participants on their community college campuses with finding where and how to receive services, communicating needs to the ODS, and communicating with instructors.

2. MEETINGS WITH INSTRUCTORS

Smiley spoke positively about his instructors, but he had not disclosed. Aaron felt his instructors treated him with respect and provided him with services he needed to feel confident and comfortable. Milk had positive and negative experiences. Once she had in-depth communication with her instructors about her disability, she felt their attitudes were more positive in assisting her with accommodations. Lite had one positive experience to share about his instructors, but most of his experiences were negative regarding assistance, accommodations, and attitudes of faculty.

Participants stated when they met with their instructors, participants discussed their needs. During these meetings, participants talked about their strengths, weaknesses, learning needs, instructors' teaching styles, and faculty comfort levels in allowing accommodations in their classrooms. The information gained during these meetings assisted participants in accessing for accommodations.

In interviews, participants discussed self-advocacy and self-determination skills, such as knowing and communicating strengths, weaknesses, and needs, in connection with the need also to meet with instructors before beginning new courses to discuss accommodations. Participants highlighted use of self-determination skills when conducting meetings with instructors to discuss accommodation use and about how communicating more about their needs had or would have helped them be successful.

Three participants discussed how meetings had assisted them and how they thought more meetings and earlier discussions in the accommodation process with instructors would have assisted in their success. Having meetings before classes start can lead to supportive relationships. Conversations with instructors about teaching styles and how to best assist SWD promote accommodation access and help SWD discuss individualized accommodation needs, leading to their academic success.

3. Positive School Experiences

All participants noted prior experiences at JMCS had been positive, assisting them with navigating 504 processes to use accommodations on college campuses or contributing to not needing accommodations. They shared how prior positive experiences had pushed them to further their education and feel confident in communicating their disabilities and needs. Smiley was thought to be mute during his early education years, and JMCS helped him open up. Milk, Lite, and JTB talked about positive school experiences they encountered through the individual care and genuine concern JMCS instructors provided. Participants talked about staff at JMCS pushing them to continue their education and helping them realize their strengths and potential. Responses of past positive educational experiences indicate JMCS students learned useful strategies for accessing their accommodations in postsecondary environments.

All participants shared their transitional planning experiences, which assisted them in navigating postsecondary environments. Smiley stated his plans had changed since his high school transitional planning. Aaron, Lite, and Milk talked about how the prior transition plans had assisted in the process of obtaining their accommodations on their postsecondary campus.

Discussion

The way participants constructed meaning of their disabilities and how motivated they were to access accommodations depended on how participants made sense, cognitively and emotionally, of their disabilities. Students with disabilities must use self-advocate skills themselves to receive assistance or services for their disabilities (Daly-Cano et al., 2015). Self-advocacy requires knowledge of self, including one's limitations, strengths, weaknesses, and rights. Self-determination theory provides educators working with SWD instructional guidance in satisfying fundamental needs. Interactions SWD have with significant adults, such as parents, teachers, and instructors, contribute to motivating them and how they access accommodations on college campuses (O'Shea & Meyer, 2016).

All six participants mentioned how their communication skills had grown while attending JMCS. Communication between instructors and SWD is central to the delivery of accommodations for student success. Kraglund-Gauthier et al. (2014) stated the lack of communication, confidence, and self-advocacy affects students' attitudes and interactions with educators and other institutional advisors hindered access to accommodations. Communication skills used during meetings between SWD and staff encompass self-advocacy and self-determination skills needed for success on college campuses (Kraglund-Gauthier et al., 2014).

Hamblet (2014) found SWD with positive experiences in high school were often more motivated to disclose their disabilities and seek support services in college and access their accommodations because they experienced firsthand how to relate to their disabilities. O'Shea and Meyer (2016) found students who had positive experiences in their past educational environments were more secure in seeking services in college and were more motivated to seek accommodations. Participants shared favorable experiences with JMCS staff in connecting to accommodations in high school and wondered why it was not as easy on their college campuses.

All participants talked about transition planning, which assists in providing accommodations for SWD, starting in secondary education (Newman et al., 2016; Ramsdell, 2014). Participants made positive comments about their transitional planning, mirroring findings in the literature that transitional planning supports accessing accommodation on postsecondary campuses. When asked about the transition planning during their time with JMCS, all participants recalled transition planning and stated it assisted in their plans.

Transition planning made specific to the students' postsecondary interests and needs must be part of SWD educational plans as mandated through IEPs in secondary educations. Transition plans increase the likelihood of receipt of disability-specific supports in postsecondary schools. Students with disabilities may be more likely to disclose their disabilities if they had transition planning in high school because they had practice discussing their limitations in transition planning

meetings (Newman et al., 2016). Transition planning done in collaboration with the post-secondary institutions to which the student is likely to attend would even heighten the likelihood of the student's accommodation access and success.

Kendall (2016) discussed the usefulness of active support systems to motivate SWD through the 504 processes and assist them in accommodation access. William-Hall (2018) said providing a contact staff member, appointed through the ODS, can assist SWD in obtaining accommodations. The ODS is the hub of services for SWD and plays a significant part in the access to accommodations and services for SWD. The ODS is designed to assist SWD in accessing their accommodations. Abreu et al. (2016) suggested SWD do not fully access the ODS, despite the amount of help the ODS provides SWD. Reasons SWD do not use services provided by the ODS range from students not being well informed of 504 processes or how to initiate their services through the ODS to improvements needed to the ODS process.

Participants of the current study and findings from the literature review showed mixed reactions to the ODS, describing it as both a support and a barrier to the attainment of accommodations. Alex and Aaron had reported only positive experiences with the ODS, and Aaron had found the ODS useful to his accommodation process. Aaron attributed his continued success to his assigned counselor located at the ODS. Milk reported no negative experiences in her many encounters with the ODS. Lite did not have positive experiences with the ODS, even after he enlisted the assistance of an advocate. Students with disabilities are more likely to use the services of ODS when providers are knowledgeable about SWD needs, as in Lite's situation. Herbert et al. (2014) found there was a connection of training needed, as professional competences of providers affects whether SWD engage with the ODS.

Being a self-advocate and developing self-advocacy skills assists with connecting to the ODS for SWD, as postsecondary SWD must self-report their disability to the ODS. The more students self-disclose, the more self-efficacy instructors have in making accommodations (Wright & Meyer, 2017). Herbert et al. (2014) reported unless students are aware of the ODS and know how to access it, they are not able to access the services made available to them.

Participants had mixed feelings about staff knowledge and attitudes. The more knowledge and training faculty and staff have in working with SWD and providing them with their accommodations, the more successful staff are in delivering those services (McCallister et al., 2014). Students with disabilities often refrain from disclosing their disabilities due to staff or instructors who do not respond appropriately to their limitations (Wright & Meyer, 2017). When staff are positive about accommodating and provide supportive relationships to SWD, accommodations are made more easily accessible (Timmerman & Mulvihill, 2015). Wright and Meyer (2017) found the willingness and flexibility of university instructors to comply with and provide accommodations for SWD were critical to SWD academic success because students felt more comfortable because of instructors' efforts made for them.

Providing written documentation for instructors would be a useful tool in accommodation access for SWD. If instructors had in hand students' plans during meetings, as students communicated their needs and accommodations, stigma and misconceptions could be alleviated. Ill-informed instructors can cause SWD to feel they are unimportant or not normal, resulting in inadequate or inappropriate support (West et al., 2016). Many SWD struggle with being judged or treated differently by peers and instructors; faculty and peer attitudes then affect SWD, hindering SWD accommodation access (Hong, 2015). Assistance and adaptations could be given still maintaining the same goals and standards and the suggested practice is to provide them discreetly without disclosing them to the rest of the class. Because of the feelings of accommodation not being normal, SWD may struggle with accepting and asking for accommodations to assist with their academic progress (Hong, 2015). Positive staff attitudes result in favorable outcomes for SWD (Krug, 2016). Participants in the current study talked about feelings of stigma attached to their disabilities, trying to appear normal, and how instructors' attitudes affected accommodation access. Participants, such as Lite, Milk, and JTB, discussed experiences of stigma, not wanting to be identified as an individual with disabilities,

and being treated differently. Participants shared feelings of being embarrassed by what others thought about them because others did not understand their disabilities and were unable to assist them correctly with their education.

Participants reported stigma surrounding their disabilities on campus when addressing questions about self-advocacy and self-determination skills. Kendall (2016) discussed the barriers of stigma on campuses of higher education, preventing students from disclosing disabilities to receive services, as students do not want different treatment. Stigma involves interpersonal and intrapersonal feelings of being misunderstood, often manifesting as feeling inadequate as a college student (Kendall, 2016). The fear of stigma can cause students with SLD feelings of being powerless or inadequate, hindering self-advocacy and self-determination skills because of the fear of being treated differently and being unable to navigate postsecondary environments. Three participants reported negative feelings surrounding the use of their 504 plans or from the staff who provided them assistance with their 504 services.

Williams-Hall (2018) found fears of stigma and embarrassment were reasons SWD did not access their accommodations on campuses and were not succeeding academically. Lite shared he felt he was made to feel he was not an individual with a disability enough to receive the accommodations he needed. JTB did not want to use his accommodations, even though he knew they would help him. Timmerman and Mulvihill (2015) found perceptions of accommodations not being normal hinders SWD accommodation access and caused SWD to feel singled out. In their study, a large number of students who had negative experiences described being humiliated in front of their professors and classmates when pretending to be normal and not disclosing their need for accommodations.

Heindel (2014) studied college SWD and found instructors needed more training on how to work with SWD. Because instructors lack specific knowledge of the issues that face SWD, instructors may display negative attitudes toward SWD and affect provisions of accommodations (Sniatecki et al., 2015). Williams-Hall (2018) found postsecondary staff required training on working with SWD, so staff could promote the success of SWD while encouraging self-disclosure and self-advocacy. Instructional training for instructors in disability supports and information surrounding disability support is pivotal for students with SLD. Kraglund-Gauthier et al. (2014) suggested institutions construct policies to promote awareness, advocacy, and learning partnerships among SWD in cooperation with the whole postsecondary community to assist them with their knowledge and gaining services for their disabilities.

RECOMMENDATIONS FOR PRACTICE

Participants shared their experiences in hopes of improved guidance in this area of social injustice for SWD. Participants' accounts provided the essence of the researched phenomenon and allowed the researcher to craft recommendations for faculty, staff, and administrators to increase their knowledge and foster positive attitudes. Recommendations for action include advocates to assist students with SLD on community college campuses, facilitating meeting between students with SLD and instructors before classes begin, and positive school experiences before college. Applying these findings in higher education environments could assist community college students with SLD in accessing their accommodations for academic success.

1. ASSIGN ADVOCATES

Participants had strong self-advocacy skills, yet half of the participants stressed the importance of advocates to assisting them in accessing their accommodations. Participants discussed assigned counselors, peers, or mentors. The literature showed promising practices for additional support for SWD through advocates, such as peer tutors (Farley, Gibbons & Cihak, 2014) and virtual mentoring (Gregg, Galyardt, Wolfe, Moon & Todd, 2017). Postsecondary institutions should explore provisions of advocates, and when budgetary concerns do not allow for full-time, professional advocates, peer and virtual advocates may be adequate for increasing accommodation use.

2. FACILITATE MEETINGS WITH INSTRUCTORS

All participants discussed meeting with instructors about students' specific needs and accommodations as a positive or potentially positive strategy for accommodation access. During meetings with instructors, participants

used self-determination skills to discuss their needs. Kraglund-Gauthier et al. (2014) suggested institutions conduct meetings with SWD to discuss their needs in cooperation with the whole postsecondary community to assist them with their knowledge and gaining services for their disabilities. Meetings that encompass the postsecondary community, including instructors, can assist students with SLD in overcoming barriers on campuses (Kraglund-Gauthier et al., 2014). Having these meetings before classes start can promote positive relationships and support development of self-advocacy and self-determination skills, which SWD need to be successful later in life. Aspects of self-determination—autonomy, competence, and relatedness—are essential to career persistence for SWD (Gregg et al., 2017). The literature provided insight into the importance of communication skills and SWD meetings with instructors; however, participants of the current study highlighted the need for providing specific, on-campus meeting times for students and their instructors to discuss their disabilities, strengths, weaknesses, and accommodation needs.

3. Provide positive school experiences

All participants expressed how their experiences at JMCS impacted their community college experiences. Providing all SWD with positive school experiences can alleviate personal and social stigma of disabilities. Positive school experiences are accomplished by providing and reinforcing inclusive and accepting cultures that deliver nonjudgmental messages at all times through all staff. By starting early, attention to and intention with school-wide culture and actions, classroom expectations, the language heard, classroom art, performances, speakers, and instructional delivery can lead to positive experiences for all students.

Hamblet (2014) found SWD with positive experiences in high school were often more motivated to disclose their disabilities and seek support services in college and accessing their accommodations. O'Shea and Meyer (2016) stated students who had positive experiences in their past educational environments were more secure in seeking services in college and more motivated to seek accommodations. Participant responses reinforced findings in the literature about the importance of secondary school experiences for accommodation access in postsecondary institutions. All participants described their past educational experiences with JMCS as supportive in continuing with a college education and lent the courage, tools, and skills to access their 504 plans and accommodations.

Positive school experiences start in preschool, and transitional planning starts at the secondary school level. Transition planning is a mandated part of IEPs starting at age 14. As described in the literature and by participants, visiting this plan often and making it specific to students' needs is a crucial part of SWD postsecondary journeys. All postsecondary SWD have mandated transitional plans; however, all plans need to be made specific, and students with SLD need to be active participants in these plans.

JMCS students may have more experience with communicating accommodation needs than the broader population, due to the practices of the school. Their comfort in communicating may be informative to other schools that wish to empower students through positive experiences. These experiences may or may not be shared by other participants who had not attended JMCS or other JMCS students on other campuses, although four different JMCS campuses were represented in the participant interviews.

Promoting positive school experiences should be the goal of all educational leaders and contributors, not just postsecondary leaders or those working with students with SLD. How postsecondary staff at all departments and levels—the ODS staff members, instructors, presidents, and paraprofessionals—treat SWD matters. How students with SLD are treated can cause or alleviate feelings associated with stigma and normalcy. Comments made to students with SLD when enrolling can impact the initiating of services, as participants described. Promoting positive school experiences can be sparked through awareness initiatives and training educators on how to accommodate SWD.

JMCS provides in-services for all full-time staff; one such workshop is Building Positive School Culture, which provides tools to ensure SWD have positive school experience and encourage them to be more proactive in accessing accommodations. A positive school culture starts with caring leaders making intentional decisions to build a strong sense of community. The target

audience for this workshop is all staff who want to build a positive culture and sense of belonging in schools. The workshop includes benefits of intentional culture-building activities, best practices from JMCS veteran teachers, and discussion of how to apply the strategies in individual positions.

Norrish, Williams, O'Connor, & Robinson (2013) described how to build positive educational experiences and created a framework for initiating positive education on campuses. They explained positive education involves combining principles of positive psychology with best practices in teaching and educational paradigms to promote optimal development and flourishment in school settings (see Figure 1). Norrish et al. targeted six wellbeing domains: (a) positive emotions, (b) positive engagement, (c) positive accomplishment, (d) positive purpose, (e) positive relationships, and (f) positive health, underpinned by a focus on character strengths (see Figure 1). The three concepts that Norrish et al. used to drive their positive education framework were (a) live it: staff should live positive education and act as authentic role models for students; (b) teach it: positive education that helps students understand key ideas and concepts, engage meaningfully in exploration and reflection, and apply the skills and mindsets to flourish; and (c) embed it: the school-wide embedding of a culture for well-being. This framework guide educators with techniques in enhancing positive education cultures.

Another way to encourage positive experiences for elementary, secondary, and postsecondary students is UDL. Educators who provide UDL provide inclusive learning environments for diverse populations and benefits for everyone in the classroom. In providing instructors ideas for new instructional delivery to diverse populations, UDL has opened the door to new accommodation delivery for educational institutions. Philosophical shifts, such as in UDL, provide educators with ideas for adequate and appropriate accommodations for students with SLD contextual and functional needs. Looking into new instructional design ideas may be a key to assisting with accommodation delivery.

CONCLUSION

Despite increases in college enrollment, graduation rates for SWD are lower than those of students without disabilities (Agarwal et al., 2014). Accommodations assist SWD in their academic success, but SWD experience barriers to their accommodations (Travis, 2014). Researchers have stressed the importance of past positive educational experiences (O'Shea & Meyer, 2016) and specific transitional planning (Newman et al., 2016) in the successful navigation of postsecondary campuses for SWD. As the literature and all participants addressed, SWD need to develop self-advocacy and self-determination skills. Students with disabilities need to be strong self-advocates to request services and accommodations needed to assist them with their postsecondary academic success (Kraglund-Gauthier et al., 2014); however, there was minimal discussion in literature on the use of advocates to assist SWD, a strategy some participants stated was the key to their accommodation access. Previous researchers have considered advocates as appropriate for disabilities other than SLD (Lux, 2016; William-Hall, 2018). For SWD to discuss their needs, they need to know their strengths, weaknesses, and how they learn best. Students with disabilities need to know their disabilities, how they affect learning, and how their instructors can assist them best.

Specific instruction that supports development, knowledge, skills, and beliefs is needed to lead to self-determination for SWD (O'Shea & Meyer, 2016). Faculty and staff lack knowledge of issues SWD face, causing instructors to display negative attitudes that students with SLD accessing accommodations (Sniatecki et al., 2015). Students with disabilities often refrain from disclosing their disabilities due to staff or instructors who do not respond appropriately to their limitations (Wright & Meyer, 2017). Providing staff with specific knowledge will support effective work with students with SLD, alleviate stigma, and assist with ideas of normalcy.

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ANNEX

Table 1. Participant Demographics

	Smiley	Milk	Aaron	Lite	Alex	JTB
Self-Identified Sex	Male	Female	Male	Male	Male	Male
Age	19	23	21	25	19	20
Self-Identified Race/Ethnicity	Hispanic	White	Black	White	White	Black

Table 2. Categories Crafted from Participant Interviews

	Smiley	Milk	Aaron	Lite	Alex	JTB
Sought 504 Services	No	Yes	Yes	Yes	Yes	No/Yes
Used 504 Services	No	Yes	Yes	Yes	Not yet	No/Yes
Reported College Success	Yes	Yes/No	Yes	Yes/No	Had not started	No/No
Named Disability	Yes	Yes	Yes	Yes	Yes	Yes
Described disability	Yes	Yes	Yes	Yes	Yes	Yes
Self-Advocacy Skills	Yes	Yes	Yes/No	Yes/No	Yes	No
Self Determination Skills	Yes	Yes	Yes	Yes	Yes	No
Past Experiences	Yes	Yes	Yes	Yes	Yes	Yes
Past Transition Plan	Yes	Yes	Yes	Yes	Yes	Yes

Table 3. Themes Crafted from Interview Categories

Participants	Themes		
	Assigned Advocates	Meetings with Instructors	Positive School Experiences
Smiley			x
Milk		x	x
Aaron	x	x	x
Lite	x	x	x
Alex	x		x
JTB		x	x

EFFECTS OF TEST ANXIETY, DISTANCE EDUCATION ON GENERAL ANXIETY AND LIFE SATISFACTION OF UNIVERSITY STUDENTS

Abstract: The objective of this study was to investigate the effects of test anxiety and dimensions of distance education on general anxiety and life satisfaction of university students. A total of 426 university students voluntarily asked to respond on online scales of test anxiety, distance education, general anxiety, and life satisfaction. The results revealed a strong direct positive path from test anxiety to the general anxiety (B=0.35) (p<.001). Also, test anxiety negatively influenced the students' life satisfaction with either a direct or indirect way. Furthermore, the general anxiety negatively affected the student's life satisfaction. Likely, Student autonomy directly and negatively affected the general anxiety. Moreover, student interaction, authentic learning, and active learning directly and positively affected the life satisfaction of the students. Student autonomy directly depressed the general anxiety which indirectly improved the students' life satisfaction. Likely, student interaction, authentic learning, and active learning directly improved the students' life satisfaction. Further researches required to be conducted in this research area.

Keywords: Test anxiety, distance learning, the general anxiety, students life satisfaction

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INTRODUCTION

During the global Covid-19 pandemic, digital technologies have captured the human imagination for their potential support in the fight against COVID-19. This pandemic virus was forced schools and universities to shut down the study in their campuses. Many educators overall the world are encouraged to shift their teaching methods to appropriate alternative strategies such as online education. Many universities worldwide approved the use of online and distance education as a potential application of digital technologies against COVID-19, especially in socially isolated regions. Online and distance education keep the students digitally isolated during learning, studying, and qualifying processes with no need to attend to the college campus. Some universities find distance education as a great challenge or even impossible. The success of distance education depends on the academic content and the effectiveness of the communication system used in the online learning process (Roberts, Irani, Telg & Lundy, 2005; Areti, 2006). Zimmerman (2002) notes that student independence contributes to success within distance learning environments. The independency of the student is a very important factor in the success of distance education (Lynch& Dembo, 2004; Ke & Kwak, 2013). Gagne & Shepherd (2001) suggest that the performance of students in a distance course similar to the performance of students in a campus course (Gagne & Shepherd, 2001).

The university stage is a very critical transition period during which the students move from adolescence to adulthood. Linearly, Sarokhani et al. (2013) observe that college years are stressful times in the student's life.

Distance education can increase student anxiety regarding the study and exams (Ajmal & Ahmad, 2019). Besides, the teaching methods and teacher evaluation are factors affecting the academic performance and anxiety of the students (Duraku, 2016). The student's general anxiety can aggravate with the rapid spread of coronavirus pandemic and appearance of distance online education as a substitute for the University campus courses.

These stressful factors may affect the student general life badly. Therefore, the current study conducted to determine the impact of test anxiety and various dimensions of distance education on the general anxiety and quality of life of university students. Also, the study will help the education policymakers and political leaders to make their decisions about the future using of online learning and distance education.

Test Anxiety And The General Anxiety

Test anxiety is a type of anxiety which the students feel before, during, or after examinations (Lawson, 2006; Duraku, 2016). So the educational system, parents' expectations, and the student's desire to enter a specific college or acceptance to some jobs depend on the performance in the exams (Lawson, 2006). Therefore, examinations are an important part of students' life for transfer to the next stage or returning to the previous stage (Lawson, 2006; Rani, 2017).

Some students have a test anxiety level above the average, which may hurt their performance in the exams (Embse, Jester, Roy & Post, 2018). Others have a normal average level of anxiety which drives to increase academic performance (Putwain, Connors, Woods & Nicholson, 2012). Linearly, the students attained excellent grades in their studies may appear to have higher test anxiety rather than those attained downgrades (Banks & Smyth, 2015). Besides, the students who have a high level of test anxiety will feel much more anxious than students who are not worried about the test (Beide, Turner & Trager, 1994). Moreover, students with a higher level of self-efficacy have lower levels of test anxiety (Mulvenson, Stegman & Ritter, 2005). High mindful students showed a low level of test anxiety and vice versa (Brannon, 2010).

The general anxiety divides into status anxiety and trait anxiety. Status anxiety occurs during certain situations such as tests. So, test anxiety is a form of status anxiety (Hong & Karstensson, 2002; Huberty & Dick, 2006). The students who show a high level of status anxiety do not necessarily have a high level of trait anxiety. However, the students who have a high level of trait anxiety have a high level of status anxiety (Huberty & Dick, 2006). In normal circumstances, some students have a high level of test anxiety, which may reflect on their health with appearing of some psychological and physical symptoms. These symptoms such as difficulty sleeping, frequent waking, nightmares,

insomnia, and stay active until late at night. Also, take sleeping pills and anti-anxiety. (Spangler, Pekrun, Kramer & Hofmann, 2002; Eller, Aluoja, Vasar & Veldi, 2006). Moreover, test anxiety reflects on attention and memory so badly (Birjandi & Alemi, 2010). Low and moderate test anxiety positively affects student performance (Chapell et al., 2005; Nicholson, 2009; Vitasari, Wahab, Othman, Herawan & Sinnadurai, 2010; DordiNejad et al., 2011; Singh, 2015), while the high level of test anxiety negatively affects student performance (Sung, Chao & Tseng, 2016).

Test Anxiety And Life Satisfaction

Many students experience anxiety during and before the exams, as they want to obtain high marks. This anxiety reflects negatively on the academic performance. Moreover, many physiological symptoms may exhibit on students such as increased heart rate, muscle tension, facial redness, and feeling panic (Karatas, Alci & Aydin, 2013). Also, it causes many reactions on the student such as lack of focus, and become irritable (Huberty & Dick, 2006).

Arbabisarjou, Zare, Shahrakipour & Ghoreishinia (2016) state that the average level of test anxiety can be beneficial and a catalytic and effective factor, while the excessive level of test anxiety can be lead to a lack of focus and low academic performance.

Causes of test anxiety are lack of time management, lack of study skills, low GPA, psychological distress, fear of failure, poor self-esteem, poor self-confidence, weak psychosocial support, and other factors (Aziz & Serafi, 2017; Cipra & Müller-Hilke, 2019).

Test anxiety varies from the university stage to another. Moreover, undergraduate students have significantly higher levels of test anxiety compared to graduate students. As well as, the undergraduate students suffer from fear of failure, a lack of time management skills, and a lack of study skills compared to masters students (Duraku, 2016). Likewise, the second-year students of the Medical College, University of Houston, Texas, USA showed a higher level of test anxiety compared to students at other educational levels (Sansgiry & Kavita Sail, 2006).

Test anxiety is the reason for a student's restlessness and fatigue, muscle contraction, and abdominal pain before the test. Moreover, test anxiety negatively affects the life of the students (Eller, Aluoja, Vasar & Veldi, 2006; Ferreira, Almondes, Braga, Mata, Lemos & Maia, 2009; Çikrıkci, Erzen & Yeniçeri, 2019), may affect many areas of life (Lufi, Okasha & Cohen, 2004), and can negatively predict changes in the cognitive and emotional component of general wellbeing (Steinmayr & McElvany, 2016).

The General Anxiety And Life Satisfaction

The university stage differs from the previous educational levels, since the distance of family and friends, making new friends, a difference in teaching strategies, and other challenges needs efforts from the student to adapt to it (Roberts & Zelenyanski, 2002). The student needs to improve and adjust his life to feel satisfaction without any psychological disturbances. Some previous research shows that a lower level of life satisfaction associated with a higher level of anxiety (Cook, Black, Rabins & German, 2000; Samaranayake & Fernando, 2011). Students who have low anxiety have high life satisfaction, also students who have lower scores on state anxiety have higher scores of life satisfaction, while students who have higher scores on trait anxiety have lower scores of life satisfaction (Paschali & Tsitsas, 2010). Life satisfaction is a valuable concept that is related to both psychological, emotional variables and some events of daily life. Therefore, it is an important indicator of mental health (Tsitsas, Nanopoulos & Paschali, 2019).

Distance Education

Today, distance education shows tremendous development with new advanced technologies. Nevertheless, dating more than 100 years old (Birnbaum, 2001; Meyer, 2002). Distance education does not require physically attending, while it keeps the interaction between students and teachers indirect (Tuncay & Uzunboylu, 2010; Ajmal & Ahmad, 2019). The primary goal of distance education is to create educational chances for the students who cannot access to the traditional educational institution due to social and economic conditions, family circumstances, physical disabilities, and geographical barriers (Jonasson, 2001; Garg, 2018). In distance education, the classrooms will be directly in the bedrooms, and study materials are on the computers (Goodyear, Salmon, Spector, Steeples & Tickner, 2001; Ní Shé et al., 2019).

Distance education gives the students who have no time to learn the chance to improve their qualifications. However, distance education requires a strong motivation and a high level of focusing to complete its courses (Rovai, Ponton, Wighting & Baker, 2007; Whiting, Liu & Rovai, 2008). Moreover, the student in distance learning feels lonely in the virtual classrooms (Dickey, 2004; Lorenzetti, 2005). This can be due to the lack of physical interaction between students and teachers (Dyrud, 2000). Additionally, some private companies in the labor market and some government jobs do not rely entirely on distance education to obtain the educational qualification, as they believe that distance education is still not a serious form of education (Nagrale, 2013).

The present study presents the following hypotheses:

1. There are no significant paths from test anxiety to the general anxiety, and life satisfaction.
2. There are no significant paths from dimensions of distance learning to the general anxiety and life satisfaction.
3. There are no significant paths from the general anxiety to life Satisfaction.

METHOD

PARTICIPANTS

Second-year University students of three Egyptian governmental Universities (Sadat City, Menofia, and Bani Suef Universities) were invited to participate in the study. Those students were enrolled in an online distance education program during the Covid-19 pandemic for the last three months of their second term (March-May, 2020). The participants are voluntarily asked to respond to the online study tools using Google Forms (Google Inc.). The unique link of the online tools was sent to target student samples via the Telegram internet app. The students were able to respond to the online tools via their smartphones. After complete data collection, the result sheet was downloaded then the Google Form sent to die in the Google server.

The study was conducted on two different samples separately collected: the first is the psychometric sample collected firstly to assess the psychometric properties of the study tool, whereas the second was the main study sample. The psychometric sample was composed of 109 university students of either sex in the age group of 19–20 years. The psychometric sample was composed of 38 males (M = 19.90, SD= 0.31) and 71 females (M = 19.68, SD= 0.47). The basic sample of the study consisted of 426 undergraduate university students of 132 males (M= 19.91, SD =0.61), and 294 female students (M= 19.82, SD= 0.53).

MATERIALS AND PROCEDURE

The Generalized Anxiety Disorder Scale used according to Spitzer, Kroenke, Williams & Lowe (2006). This scale consisted of seven items to evaluate the level of anxiety disorder. The evaluation of the participant's responses followed the Likert-type format as not at all sure= 0, several days=1, over half the days=2, and nearly every day=3. The Cronbach's alpha for the generalized anxiety disorder scale was α= 0.79, M = 9.5, SD= 5.21.

Distance Education Scale built according to Walker & Fraser (2005), which included 34 items. The evaluation of the participant's responses followed the Likert-type format from strongly agree=5 to strongly disagree=1. The distance education scale composed of six dimensions were instructor support (α= 0.95, M=21.32, SD= 7.94), student interaction and collaboration (α= 0.93, M=15.752, SD= 5.4), personal relevance (α= 0.94, M=17.29, SD= 6.38), authentic learning (α= 0.93, M=12.32, SD= 4.5), active learning (α= 0.82, M=8.06, SD= 2.84), and student autonomy (α= 0.91, M=13.85, SD= 5.03).

Westside Test Anxiety Scale developed by Driscoll (2007), which consisted of (10) items. The sample came to choose a response from five responses followed the Likert- type format, where the responses ranged from 1- 5 score. The Cronbach's alpha of the Westside Test Anxiety Scale was α= 0.896, M= 36.06, SD= 7.76.

Satisfaction of Life Scale constructed by Diener, Emmons, Larsen & Griffin (1985). This scale composed of (5) items. The responses on this scale followed the five Likert-type format, where the total score ranged from 1- 25. The Cronbach's alpha of Satisfaction of Life Scale was α= 0. 74, M= 13.31, SD= 3.41.

RESULTS

The correlation matrix among different study variables showed a negative correlation between test anxiety and dimensions of distance education ($p < 0.01$), as well as life satisfaction (-0.278) ($p<0.01$) Table (1), while test anxiety a positively correlated with the general anxiety (0.373) ($p < 0.01$)

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Table 1. Pearson correlation for the associations between test anxiety, dimensions of distance education, general anxiety, and life satisfaction.

Parameters	1	2	3	4	5	6	7	8	9
1.Test anxiety	1								
2. Instructor support	-.145**	1							
3. Student interaction	-.167**	.621**	1						
4. Personal relevance	-.213**	.615**	.679**	1					
5. Authentic learning	-.173**	.579**	.560**	.767**	1				
6. Active learning	-.150**	.531**	.547**	.740**	.670**	1			
7. Student autonomy	-.202**	.531**	.552**	.700**	.638**	.788**	1		
8. Life Satisfaction	-.278**	.284**	.354**	.409**	.395**	.380**	.371**	1	
9. General anxiety	.373**	-.045	-.099*	-.170**	-.108*	-.148**	-.185**	-.334**	1

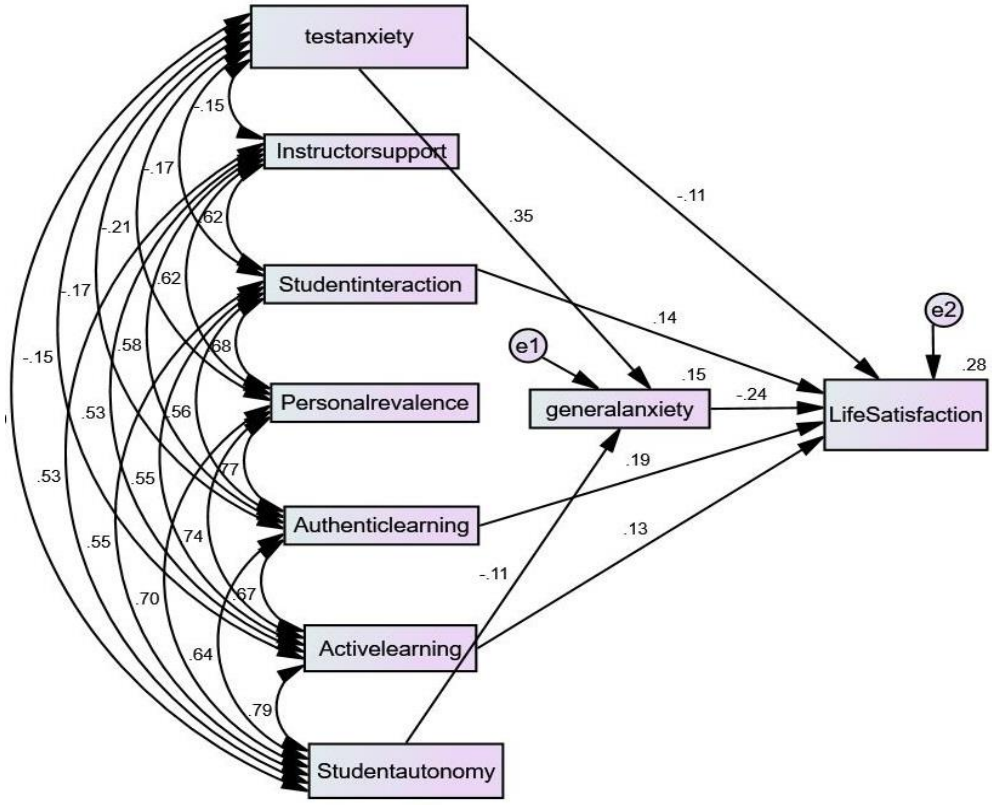
N=426

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Instructor support positively correlated with other distance learning dimensions, as well as life satisfaction (0.284) ($p < 0.01$). Student interaction positively correlated with other distance learning dimensions, as well as life satisfaction (0.354) ($p<0.01$), but student interaction negatively correlated with the general anxiety (-0.099) ($p<0.05$). Personal relevance positively correlated with other distance learning dimensions, as well as life satisfaction (0.409) ($p < 0.01$), but personal relevance negatively correlated with the general anxiety (-0.170) ($p<0.01$). Authentic learning positively correlated with other distance learning dimensions, as well as life satisfaction (0.395) ($p<0.01$), while authentic learning negatively correlated with the general anxiety (-0.108) ($p<0.05$). Active learning positively correlated with other distance learning dimensions, as well as life satisfaction (0.380) ($p <0.01$), while active learning negatively correlated with the general anxiety (-0.148) ($p< 0.01$). Student autonomy positively correlated with other distance learning dimensions, as well as life satisfaction (0.371) ($p<0.01$), while student autonomy negatively correlated with the general anxiety (-0.185) ($p<0.01$). The general anxiety negatively correlated with life satisfaction (-.334) ($p < 0.01$). The model fit indicted for the modified path model showed good model fit, as the value of the chi-square was 6.225 with a degree of freedom of 8 and not significant at ($P<0.05$). The chi-square/degree of freedom ratio was 0.778. Linearly, the values of NFI, RFI, IFI, TLI, CFI, GFI, and AGFI were 0.997, 0.986, 1.001, 1.004, 1.000, 0.997, and 0.982, this evidenced efficient model fit. Similarly, the values of the RMSEA and SRMR were zero and 0.01, which indicated a good model fit (Fig. 1).

Figure 2. Path model of the effect of the test anxiety and dimensions of distance education on the general anxiety and life satisfaction of university students.



The path model reveals that the effect of test anxiety on the general anxiety is significant with a direct standardized beta load of (0.350) ($p < 0.001$) (Tables 2; 3). Also, the effect of test anxiety on life satisfaction is significant with a direct standardized beta load of (-0.114) ($p < 0.01$). Moreover, the general anxiety affects the life satisfaction with a direct standardized beta load of (-0.239) ($p < 0.001$). Furthermore, all dimensions of distance learning do not affect the general anxiety with exception of student autonomy dimension, which affects the general anxiety with a direct standardized beta load of (-0.114) ($p < 0.01$). Additionally, student interaction, active learning, and authentic learning affect life satisfaction with a direct standardized beta load of (0.136), (0.128), and (0.186), respectively.

Table 2. Standardized beta load between test anxiety, dimensions of distance education, general anxiety, and life satisfaction in the path model.

Structural Paths			β	C.R.	P-Value
Student autonomy	→	General anxiety	-0.114	-2.499	0.012
Test anxiety	→	General anxiety	0.350	7.666	***
Student interaction	→	Life satisfaction	0.136	2.630	0.009
Test anxiety	→	Life satisfaction	-0.114	-2.548	0.011
Active learning	→	Life satisfaction	0.128	2.224	0.026
Authentic learning	→	Life Satisfaction	0.186	3.193	0.001
general anxiety	→	Life Satisfaction	-0.239	-5.374	***

Table 3: Standardized direct, indirect, and total effects between different study variables.

Parameters		Test anxiety	Student interaction	Authentic learning	Student autonomy	Active learning	General anxiety
General anxiety	Direct	0.350	0.000	0.000	-0.114	0.000	0.000
	Indirect	0.000	0.000	0.000	0.000	0.000	0.000
	Total	0.350	0.000	0.000	-0.114	0.000	0.000
Life satisfaction	Direct	-0.114	0.136	0.186	0.000	0.128	-0.239
	Indirect	-0.083	0.000	0.000	0.027	0.000	0.000
	Total	-0.197	0.136	0.186	0.027	0.128	-0.239

The indirect effect of test anxiety on life satisfaction is -0.083. Moreover, student autonomy has an indirect effect on life satisfaction with a standardized beta load of 0.027. Furthermore, all dimensions of distance education do not affect the general anxiety. The path model shows a significant correlation among dimensions of distance education, as student autonomy significantly correlates with active learning (0.788). Also, student autonomy correlates with personal relevance (0.700) (Figure 1). Besides, active learning significantly correlates with personal relevance (0.740). Moreover, student autonomy, active learning, authentic learning, personal relevance, student interaction, and instructor support correlate with test anxiety with values of -0.202, -0.150, -0.173, -0.213, -0.167, and -0.145, respectively. The path model succeeds in explaining about 0.28 from the total variation of life satisfaction, and 0.15 from the variation of the general anxiety.

Test anxiety directly and negatively affects life satisfaction. This outcome consists of (Ferreira, Almondes, Braga, Mata, Lemos & Maia, 2009; Çikrıkci, Erzen & Yeniçeri, 2019). Linearly, Çikrıkci, Erzen & Yeniçeri (2019) suggested that test anxiety negatively correlated with life satisfaction. Moreover, test anxiety may affect many life domains (Steinmayr & McElvany, 2016). The students exhibit sever levels of test anxiety show low academic performance with a lack of focusing on studying and examination (Keogh, Bond, French, Richards & Davis, 2004). Also, those students experience insomnia, fatigue, difficulty sleeping, and waking up active all night. Furthermore, their life was effective in general with reduced life satisfaction (Lufi, Okasha & Cohen, 2004). Linearly, Steinmayr & McElvany (2016) found that test anxiety may negatively predict changes in the cognitive and emotional component of wellbeing.

DISCUSSION

The current study aims to determine the factors that may affect the life satisfaction of university students. The casual path model between the study variables reveals that test anxiety directly and positively affects the general anxiety. This result agrees with the findings of (Barinder, 1985; Beide, Turner & Trager, 1994; Bruehi, 2009; Sridevi, 2013), as they reported that test anxiety relates to the general anxiety. The findings reveal that the student who has high test anxiety show more general anxiety. Hence, the student feels all the time worried about the results of the exams.

Student autonomy directly and negatively affects general anxiety. This could be due to the independence of the student contributed effectively to success within distance education (Lynch & Dembo, 2004; Ke & Kwak, 2013). Walker & Fraser (2005) revealed that student autonomy plays an important role in the distance education system. Distance education requires the student is self-reliant in receiving information and strong motivation to communicate and complete the educational process (Whiting, Liu & Rovai, 2008). Furthermore, distance education needs a computer, internet, and electricity all time. Besides, the student should have the ability and skill in dealing with such devices and modern technologies. Any problem during the explanation or any problem relates to computer will cause student frustration and anxiety (Connolly, Jones & O'Shea, 2005).

Besides, Tuncay & Uzunboylu (2010) see during the beginning of the distance learning process, the student feels anxiety and uneasiness about dealing with the computer, how to communicate with the teacher, the internet, the presence of electricity throughout the lecture period. Many questions revolve in the mind of the student raise concern and will affect his absorption and his ability to learn.

According to, the effect of the dimensions of distance education on life satisfaction. Student interaction, authentic learning, and active learning directly and positively affect life satisfaction. Walker & Fraser (2005) identified student interaction, collaboration, instructor support, personal relevance, authentic learning, student autonomy, and active learning as dimensions consider important in high-quality distance education environments. The student has the ability and skill to deal with computer and realizing that distance education is a useful and flexible way to learn, communicate, and participate, their will enjoyment of online education and will reflect in the level of their life satisfaction (Ozkan & Koseler, 2009; Caliskana, Suzek, Ozcan, 2017).

The general anxiety directly and negatively affects the life satisfaction of university students. This result agrees with (Boa, Pan, Shi & Ji, 2013; Warnecke, Baum, Peer & Goreczny, 2014; Lucas-Carrasco, Sastre-Garriga, Galan, Den Oudsten, & Power, 2014; Tsitsas, Nanopoulos & Paschali, 2019). Where the anxiety negatively correlates with life satisfaction. In this stage, university students go through an important period of change (Sarokhani et al, 2013). Moreover, students who experience a lot of psychological and social stressors will experience a higher of the anxiety (Farrer, Gulliver, Bennett, Fassnacht & Griffiths, 2016). Student's life will affect because of the anxiety. Also, the anxiety inhibits the enjoyment of various life fields. Students have higher anxiety in their life have a low level of life satisfaction. Bukhari & Saba (2017) report that students who face less distress have a higher level of life satisfaction.

CONCLUSION

All distance education dimensions negatively correlated with the students test anxiety. Also, test anxiety negatively influences the students' life satisfaction with either a direct or indirect way. Students test anxiety positively influence general anxiety. Furthermore, Student autonomy directly depressed the general anxiety which indirectly improved the students' life satisfaction. Likely, student interaction, authentic learning, and active learning directly improved the students' life satisfaction.

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PERCEPTIONS OF UNIVERSITY STUDENTS ABOUT CORONAVIRUS: A METAPHOR ANALYSIS STUDY

Abstract: The aim of this study is to analyse university students' perceptions about the Coronavirus concept through metaphor analysis. The data were obtained from 186 students studying in the Education Faculty of a university. Phenomenology research design, one of the qualitative research patterns, was used in this study. The data obtained in the study were collected with the expression "Coronavirus is like…because…" and document analysis technique was used in the analysis of the data. It was found that the students who participated in the study created 133 well-structured metaphors related with the concept of coronavirus. According to the results obtained from the study, it was found that students mostly created negative metaphors about the concept of coronavirus. The metaphors created by the students who participated in the study were grouped under 11 conceptual categories as "being contagious, causing damage / being fatal, being hidden, being unifying / regulating / leaving positive effects on people, affecting large areas / the process covering a large period of time / changing life and affecting everyone equally, isolation, taking measures, social distance, emotions, restriction, uncertainty". Based on the metaphors created by the students, it was found that the concept of Coronavirus was explained with more than one and different metaphors.

Keywords: Coronavirus, metaphor, phenomenology, perception.

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INTRODUCTION

Humans, one of the living beings in nature, are born, grow and die in accordance with the flow of life. There are many different causes of human deaths and one of these causes is epidemic diseases. If these epidemics become global, they can become pandemic.

World Health Organization (2010) defines pandemic as large scaled epidemics which affect millions of people in more than one country and which sometimes spread to the world. In order for a virus or bacterium to cause a pandemic, it must be an organism for which most people do not have a pre-existing immunity, transmitting easily from person to person and causing severe illness (Taylor, 2019). In the history of the world, people have had to deal with many pandemics and have suffered from serious losses. Coronavirus is one of the leading viruses that cause pandemic. Coronavirus, which is derived from the word corona that means "crown" in Latin, causes respiratory tract infections that can be fatal in humans (Alpago and Alpago, 2020). Humans have recently had to deal with viruses such as SARS and MERS, which are deadly varieties of the Coronavirus. Today, humanity is struggling with the novel coronavirus Covid-19, which has a very high spreading rate and which has affected almost the whole world.

According to Centres for Disease Control and Prevention (2020), Covid-19, which is a novel coronavirus not previously described among humans, is not the same as coronaviruses which are widespread among people and which cause mild diseases such as cold. The novel coronavirus, which was first described in the Wuhan region of China in December 2019, was named as Covid-19 by World Health Organization on February 11, 2020. Various symptoms ranging from mild symptoms to severe diseases have been reported in individuals with COVID-19. The symptoms may appear 2-14 days after being exposed to the virus. Some of the symptoms that may appear in Covid-19 patients have been defined as cough, shortness of breath, fever, shivering, muscle pain, loss of taste and smell (Centres for Disease Control and Prevention, 2020). Due to the fact that the spread of novel Covid-19 is very fast, the disease courses very severe in some individuals and no cure or vaccine has been found yet, all countries of the world are taking various measures against the disease and lifestyles of humans are changing seriously.

Official authorities of all countries, especially the World Health Organization, are making various warnings and recommendations to people through mass media. Since the treatment and vaccination of Covid-19 is not found yet, explanations made generally include protective measures such as social distance, social isolation, hand hygiene, general hygiene rules, wearing mask, etc. (Waadod et al., 2020). Although general policies, health systems and health workers of countries have a very important place in dealing with this disease, they won't be enough alone. It can be said that the behaviours of the people of the country will be effective on the novel coronavirus. Human behaviours are influenced by knowledge and perceptions (Geldsetzer, 2020). At this point, it can be said that the perceptions of people about the concept of coronavirus have a very important place in terms of the course of the disease in the upcoming days. One of the ways that reveal how a concept or phenomenon is perceived is metaphors (Aydın, 2011).

Metaphor is a figurative structure created by establishing a relationship by comparing the differences and similarities between two concepts or objects and transferring one to another (Palmquist, 2001). According to Saban (2008), metaphors, in which a specific mental schema is reflected on another mental schema by establishing relationship between two phenomena that are not similar, are a mentally powerful model. Metaphors which serve very different purposes are highly effective in organizing information for societies and individuals (Cameron, 1996). When studies conducted are examined, it can be seen that metaphor studies are used in very different areas, especially education and they are important in showing the perceptions of individuals about specific concepts.

In this context, it is thought that it will be meaningful to analyse novel coronavirus, which directly or indirectly affects the lives of millions of people in the whole world, through metaphor analysis. It was thought that especially the young people studying at the university, due to the closure of the universities, were greatly affected

by this process. It is expected that the result of the metaphor analysis conducted will give some cluesabout what kind of changes coronavirus will cause in the lives and psychological states of individuals in young adulthood and about how young people perceive coronavirus. In this study, while the concept of coronavirus is addressed through the eyes of university students, the study is also considered to be important in terms of reflecting what kind of mood students have about this epidemic. The primary aim of this study is to find out the perceptions of university students about the concept of coronavirus. The problem of this study is the question "What are the metaphor perceptions of university students related with the concept of coronavirus? In order to be able to give more detailed answers to this problem, the following problems were reached:

1. What are the metaphors created by university students about the concept of coronavirus?
2. Under which categories are the metaphors created about the concept of coronavirus collected?
3. From which themes are the metaphors created about the concept of coronavirus chosen?
4. What are the meaning characteristics of the metaphors created about the concept of coronavirus?

METHOD

Research Model

In this study, phenomenology, one of the qualitative research designs, was used. Phenomena are perceivable events that can be experienced by individuals. According to Creswell (2013), a phenomenological study describes a common meaning created by individuals' expressing their experiences about a phenomenon or concept with words.

Study Group

This study was conducted on 186 students studying at the Education Faculty, Turkish Education Department and Psychological Counselling and Guidance Department of a state university during 2019-2020 academic year. Convenience sampling method was used in determining the study group. In this method, the researcher chooses a case that is close to reach (Yıldırım and Şimşek, 2008). For this reason, the researchers chose university students in the aforementioned departments that they could easily reach. 132 (71%) of the students who participated in the study were female, while 54 (39%) were male. Participants' ages ranged between 19 and 40.

DATA COLLECTION

A two-stage form was used to find out the metaphors of university students who participated in the study about the concept of coronavirus. In the first stage, the students were asked to complete the sentence "Coronavirus is like…" to find out which metaphors university students associated the coronavirus concept with. In the second stage, the students were asked to complete the sentence starting with "because…" to explain the metaphor they associated with the concept of coronavirus. During the process of developing the form, opinions of 4 academic staff who were experts in the field (educational sciences and Turkish education) were taken. In line with the opinions of the experts, the first statement put forward "Coronavirus resembles…" was changed to "Coronavirus is like…" to help the participants create the metaphors more clearly. After revisions were made in line with the views of experts, the finalized form was applied to university students.

Data Analysis

In the study, document analysis technique, which is one of the qualitative research methods, was used for data analysis. Document analysis is the analysis of the written material that will guide in reaching the phenomena and concepts that will be obtained as a result of the study. Document analysis includes the analysis of written material containing information about the events or phenomena which are aimed to investigate (Şimsek, 2009).

Creating the metaphors:

Metaphors university students created about the concept of coronavirus were determined and a metaphor table was formed. In the study which was conducted with 203 university students, the metaphors created by 17 university students were excluded since they were not deemed as appropriate, irrelevant to the structure of the subject and they were weakly constructed. The metaphors created by 186 university students were categorized by the researchers and added in the metaphor table. It was found that 186 students created a total of 133 appropriate for the structure of the metaphors.

FORMING THE CATEGORIES:

The metaphors created by the participants in the study were analysed in terms of their characteristics. 12 categories were formed as a result of the analysis and the metaphors obtained were distributed to these categories. After the metaphors were distributed in categories, category and metaphor table was sent to two different field experts and they were asked to group the metaphors into categories; the tables they sent were matched with the tables created by the researchers and a consensus was reached in grouping the metaphors into categories. SPSS 18.0 statistical program was used in the percentage and frequency calculations of the metaphors in categories.

RESULTS

This section of the study includes metaphors of the students about coronavirus obtained as a result of the data analysis. First the metaphors obtained from the study were given in general, and then the metaphors were presented separately within the conceptual categories and themes they were related with. The university students in the study created 133 well-structured metaphors about Coronavirus. Table 1 shows the frequency values of all the metaphors.

Table 1. Metaphors Created in the Study and Their Frequency Values

Rank	Metaphor	f	Rank	Metaphor	f
1	Gossip	8	21	Mud	2
2	Love	6	22	Nightmare	2
3	War	5	23	Lie	2
4	Darling	4	24	Lottery ticket	2
5	Enemy	4	25	Snow ball	2
6	Exam	4	26	Wall	2
7	Fire	4	27	Adhesive	1
8	Domino	3	28	Advice	1
9	Gum	3	29	Alcohol	1
10	Illiteracy	3	30	Anti-sociality	1
11	Rain	3	31	Betrayal	1
12	Thief	3	32	Blindness	1
13	Uninvited guest	3	33	Book	1
14	Bad friend	2	34	Bullet	1
15	Dreams	2	35	Bump	1
16	Fabricated news	2	36	Burning air	1
17	Guard	2	37	Cancer	1
18	Happiness	2	38	Chicken pox	1
19	Humans	2	39	Cigarette	1
20	Ivy	2	40	Cleaning staff	1
41	Conscience	1	88	Mother-in-law	1
42	Contest	1	89	Natural gas	1
43	Cross fire	1	90	Naughty step	1
44	Dictator	1	91	Ninja	1
45	Dodge ball	1	92	Officer	1
46	Dollar exchange rate	1	93	Oral exam	1
47	Doomsday	1	94	Pomegranate	1
48	Doubt	1	95	Pomegranate stain	1
49	Dress	1	96	Poor quality pop music	1
50	Driving on an icy road	1	97	Prison	1
51	Eagerness	1	98	Problem	1
52	Earthquake	1	99	Radar application	1
53	Electrical current	1	100	Random bullet	1
54	End of month	1	101	Red blood cell	1
55	Exam week	1	102	Red wine	1
56	Fake news	1	103	Ring	1
57	Fan	1	104	Rope	1
58	Favour	1	105	Rubick’s cube	1
59	Fear	1	106	Sans storm	1
60	Flea	1	107	Sin	1

61	Flood	1	108	Sleep terror	1
62	Folk dance	1	109	Snail	1
63	Football	1	110	Sneezing	1
64	Foreign land	1	111	Social media	1
65	Forest fire	1	112	Song	1
66	Glue	1	113	Sound	1
67	Guest	1	114	Sparkle	1
68	Handcuffs	1	115	Stinging nettle	1
69	Hatred	1	116	Storm	1
70	Herd of snakes	1	117	Swamp	1
71	Historical era	1	118	Technology	1
72	Hourglass	1	119	Thorny road	1
73	Hurricane	1	120	Tick	1
74	Insight	1	121	Tornado	1
75	Instructor	1	122	Traffic lights	1
76	Iron bars	1	123	Trip	1
77	Key	1	124	Truth	1
78	Knife	1	125	Turtle tamer	1
79	Knot	1	126	Undesired habit	1
80	Letter	1	127	Unhappiness	1
81	Magic ball	1	128	Vacuum cleaner	1
82	Maid	1	129	Water pipe	1
83	Medallion	1	130	Well	1
84	Mental illness	1	131	Whirlpool	1
85	Meteor	1	132	Wind	1
86	Mine	1	133	Yawning	1
87		Mixer		1	
Total			186		

As can be seen in Table 1, university students associate the concept of coronavirus with 133 metaphors. It can be seen that university students associated the concept of coronavirus with the metaphors of gossip (f= 8), love (f= 6), war (f= 5), exam (f= 4), darling (f= 4), enemy (f= 4) and fire (f= 4) the most. The fact that university students associated the concept of coronavirus with the metaphors of gossip, love, exam and darling more can be associated with the fact that they have the status of student in the society and they try to establish bilateral relationships of the period of life they are in and that they are during a stage of preparing for life. In addition, it was found that students associated 39,8% of the metaphors they created with human elements (f=74), 21% with objects (f= 39), 16,7% with events-situations (f= 31), 14,5% with nature elements (f= 27), 3,8% with eating-drinking (f= 7), 2,2% with animals (f= 4), and 2,2% with other concepts (f= 4). Of human elements, the metaphors most chosen were gossip (f= 8) and love (f= 6).

Of the object theme, the metaphors most chosen were fire (f= 4) and domino (f= 3). Of the events-situations theme, the metaphors most chosen were war (f= 5) and exam (f= 4). Of the eating-drinking theme, the metaphor most chosen was gum (f= 3). Table 2 shows the frequency values according to whether the metaphor created has a positive or negative meaning.

Table.2 Metaphor's Containing a Positive or Negative Meaning

Metaphor	Frequency
Positive	24
Negative	162
Total	186

Of the metaphors created by university students, 87,1% were used with a negative (f= 162) meaning, while 12,9% were used with a positive (f=24) meaning. Metaphors created about coronavirus mostly have a negative meaning.

Of the metaphors used with a negative meaning, the most used metaphors were gossip (f= 8), love

(f= 6), fire (f= 4). The sentences "Coronavirus is like gossip because it loves spreading", "Coronavirus is like love because it comes suddenly", "Coronavirus is like fire because it burns where it touches" can be given as examples. Metaphors about coronavirus mostly express negative meaning. It can be seen that this is caused by the fact that coronavirus restricts human life, damages human body and even causes death, changes life standards to a great extent, and also as a result of factors such as the necessity of obeying rules such as social distance and isolation.

Of the metaphors used with a positive meaning, the most used metaphor was exam (f=3). The sentence "Coronavirus is like exam because it taught us to win" can be shown as an example to the positive use of this metaphor. In addition, the sentences "Coronavirus is like an instructor because it taught us the habit to wash hands", "Coronavirus is like a magic ball showing the truth because it made us confront with the truth of death in a striking way, reminded us again and again that each moment lived, our loved ones, the outside world and in short our lives are very valuable and made us understand the importance of even the smallest details in our lives" are also sentences including metaphors with positive meanings. Although coronavirus meant mostly negative things to university students with the things it brought into human life and took away from human life, it also provided the use of many metaphors with positive meaning. The reason for this may be the fact that although out of necessity, coronavirus caused people to act together again, to respect each other and to emphasize cleaning habits more. In our study, metaphors were groped in conceptual categories and analysed. Table 3 shows the categories created for the concept of coronavirus.

Table 3. Categories Created for the Concept of Coronavirus

Category	Metaphors	f	%
Being contagious	love, fire, swamp, illiteracy, mud, gossip, domino, vacuum cleaner, yawning, truth, sin, folk dance, sneezing, dreams, rope, undesired habit, favour, poor quality pop music, snowball, mother-in-law, red wine, sparkle, random bullet, happiness, unhappiness, pomegranate, hatred, forest fire, fake news, gum, ivy, sound, darling, water pipe, chicken pox, technology, glue, rain, lie, fabricated news, fan	57	30,6
Causing damage/being fatal	alcohol, love, fire, earthquake, problem, thorny road, enemy, dress, storm, whirlpool, stinging nettle, betrayal, humans, nightmare, cancer, tick, bad friend, hour glass, mine, guest, pomegranate stain, radar, gum, war, doubt, contest	34	18,3
Being hidden	mental disease, love, flea, uninvited guest, natural gas, enemy, tornado, humans, sleep terror, bullet, ninja, lottery ticket, flood, oral exam, bump, cross fire	20	10,8
Being unifying/regulating /leaving positive effects on people	red blood cell, knot, football, dreams, maid, insight, turtle tamer, hurricane, book, letter, officer, naughty step, instructor, war, exam, magic ball	18	9,7
Affecting large areas/the process covering a large period of time/changing life and affecting everyone equally	end of month, mud, dollar currency, eagerness, thief, medallion, meteor, mixer, gum, snail, war, cigarette, historical era, rain, ring,	17	9,1
Isolation	key, anti-sociality, prison, iron bars, wall, enemy, guard, foreign land, handcuffs, sand storm, social media, cleaning staff, conscience, trip	15	8,1
Taking measures	knife, driving on icy road, electrical current, thief, bad friend, advice, darling, song, traffic lights, herd of snakes	10	5,4
Social distance	wall, doomsday, darling, dodge ball, burning air	5	2,7
Emotions	illiteracy, blindness, well, exam week	4	2,2
Restriction	dictator, thief, fear, darling	4	2,2
Uncertainty	wind, rubick's cube	2	1,1
Total		186	100,0

It was found that 11 categories were created for the concept of coronavirus in the study. Of the metaphors university students created, 30,6% were in the category of being contagious (f= 57); 18,3% were in the category of causing damage/being fatal (f= 34); 10,8% were in the category of being hidden (f= 20); 9,7% were in the category of being unifying/regulating/leaving positive effects on people (f= 18); 9,1% were in the category of affecting large areas/the process covering a large period of time/changing life and affecting everyone equally(f= 17); 8,1% were in the category of isolation (f=15); 5,4 % were in the category of taking measures (f= 10); 2,7% were in the category of social distance (f=5); 2,2% were in the category of emotions (f=4); 2,2% were in the category of restriction (f=4); 1% were in the category of uncertainty (f=2).

In the category of being contagious, the metaphor most used by the participants was gossip (f= 8) "*Coronavirus is like gossip because it spreads quickly.*" The fact that gossip metaphor was the most used metaphor in the category of being contagious can be associated with the quick spread of gossip. In addition, the fact that gossip metaphor was among the human elements such as the metaphor of illiteracy, which is another metaphor used in the category of being contagious, has caused it to be in the forefront in metaphor use.

In the category of causing damage/being fatal, the most used metaphors were love (f=3) and fire (f=3). "*Coronavirus is like love because they both take your breath away.*", "*Coronavirus is like love because it causes pain.*", "*Coronavirus is like fire because it burns.*" It is thought that the reason why the metaphor of love was used the most in this category is the fact that love has an important place in the lives of students because of their ages.

In the category of being hidden, the most used metaphor was uninvited guest (f=3). "*Coronavirus is like an uninvited guest because it comes when it is not expected.*" It is seen that the metaphor of uninvited guest is used in the forefront in the category of being hidden as a human element.

In the category of being unifying/ regulating/ leaving positive effects on people, the metaphor exam (f= 3) was used more. "*Coronavirus is like exam because it taught us to win.*" It is thought that the reason why the metaphor is used more than the other metaphors is the fact that exam is an important factor in university life, it affects students at many points, enables them to assess themselves and provides intrinsic motivation with success obtained as a result of exams.

In the category of affecting large areas/the process covering a large period of time/changing life and affecting everyone equally, the most used metaphor was war (f= 2). *"Coronavirus is like war because it has the power to take the whole world under its effect and it has affected many areas (economy, health, education, etc.)."* The reason why this metaphor was used can be the fact that the metaphor of war has a high effect power and it includes the concept of fight and at the same time the fact that since news about war are in the forefront in our time, they have a place in the memories of the participants. In the category of isolation, the most used metaphor was guard (f= 2) "*Coronavirus is like guard because it imprisons people to home".* In this category, another isolation element, guard, is in the forefront as metaphor.

In the category of taking measures, all metaphors were used equally. The metaphor of herd of snakes is an interesting metaphor that can be given as example. "*Coronavirus is like herd of snakes the antidote of which has not been found and which grows around because it is present around in a herd, it can kill you when it stings although it has no harm from away".* In the category of social distance, all metaphors were used equally. The metaphors of wall and doomsday can be given as examples to this category. *"Coronavirus is like a wall because it keeps people away from each other.", "Coronavirus is like the doomsday because everyone is running away from each other."* In the category of emotions, all metaphors were used equally. The metaphor of exam week can be given as example to this category. *"Coronavirus is like the exam week because it causes everyone distress and uneasiness."* In the category of restrictions, all metaphors were used equally. The metaphor of darling can be given as example to this category. *"Coronavirus is like a darling because it prevents me from what I want to do."* In the category of uncertainty, all metaphors were used equally. "Coronavirus is like wind because you don't know where it will blow you".

CONCLUSION AND DISCUSSION

186 university students who participated in the study expressed the concept of coronavirus with 133 different metaphors. Although this finding alone is not enough, it shows that university students have a large vocabulary. While university students were describing the concept of coronavirus, they used the metaphors of gossip, love, war, exam, darling, enemy and fire the most. This shows that social status, social events and development periods had a significant place in metaphor creation.

The metaphors created by the university students were in the categories of being contagious, causing damage/being fatal, being hidden, being unifying/regulating/leaving positive effects on people, affecting large areas/the process covering a large period of time/changing life and affecting everyone equally, isolation, taking measures, social distance, emotions, restriction, uncertainty. While the content of coronavirus, its effects on human life, and its effects on human body had a significant place in the formation of these categories, the words social distance, isolation, spreading-being contagious, which entered human life with coronavirus also had a great effect.

From the metaphors created by university students, the themes of human elements, objects, events-situations, natural elements, eating-drinking, animals and other elements which were not included in these themes were obtained. With such a distinction, it can be seen which elements in their lives students made use of in choosing metaphors. While creating metaphors about coronavirus, university students made use of human elements, in other words, themselves and their social environment.

While creating metaphors about coronavirus, university students made use of words and sentences which had both positive and negative meanings. It can be seen that metaphors created about coronavirus mostly had negative meanings.

When the literature is reviewed, it can be seen that there are metaphor analysis studies on how people perceive some concepts. It can be seen that these studies are mostly in the fields of education. For example, it can be seen that a large number of metaphors have been conducted with the concepts of exams (Duban and Arısoy, 2017; Güngör-Aytar and Kurtoğlu-Karataş, 2017; Güven and Dak, 2017) and teacher (Gillis and Johnson, 2002; Oğuz, 2009, Patchen and Crawford, 2011; Saban, 2008; Shaw and Mahlios, 2008, Yob, 2003). It can be seen that the results obtained as a result of metaphor analysis are important in terms of learning the perceptions and attitudes of individuals about that concept. Although the concept of coronavirus is not a new concept, it has become the number of agenda of people since it has affected the whole world deeply. For this reason, it is thought that finding out the perceptions about the concept of coronavirus can lead to finding out the attitudes of humans against this epidemic. The government authorities of all countries in the world, especially World Health Organization state that the behaviours of people against this disease, which does not have a vaccination and treatment yet, are very important. Human behaviours are shaped by the perceptions of humans. From this perspective, it is very important for countries to find out people's perceptions against this disease. As a result of the findings of the study, it is valuable that university students perceived coronavirus as contagious with a rate of 30.6% and as damaging and fatal with a rate of 18.3%. These results can be interpreted as the fact that students take coronavirus seriously and that they will shape their behaviours accordingly. Another important issue at this point is the concepts of social isolation and distance. It can be seen that this disease can easily transmit from person to person and its transmission rate is very high. Since humans are social beings, it can be predicted that obeying the rules of distance and isolation, which are of the most effective ways in preventing coronavirus, can be challenging for humans in the long run. However, right now isolation and social distance are the most important rules that can be applied to fight this disease. It can be seen that students used metaphors about isolation and social distance with a rate of 10.8% in this study. It is valuable that the students are conscious about this issue. Another interesting point in the study is the result that 12.9% of the metaphors have positive meanings.

This result can be seen as important in terms of maintaining people's mental health; however, it can also be said that it can be possible for individuals who have positive perspective against

this disease not to care about the disease and not to take the rules seriously and thus cause serious problems in the future. At this point, it can be thought that it will be important to conduct studies for awareness on the serious effects and significance of coronavirus.

RECOMMENDATIONS

1. Researchers may conduct studies showing to what extent coronavirus affects the use of words such as social distance, isolation, spreading-being contagious and restriction in daily life.
2. Words chosen as metaphor are also an indicator of human memory and experience. In this context, concepts such as exam, love, fire and gossip, which are used more than the other concepts in the present study, should be emphasized more.
3. Concepts such as love, fire and gossip, which were used more than the other metaphors, should be evaluated by field experts and it should be made possible for students to survive the developmental period they are in more healthily.
4. Metaphors obtained in the study show the students' perceptions. Perceptions guide our behaviours. Since the perceptions and behaviours of people against this disease will have an important place in the extent coronavirus affects countries, it will be suitable for experts in social psychology and behaviourists working in the field to analyse the results obtained from the study in detail.
5. The present study was conducted to find out the metaphorical perceptions of university students about coronavirus; however, considering that coronavirus affects all sections, future studies can be conducted with different sample groups. In addition, different methods and approaches which can show the perceptions of people, other than metaphor analysis can be used in future studies.

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THE PREDICTIVE POWER OF PROBLEMATIC INTERNET USE ON LEARNING RESPONSIBILITY OF HIGH SCHOOL STUDENTS

Abstract: The aim of the study is to determine the relationship between problematic internet use and learning responsibilities of students studying at different types of high schools in the province of Aydın and also to examine whether problematic internet usage and learning responsibilities of high school students differ significantly according to gender and school type variables. In this quantitative study using the relational survey model, Adolescent Form of Problematic Internet Usage Scale and Learning Responsibility Scale were used as data collection tool. For the analysis of the data collected within the scope of the research, independent samples t-test, one-way analysis of variance, pearson moments correlation test and multiple linear regression analysis were used. According to the results obtained in the study, it was observed that there was a significant difference between gender and school type variables and problematic internet usage. It was observed that the learning responsibility scores of high school students differed significantly according to gender. There was no significant difference between school type and learning responsibilities. A moderate negative relationship was found between problematic internet use and learning responsibilities. As a result of the multiple regression analysis, it was found that negative results of the internet and excessive use scores significantly predicted learning responsibilities. It was determined that the social benefit / social comfort did not have a significant effect on learning responsibilities.

Keywords: Problematic internet use, learning responsibility, negative results of the internet

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INTRODUCTION

As one of the most important dynamics of the 21st century, technology deeply affects our lives and changes human life. With the innovations brought by virtual communication technologies, the style of communication and entertainment styles differ especially among adolescents. Internet is becoming an environment that affects people's communication styles and how they spend their free time (Dağtaş & Yıldırım, 2015: 149). According to the report called "The State of Digital in April 2019" 56 % of the world populations have access to the internet (www.wearesocial.com). As the rest of the world, internet usage rates are increasing rapidly in Turkey. According to the research by Turkey Statistics Institute [TÜİK] (2019), the use rate of computer and internet among individuals aged 15-74 is % 75,3 and % 90,8 among individuals aged 16-24. According to the same survey, 88.3 % of the households in general Turkey is reported to have internet access at home.

As the research results also show, with the widespread use of internet at home and via mobile devices, it is obvious that internet use is also becoming widespread. Especially with the widespread use of smartphones, applications provided by internet such as instant communication, messaging, entertainment, games and video sharing have become a popular phenomenon among young people. Besides its positive aspects such as fast and easy access to communication and learning environments, the excessive, unconscious and uncontrolled use of internet can cause negative effects especially on young people. Apart from the time spent on the internet for business or education, the use of internet at a level that disrupts individual's personal and social responsibilities is considered as excessive and problematic internet use. Especially, smart phones, which have become indispensable for internet access and communication, can cause academic and social problems when used excessively (Fathalla, 2019: 8). After the widespread use of smartphones, it is debated whether the overuse and abuse of these devices lead to addiction. A significant portion of young people see smartphones as an indispensable tool to access information. More and more young people cannot imagine even an hour without a cell phone. Therefore, problematic smart phone use can result in psychological problems such as anxiety disorder, loneliness, depression and guilt (Adamczyk et al., 2018: 30). In addition, problematic use of the internet can lead to cyberbullying behaviors. Individuals exposed to cyberbullying can experience problems such as depression, anxiety disorder, insomnia and panic attacks (Ramadan, 2019: 96). Beard & Wolf (2001: 378) defined problematic internet use as internet use that causes psychological and social difficulties in a person's life and difficulties at school or professional life. It can be said that the main factors in the development of internet addiction/ problematic internet use are the duration and the purpose of the internet use. Psychological and social problems experienced by an individual can be considered as factors contributing to internet addiction (Ögel, 2017: 135). Internet is also used by young people not only for fun, having information, social communication and playing games but also avoiding the problems of life, relieving loneliness, killing time and expressing oneself (Akar, 2017: 276). It is stated that the misuse or overuse of internet weakens communication skills of young people, lowers their academic success, negatively affects their physical and psychological development, worsens their relationship with their social environment and causes problems such as problematic internet use. (Zorbaz & Tuzgöl Dost, 2014: 299). It is seen that, in the literature the most frequently used terms to name the excessive, uncontrolled or unhealthy use of internet are internet addiction (Young, 2004: 402), internet abuse (Morahan-Martin & Schumacker, 2005: 39), pathological internet use (Davis, 2001: 188), problematic internet use (Caplan, 2002: 554) and compulsive internet use (Ciarrochi et al., 2016: 274). It can be said that different naming in the literature stems from the researchers' study of the cognitive, behavioral and affective aspects of functional disorders caused by unhealthy internet use in individuals. Although internet addiction has not yet been defined as a behavioral disorder, internet game addiction was accepted as a disorder that should be investigated in the future in DSM-V published by the American Psychiatric Association (APA) in 2013 and nine

diagnostic criteria were presented. DSM-V stated that, in order to diagnose internet game addiction, gaming must cause "significant disruption or distress" in various aspects of an individual (https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM-5-Internet-Gaming-Disorder.pdf). In 2018, internet gaming disorder was included in the 11th revision of World Health Organization's (WHO) International Classification of Diseases (ICD-11) and identified as a disorder. According to ICD-11, for the diagnosis of gaming disorder, the behavioral pattern must be at a level that cause significant deterioration in personal, familial, social, academic, professional or other important fields of study and must be evident for at least 12 months (https://www.who.int/news-room/q-a-detail/gaming-disorder). After Young has established the diagnostic criteria of internet addiction for the first time, many researchers created internet addiction criteria and contributed to the diagnosis of addiction by developing various evaluation tools. (Young, 2009: 8; Davis, 2001: 193; Caplan, 2002: 561; Hsu et al., 2015: 507). In addition, Davis's Cognitive- Behavioral Model of Pathological Internet Use Model which explains the etiology of problematic internet use (Davis, 2001: 188), Caplan's Problematic Internet Use Model (Caplan, 2002: 554) and Feindel's Biopsychosocial Internet Addiction Model (Feindel, 2019; 45) are important theories in the literature. In his model that explains problematic internet use, Caplan argues that problematic psychosocial predispositions lead individuals to excessive and compulsive online social interaction, which in turn worsens their problems. In this model, excessive internet use is defined by the participants as an amount of use that exceeds a normal, usual or planned period of time. On the other hand, compulsive internet use includes feeling of guilt about the individual's inability to control online activity (Caplan, 2003: 626). As seen in these models and definitions, uncontrolled use of the internet may cause individuals, especially the ones in the learning age to disrupt their responsibilities.

Learning responsibility can be defined as realizing that the learner is responsible for his / her academic achievements and taking an active role in his / her own learning, being prepared for the lessons, completing the assignments on time, determining, developing and implementing a plan to achieve educational goals. Yakar & Saracaloğlu (2017: 28) expressed the responsibility of learning as performing the tasks of individuals regarding learning, fulfilling what needs to be done to reach their own goals, and completing themselves in subjects they think they need. Learning responsibility is an important phenomenon as it forms the basis for other feelings of responsibility in the individual (Yeşil, 2013: 1216). Allan (2006: 102) examined learning responsibility in six dimensions in the learning responsibility scale developed in the sample of middle school and high school students studying in Australia: a) Orientation towards School and Learning b) Active Participation in Learning Activities c) Autonomy and Control of Learning d) Initiative e) Management of Learning Resources f) Control of Behavior in the Classroom and Cooperation. When learning is considered as a process in which the learner takes individual responsibility, students must fulfill their learning tasks on time in order to achieve academic success. In this context, it can be said that responsibility for learning is an important factor affecting students success (Yakar & Saracaloğlu, 2019: 8). Helker & Wosnitza (2016: 46) showed in their study among high school students that students with high learning responsibility tend to achieve higher success in mathematics lesson

Importance And Purpose Of The Research

High school period is a period in which critical decisions are made and critical developments are experienced in students' lives. During this period, there may be external and internal factors that negatively affect students' responsibility behaviors (Yeşil, 2013: 1215). Among these factors, excessive and unconscious use of technology and especially internet can also be listed. As Beard & Wolf (2001: 378) stated in their definition of problematic internet use, unconscious and excessive use of the internet can cause difficulties in an individual's school life. For this reason, determining the power of problematic internet use to predict learning responsibility is considered to be an important requirement. The aim of the study is to determine relationship between problematic

internet use and learning responsibilities of students studying at different types of high schools in the district of Efeler, Aydın, and to examine whether they differ significantly according to gender, school type and daily internet usage time variables.

Problem Statement

Is there a significant relationship between problematic internet use levels of the high school students and their learning responsibility levels?

Subproblems

1.Do the problematic internet use, negative aspects of internet, social benefit/social comfort and excessive use of internet differ significantly by gender?
2.Do the problematic internet use, negative aspects of internet, social benefit/social comfort and excessive use of internet differ significantly by school type?
3. Do high school students participating in the study levels of fulfilling their learning responsibilities in the sub-dimensions of "Externally Managed Learning Responsibilities" and "Self-Directed Learning Responsibilities" differ significantly?
4. Do the learning responsibilities, externally managed learning responsibilities and self-directed learning responsibilities of high school students differ significantly by gender?
5. Do the learning responsibilities, externally managed learning responsibilities and self-directed learning responsibilities of high school students participating in the study differ significantly by school type?
6. Is there a significant relationship between problematic internet use and its sub-dimensions and learning responsibilities and its sub-dimensions of high school students participating in the study?
7. Do the negative results of the internet, social benefit / social comfort and excessive use sub-dimensions of the high school students participating in the study have a significant predictive power on the responsibility of learning together?

METHOD

In this study, the relational survey model aiming to determine the existence and/or degree of mutual change between two or more variables was used (Karasar, 2018: 114) in accordance with the research problem.

Universe And Sample

The universe of the research consists of 9^{th}, 10^{th}, 11^{th} and 12^{th} grade students studying at public schools in Efeler district of Aydın in the 2019-2020 academic year. In the universe of the research, there are approximately 10945 students enrolled in 19 high schools of different school types (Aydın Provincial Directorate of National Education, 2019). In the cluster sampling method, the universe is divided into clusters consisting of similar features. In disproportionate cluster sampling, the selection of clusters to be included in sampling is entirely random (Karasar, 2018: 152). While determining the sample, firstly 19 schools in 5 different high school types were listed. Then, two schools among Anatolian High Schools, two schools among Vocational High Schools and 2 Anatolian Imam Hatip High Schools were determined randomly; and 1 Science High School and 1 Social Sciences High School were determined as sub-clusters. Classes were chosen randomly from each school and scales were applied to the students. The scale was applied to 1043 students who voluntarily participated in the study as a sample in the study. After eliminating the incorrectly and incompletely filled scales, the remaining 1005 scales were analyzed. Detailed numerical and percentage distributions regarding some demographic characteristics of high school students participating in the study are shown in Table1.

Table 1.Demographic Characteristics of Students

Variable	Groups	N	%
Gender	Female	668	66,5
	Male	337	33,5
School Type	Anatolian High School	389	38,7
	Anatolian Imam Hatip High School	152	15,1
	Social Sciences High School	109	10,8
	Science High School	114	11,3
	Vocational High School	241	24,0
	Total	1005	100

Data Collection Tool And Process

In the study, the "Demographic Information Form" prepared by the researcher, the "Problematic Internet Use Scale-Adolescent" developed by Ceyhan and Ceyhan (2009), and the "Learning Responsibility Scale (High School Student Form)" developed by Yeşil (2013) have been applied to the participating students. The validity and reliability studies of the problematic internet use scale for adolescents were conducted by Ceyhan and Ceyhan (2009) among 678 high school students. The scale is 5-point Likert type consisting of 27 items. According to the results of the exploratory and confirmatory factor analysis of the scale, it has been revealed that it has a three-factor structure: "negative consequences of the internet", "excessive use" and "social benefit / social comfort". The overall internal consistency coefficient (α) of the scale was found 0.93. According to these results, the findings regarding the scale show that the scale is a valid and reliable measurement tool. Learning Responsibility Scale was developed by Yeşil (2013) to determine the level of high school students' fulfilling their learning responsibilities for school learning. The scale is 5-point Likert type consisting of 22 items. It consists of 2 sub-factors: Externally Directed Learning Responsibility and Self-Directed Learning Responsibility. The reliability coefficient of the Learning Responsibility Scale (LRS-II) was determined as Cronbach Alpha .89.

Data Analysis

At the end of the research, the data obtained from the Problematic Internet Use Scale (Adolescent Form), Learning Responsibility Scale and Demographic Information Form were analyzed in a computer statistics program. The significance level of $p < 0.05$ was accepted as the basic criterion in the interpretation of the data. In this study; gender and school type were determined as independent variables. The dependent variables to be compared, according to these variables are problematic internet use and learning responsibility. In the data analysis process of the study, at first, it was examined whether the average scores obtained from the scales show normal distribution or not. In order to test the normality situation, the coefficients of skewness and kurtosis of the distribution were examined. In studies where the number of data is over 50, the distribution can be considered normal when the coefficients of skewness and kurtosis are in the range of ± 1 (Can, 2018: 85). Considering the size of the sample included in this study (N = 1005), it can be said that this assumption is valid (Table 2) and the distribution was sufficient for the assumption of normality.

The t-test was used to determine whether the average scores obtained from the scales differ significantly according to gender. One-way analysis of variance (ANOVA) was conducted to determine whether there was a significant difference in the average scores according to school type and daily internet usage time variable. In order to determine the source of difference, LSD test was performed in cases where the homogeneity of variances could not be provided, and Tamhane's T2 test was used when it could not. Pearson Product Moment Correlation test was used in order to determine the relationship between problematic internet use and learning responsibility. Multiple linear regression analysis was conducted to determine the predictive power of problematic internet use sub-dimensions on co-learning responsibility. For the linearity assumption, which

is one of the basic assumptions of multiple linear regressions, the covariance plot was examined and it was seen that the assumption was met. VIF (Variance Augmentation Factors), tolerance values, correlation coefficients between variables and Durbin-Watson values were examined to determine whether there was a multiple connectivity problem among the predictive variables and they were found to meet the multiple linear regression assumption.

Table 2. Skewness and Kurtosis Values of the Scale Average Scores

Scales	N	$\bar{X}$	Ss	Skewness	Kurtosis
Problematic Internet Use	1005	2,19	0,71	,707	-,208
Learning Responsibility	1005	2,91	0,60	-,314	-,427

FINDINGS

In accordance with the sub-problems of the study, findings related to the comparison of problematic internet use and learning responsibility levels according to the variables of gender and school type were included.

Findings and Comments Regarding the Difference of High School Students' Problematic Internet Use Levels by Gender

T-Test analysis was conducted to determine whether problematic internet use of high school students caused a significant difference according to gender. In this context, the data regarding the test results are given in Table 3.

Table 3.T-Test Results of the Average Scores of High School Students' Problematic Internet Use Levels and Sub-Dimensions Difference According to Gender

Sub-Dimensions	Gender	N		$\bar{X}$	Ss	t	sd	p
Negative consequences of the internet	Female	668		1,84	,81	-2,01	1003	.044*
	Male	337		1,95	,75			
Social benefit / social comfort	Female	668		1,95	,83	-3,36	1003	.001*
	Male	337		2,14	,84			
Excessive Use	Female	668		3,12	,91	,421	1003	.674
	Male	337		3,10	,78			
Problematic Internet Use	Female	668		2,15	,73	-2,09	1003	.037*
	Male	337		2,25	,66			

*p<.05

According to Table 3 it was determined that the problematic internet use of high school students differed significantly according to the gender variable, the problematic internet use scores of males ($\bar{X}$=2,25), were higher than the problematic internet use scores of females ($\bar{X}$=2,15) ($t_{(1003)}$=-2,09, p<.05). It is seen that the average scores of the sub-dimension of excessive use ($t_{(1003)}$ = 421, p>0,05) did not make a significant difference according to gender; in the sub-dimensions of negative results of the internet ($t_{(1003)}$=-2,01, p<.05and social benefit / social comfort ($t_{(1003)}$=-3,36, p<.05) there is a significant difference in favor of males.

Findings and Comments Regarding the Difference of High School Students' Problematic Internet Use Levels by School Type

One-way analysis of variance (ANOVA) was conducted to determine whether the problematic internet use of high school students made a significant difference according to the school type variable. In this context, the data regarding the test results are given in Table 4.

Table 4. ANOVA Results on the Difference in Average Scores of High School Students' Problematic Internet Use Levels and Sub-Dimensions According to School Types

Sub-Dimensions	Groups	Sum of Squares	df	Average of Squares	F	*p*	Significant Difference
Negative consequences of the internet	Between Groups	9,626	4	2,407	5,063	.001*	1-3 5-3
	Within Groups	629,388	1000	,629			
	Total	639,014	1004				
Social benefit / social comfort	Between Groups	3,746	4	4,112	7,988	.000*	1-3 2-3 5-3
	Within Groups	715,192	1000	,702			
	Total	718,938	1004				
Excessive Use	Between Groups	8,154	4	2,718	3,583	.612	
	Within Groups	759,259	1000	,759			
	Total	767,413	1004				
Problematic Internet Use	Between Groups	4,063	4	1,806	4,781	.001*	1-3 5-3
	Within Groups	507,150	1000	,504			
	Total	511,212	1004				

* p<.05 1= Anatolian High School, 2= Anatolian Imam Hatip High School, 3=Social Sciences High School 4= Science High School 5= Vocational High School

When the analysis results given in Table 4 are examined, it is seen that the average scores of problematic internet use in terms of the general scale ($F_{4-1000)}$= 4,78, p<.05), in negative results of internet ($F_{4-1000)}$= 5,06, p<.05) and social benefit / social comfort ($F_{4-1000)}$= 7,98, p<0,05) sub-dimensions make a significant difference according to the school type variable; on the other hand, it does not seem to make a significant difference in the excessive use ($F_{4-1000)}$= 3,58, p<.05) sub-dimension. As a result of the Tamhane T2 comparison test conducted to find the source of the difference, it was seen that the difference between the students of Social Sciences High School ($\overline{X}$=2,00) and Anatolian High School ($\overline{X}$=2,25) and Vocational High School ($\overline{X}$=2,22) was in favor of Anatolian High School and Vocational High School respectively in terms of the general problematic internet use scale of the significant difference. In the negative consequences of the Internet sub-dimension, it was observed that the difference between Social Sciences High School ($\overline{X}$=1,64) and Anatolian High School ($\overline{X}$=1,96) and Vocational High School students was in favor of Anatolian High School and Vocational High School, respectively. In the sub-dimension of social benefit / social comfort, it was observed that the difference between Social Sciences High School ($\overline{X}$=1,74) and Vocational High School ($\overline{X}$=2,14), Anatolian Imam Hatip High School ($\overline{X}$=2,06) and Anatolian High School ($\overline{X}$=2,04) students was in favor of Vocational High School, Anatolian Imam Hatip High School and Anatolian High School, respectively.

Differentiation of High School Students' Levels of Fulfilling Their Learning Responsibilities According to Sub-dimensions

The Dependent Sample t-Test Results on whether the levels of fulfilling the learning responsibilities in the sub-dimensions of "Externally Directed Learning Responsibilities" and "Self-Directed Learning Responsibilities" of the High School students participating in the study differ significantly or not are given in Table 5.

Table 5.Paired Sample t-Test Results Regarding Differentiation According to High School Students' Learning Responsibility Levels and Sub-Dimensions

Sub-Dimensions	N	$\bar{X}$	Ss	t	*df*	*p*
Externally Directed Learning Responsibility	1005	3,10	,58	27,871	1004	.000*
Self-Directed Learning Responsibility	1005	2,42	,91			

*p<.05

When Table 5 is examined, it is seen that there is a significant difference in favor of externally directed learning responsibility ($t_{(1005)}$=27.871) between the average scores of externally directed learning responsibility ($\bar{X}$=3.10) and self-directed learning responsibility ($\bar{X}$=2.42) among high school students participating in the study. p <0.05).

Differentiation Of High School Students' Learning Responsibility Levels According To Gender

T-Test analysis was conducted for independent samples in order to determine whether the Learning Responsibilities of high school students caused a significant difference according to gender. In this context, the data regarding the test results are given in Table 6.

Table 6. T-Test Results of the Average Scores of High School Students' Learning Responsibility Levels and Sub-Dimensions Difference According to Gender

Sub-Dimensions	Gender	N	$\bar{X}$	Ss	t	*df*	*p*
Externally Managed Learning Responsibility	Female	668	3,17	,56	5,863	1003	.000*
	Male	337	2,95	,60			
Self-Directed Learning Responsibility	Female	668	2,48	,92	2,896	1003	.004*
	Male	337	2,31	,89			
Learning Responsibility General	Female	668	2,99	,58	5,361	1003	.000*
	Male	337	2,77	,61			

*p<.05

According to the results of the T-Test conducted for independent samples in order to reveal whether there is a significant difference in the learning responsibility levels of high school students according to the gender variable, when the analysis results given in Table 6 are examined, it was seen that the learning responsibility levels of the students differ significantly according to the gender variable, and the learning responsibility average scores of the female students ($\bar{X}$=2,99) was found to be higher than the male students' average scores for learning responsibility ($\bar{X}$=2,77) ($t_{(1003)}$= -2,09, p<.05).When analyzing the differentiation of the sub-dimensions of the learning responsibility scale according to gender, it is seen that the average scores of the Externally Directed Learning Responsibility ($t_{(1003)}$=5,863, p<.05) and Self-Directed Learning Responsibility ($t_{(1003)}$=2,896, p<.05) sub-dimensions make a significant difference in favor of females.

Differentiation of High School Students' Learning Responsibility Levels According to School Types

One-way analysis of variance (ANOVA) was conducted to determine whether the learning responsibility of high school students made a significant difference according to the school types. In this context, the data regarding the test results are given in Table 7.

Table 7. ANOVA Results Regarding the Difference of Average Scores of High School Students' Learning Responsibility Levels and Sub-Dimensions According to School Types

Sub-Dimensions	Groups	Sum of Squares	*df*	Average of Squares	F	*p*	Significant Difference
Externally Managed Learning Responsibility	Between Groups	1,668	4	,417	1,412	.229	
	Within Groups Total	347,011 348,679	1000 1004	,347			
Self-Directed Learning Responsibility	Between Groups	13,045	4	3,261	4,072	.003*	3-2* 3-5*
	Within Groups Total	828,063 841,108	1000 1004	,828			
Learning Responsibility General	Between Groups	1,251	4	,313	,874	.480	
	Within Groups Total	364,534 365,785	1000 1004	,365			

*p<.05 1= Anatolian High School 2= Anatolian Imam Hatip High School 3=Social Sciences High School 4= Science High School 5= Vocational High School.

As seen in Table 7 according to the results of one-way analysis of variance (ANOVA) conducted to determine whether the learning responsibility of high school students made a significant difference according to the school type variable, there is no significant difference statistically in Learning Responsibility scale in general or in the Externally Managed Learning Responsibility sub-dimension between the average scores (p>.05). The average scores in Self-Directed Learning Responsibility (F_{4-1000}= 4,072, p<.05) sub-dimension have a significant difference according to the school type variable. Since the homogeneity of variances could not be provided in Levene's Test performed to determine the source of difference in self-directed learning responsibility sub-dimension, Tamhane's T2 multiple comparison test, which is used when variances are not homogeneous, was conducted. As a result of Tamhane's T2 test, it was seen that the significant difference between groups is between Social Sciences High School ($\overline{X}$=2,65) students and Anatolian Imam Hatip High School ($\overline{X}$=2,28) students in favor of Social Sciences High School; between Social Sciences High School ($\overline{X}$=2,65) students and Vocational High School ($\overline{X}$=2,32) in favor of Social Sciences High School.

FINDINGS REGARDING THE RELATIONSHIP BETWEEN HIGH SCHOOL STUDENTS' PROBLEMATIC INTERNET USE AND LEARNING RESPONSIBILITIES

In determining the relationship between high school students' problematic internet use and learning responsibilities; Pearson Product Moment Correlation Coefficient was examined since the assumptions of normality of variables were met. The data regarding the correlation analysis performed are given in Table 8.

Table 8. Pearson Product Moment Correlation Analysis Results Regarding the Relationship Between High School Students' Problematic Internet Use and Learning Responsibilities

Sub-Dimensions		Externally Managed LRS-II	Self-Directed LRS-II	LRS-II General
Negative consequences of the internet	Correlation	-,354*	-,306*	-,378*
	p N	,000 1005	,000 1005	,000 1005
Social benefit / social comfort	Correlation	-,231*	-,152*	-,227*
	p N	,000 1005	,000 1005	,000 1005
Excessive Use	Correlation	-,311*	-,355*	-,368*
	p N	,000 1005	,000 1005	,000 1005
PIU	Correlation	-,361*	-,321*	-,389*
General	p N	,000 1005	,000 1005	,000 1005

*p<.01 PIU = Problematic Internet Use, LRS-II = Learning Responsibility Scale

When Table 8 is analyzed, a moderate downhill (negative) and significant relationship was found between the average scores obtained from the problematic internet use scale and the learning responsibility scale (r=,389, p<0.01) in general. When the relationship between the sub-dimensions of problematic internet use and learning responsibility is examined, it is seen that there is a moderate downhill (negative) and significant relationship with the negative consequences of the Internet sub-dimension (r=- ,378, p<0,01), and a low downhill (negative) and significant relationship with the social benefit / social comfort sub-dimension (r=-,227, p<.01), and a moderate downhill (negative) and significant relationship with excessive use sub-dimension (r= -,368, p<.01).

FINDINGS REGARDING THE PREDICTIVE POWER OF THE PROBLEMATIC INTERNET USE ON LEARNING RESPONSIBILITIES OF HIGH SCHOOL STUDENTS

The data obtained from the multiple linear regression analysis regarding the Predictive Power of the Problematic Internet Use on Learning Responsibilities of High School Students are given in Table 9.

Table 9. Multiple Linear Regression Analysis Results Regarding the Predictive Power of the Problematic Internet Use on Learning Responsibilities of High School Students

Variable	R	R^2	F	B	Standart $Error_B$	β	t	p
Fixed	,408	,166	66,447	3,704	,068		54,422	,000
Negative consequences of the internet				-,179	,034	-,237	-5,272	,000**
Social benefit / social comfort				-,001	,026	-,001	-,040	,968
Excessive Use				-,143	,027	-,207	-5,259	,000**

**p<.05

When Table 9 is examined, it is seen that the negative consequences of the internet, together with the social benefit / social comfort and excessive use sub-dimensions, have significant predictive power on learning responsibility. (R=.408, R^2=.166, F=66,447, p<.05). These three variables together explain the %17 of the total variance in learning responsibility. It was seen that the important predictor variables of learning responsibility were the negative consequences of the internet (β=-.237, p<.05) and the excessive use of internet (β=-.207, p<.05). It was also seen that the social benefit / social comfort sub-dimension (β=-.001, p>.05) was not a predictor variable of learning responsibility.

DISCUSSION, CONCLUSION AND SUGGESTIONS

THE PROBLEMATIC INTERNET USE OF HIGH SCHOOL STUDENTS

According to the results obtained regarding this sub-problem, it was determined that the problematic internet use of high school students differed significantly according to the gender variable, and the problematic internet use scores of the males were significantly higher than the problematic internet use scores of the females. When the analyzes regarding the sub-dimensions were examined, it was seen that the excessive use scores do not make a significant difference according to the gender; and that that there was a significant difference in favor of males in the negative results of the internet and social benefit/social comfort sub-dimensions. The results supporting the findings in the literature have been reached. There are many studies in the literature that indicate that problematic internet use differs in favor of males according to gender (Vigna-Tagliant et al., 2017). There are also some studies in the literature that indicate that the scores of the problematic internet use are significantly higher in favor of females. (Liu et al. , 2011). There are also studies (Hall and Parsons, 2001; Ceyhan, 2011) in the literature showing that gender is not a determining variable on problematic internet use. In the studies, mostly male students have higher scores of problematic internet use.

It may be caused by factors such as males acquaintance of internet and computer earlier than females (Öztürk & Özmen, 2011), males having more positive attitudes and self-efficacy perceptions than females (Cai et al., 2017), and male students' higher addiction levels of online gaming than female students (Koçoğlu, 2019).According to the results obtained in this study, in terms of the school type variable, the scores in the dimensions of problematic internet use scale in general, social benefit and negative consequences of the internet differ significantly; while there was no significant difference in excessive usage scores. In this study, it was observed that the highest average scores for problematic internet use were among the Anatolian High School students, and the lowest average scores for problematic internet use were among the Social Sciences High School and Science High School students. The average social benefit / social comfort scores of Vocational High School students were found to be higher than other high school students. The reason for this result may arise from the fact that Social Sciences High School and Science High School students focus more on university exams than other high schools. When the time allocated for the exam is much, it can be thought that the use of the internet, which is not required except for accessing information and communication, will be very limited. It can be said that the low level of problematic internet use among Social Sciences High School students stems from a culture-oriented school climate. It can be argued that with teachers encouraging students at school about art, history, culture and literature publications and events and that the lessons being different from other schools in this context, prevent excessive and unconscious use of the internet. Since Science High School students have regular studying habits, self-regulation skills and use the internet for doing homework or research instead of entertainment, it can be said that they use the internet consciously and healthily.

As a result, it can be argued that they are less affected by the negative consequences of the internet than other school students. In the literature there are some studies supporting the findings obtained in this study to the type of school (Kaçar, 2017). The reason for the differentiation between school types may due to the fact that Science High School and Social Sciences High School students spend more time studying and focus on academic success in order to prepare for exams. There are also studies (Yörük & Taylan, 2018) in the literature showing that school type is not a determining variable on problematic internet use.

THE LEARNING RESPONSIBILITIES OF HIGH SCHOOL STUDENTS

According to the results obtained from the study, it was found that the external directed learning responsibility scores of high school students were significantly higher than the self-directed learning responsibilities. It is seen that there are studies consistent with the results obtained in this study in the relevant literature. Yeşil (2013) found that high school students' external directed learning responsibilities average scores were significantly higher than their self-directed learning responsibility scores. In the study in question, it was determined that students fulfill their learning responsibilities and external directed learning responsibilities at a good level and self-directed learning responsibilities at a medium level. Contrary to these findings, Golzar (2006) found in his research on 5th grade students that internally supervised students had a higher level of fulfilling their responsibilities than externally supervised students. According to the results obtained in this study, it was determined that the learning responsibilities of high school students differ significantly according to the gender variable and the learning responsibility scores of female students were significantly higher than the learning responsibility scores of male students. This finding can be explained by the fact that girls and boys grow up with different roles and behavior patterns based on gender. When considered in terms of social expectations and cultural phenomena, assigning more responsibility on girl from an early age, especially at home, can make learning responsibility settled more for girls. Thus, it can be said that girls have higher levels of responsibility from an early age compared to boys. (Golzar, 2006).In his study,

Yeşil (2013) found that the level of fulfilling the responsibilities towards school learning of female students studying in different types of high schools was significantly higher than male students. There are studies consistent with the results of the research in the relevant literature (Yeşil, 2013). Apart from this, there are also studies that do not show a significant difference according to gender (Hakkari, 2020). According to the results obtained in this study, no statistically significant difference was found between the average scores of learning responsibility and external-directed learning responsibility in terms of school type variable. Significant difference was found between self-directed learning responsibility and school type variable. Contrary to these findings, Yeşil (2013) found that there is a significant difference in learning responsibility and its sub-dimensions according to the variable of school types in his study on high school students. According to the results of this study, it is observed that the highest average scores in the learning responsibility scale are among the Social Sciences High School students and the lowest learning responsibility average scores are among the Vocational High School students. In the Externally-Managed Learning Responsibility sub-dimension, it is observed that the highest average scores are among the students of Anatolian Imam Hatip High School, and the lowest average scores of learning responsibility are among the Science High School students. It is seen that the highest average scores in the sub-dimension of Self-Directed Learning Responsibility are among the Social Sciences High School and Science High School students, respectively. It is observed that the lowest average scores of responsibility for self-directed learning are among Anatolian Imam Hatip High School students. According to these results, it can be said that Anatolian Imam Hatip High School students are more open to external control tools such as teachers, peers and parents. It can be argued that Science High School and Social Sciences High School students rely more on internal control tools such as self-regulation, self-control and self-motivation. In this study, it is an unexpected result that there is no significant difference between learning responsibility scores according to the school type variable.

The Relationship Between Problematic Internet Use And Learning Responsibility

According to the findings obtained from the study, a moderate downhill (negative) and significant relationship was found between high school students' problematic internet use and their learning responsibilities. Problematic internet use average scores explain about 16 % of the average scores of learning responsibilities. Moreover, it has been observed that negative results of the internet and excessive use scores have a significant predictive power on learning responsibility, but social benefit / social comfort scores do not have a predictive power on learning responsibilities. Considering that the negative results of the internet have a weak average score in this study, it can be said that it is a consistent result to find a moderate relationship between problematic internet use and learning responsibilities. According to this result, although high school students use the internet relatively excessively, its negative effects are limited. In this context, it can be considered as a reasonable result that participant students' level of internet usage is moderately effective in hindering their responsibilities towards learning. In addition, it is another finding of this study that excessive use behaviors, one of the main factors of internet addiction, have a negative effect on learning responsibilities. In today's world where distance education and online learning are gaining importance, it is getting more and more important for students to be responsible for their own learning. One of the main factors affecting students' learning responsibility is the excessive, problematic, uncontrolled usage of the internet, in short, unhealthy usage. As a result of problematic internet use, students may experience problems such as difficulty concentrating on their academic studies, distraction, not being able to finish homework on time, not being able to prepare for exams, deterioration of studying habits, decrease in academic success, and missing classes (Ayaydın & Ayaydın, 2018). When the factors that negatively affect their performance are examined, it is seen that problematic internet use

behaviors are an important factor for students. Problematic internet use causes negativities such as excessive mental preoccupation, the need to use the internet for increasing periods, and the loss of time control in internet usage, which may cause students to fail to fulfill their responsibilities towards learning.

SUGGESTIONS

• The value of responsibility in education programs is among the root values that students should gain. In addition, students need to be a responsible learner in order to achieve their goals and dreams in a lifelong learning journey. Teachers, family and media have an important role in helping students gain responsibility behaviors. In this context, responsibility for learning can be integrated into curricula as a targeted competence from preschool.

• In this process, where distance education and lifelong learning competencies gain importance, school administrations, counselors and field teachers can raise awareness of students in order to increase the level of learning responsibility in students. In addition, awareness raising activities can be carried out by counselors for parents to help their children gain learning responsibility behaviors.

• Considering the relationship between problematic internet use and learning responsibility, trainings on conscious and healthy internet use for students can be provided by counselors and information technologies teachers.

• In order to equip students with skills such as self-motivation, self-regulation and self-control, which are closely related to learning responsibility behaviors, training programs that include these skills and competencies can be developed and implemented.

• School counselors can apply training programs based on cognitive behavioral approach to preventing problematic internet use to students who use the internet at an unhealthy and excessive level and whose problem is observed that internet use disrupts their learning responsibilities.

• In this study, it was determined that there is a significant relationship between problematic internet use and learning responsibilities. In the literature, there is no research examining the relationship between these variables. Therefore, studies that examine the relationship between these two variables can be conducted in samples of different ages and education levels.

• Research using qualitative research methods can be conducted to examine the causes and consequences of problematic internet use in depth.

• In this study, it was determined that problematic internet use explains an important part of learning responsibility. In this context, it can be said that there are other factors affecting learning responsibility. In order to determine other facts that explain learning responsibility, studies can be done to test the relationship between different variables and learning responsibility.

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TEACHERS' VIEWS ON THE CLASSROOM INSPECTION PRACTICES OF SCHOOL PRINCIPALS

Abstract: Research aims to identify the attitudes of middle school teachers and school principals on lecture inspections. This research uses case study research design. The data collection tool was used in interviews because it aimed to help principals access more extensive data in relation to the comments of middle school teachers on lecture inspection. The study group of the research was five teachers working in different branches of the Buca Otuken Middle School in the academic year 2016-2017. The sample in the research was determined with convenience sampling. The data for the research were obtained through the semi-structured interview form prepared by the researchers after a literature review. The validity of the interview form used in obtaining research data was considered stepwise in terms of criteria. The findings on the comments of the teachers in the school in which the research was performed on lecture inspections by principals. The findings are considered separately as sub-problems. In the first sub-problem, we aimed to establish the expectations of the school principal in terms of duties and competence. The participants were asked to list the duties and competences they expected. In the second sub-problem, the participants were asked about their opinion of the leadership role of the school principal during inspections. The participants desire a principal who is a constructive leader who can control the style and level of criticism. In the third sub-problem, the teachers were asked for their opinions on the evaluation and feedback style of the school principal after inspection. The duration should be determined based on the teacher. As a leader, the school principal should be aware of this duration with each teacher.

Keywords: School principals, lecture inspections, middle school, teachers' views.

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INTRODUCTION

The idea of productivity, seen as one of the greatest dead-ends of today's educational systems, affects teachers and responsible individuals and institutions within the process of their development and inspection. The development and inspection of teaching and the effort to make it more efficient lie in the basis of the development and inspection of the teacher. This effort shows differences in every school in each educational system in each term based on varying conditions in each locality.

Inspection mechanisms are focused in different ways and with different implementations. Each educational system constructs the inspection mechanism in accordance with their own characteristics for the purpose of determining whether their own aims are realized or not. The aims of the Turkish educational system are protected by laws and codes and strive to determine the level of reaching mission attainment in terms of the related laws and regulations. For this purpose, the Legislative Decree on the Organization and Tasks of the National Education Ministry is in force and carries out the inspection.

Uncertainties in the Turkish educational system are particularly observed in the area of inspection. The stages of the inspection process, how and by whom the inspection will be carried out within the frame of which authorities and responsibilities have been a subject of discussion for years. The inspection mechanism, starting with the declaration of the Second Constitutional Era, has brought into force many implementations in the educational system and created efforts to inspect the operability of the system. According to Memduhoglu and Taymur (2014, 29), most of the studies conducted regarding educational inspection in Turkish educational system have discovered that important problems have been detected in the system, the inspection process has not proceeded in the direction of the desired targets, they could not manage to develop the teaching process (one of their main objectives) and the professional skills of the teacher and the inspectors were not adequate for carrying out the tasks and responsibilities expected from them. Educational politicians, becoming aware of the problems in the inspection processes over the last a few years, conducted modifications in the laws and regulations and tried to make the inspection functional and valid. For this reason, at the end of many modifications conducted from the 1990s up to today, the current inspection system of the Ministry of National Education has taken its final form within the frame of "Law on Making Amendments in the National Education Basic Law and Some Laws and Legislative Decrees" and "Regulation on Guidance for the National Education Ministry and Inspection Department and Regulation of the Department of Education Inspectors." The amendments made on the dates specified in these laws and regulations have partly removed uncertainty about the frame within which principles and methods will be implemented and by whom institution inspection and teacher inspection will be conducted (Altun 2014, 27).

Currently, the inspection system of the Ministry of National Education is executed by the Department of Education Inspectorate within the body of the Directorate for Guidance and Inspection, the Directorate for Internal Auditing and Provincial Directorates of National Education (MEB 2014). The amendment to the Organizational Regulation of the Ministry of National Education on August 20, 2017 changed "Directorate for Guidance and Inspection" to "Department of Inspection Board". The fundamental duty of the Department of Inspection Board is to carry out, in collaboration with relevant units, the control and inspection processes of services offered by or under the control of the Ministry, analyze, compare and measure processes and results on the basis of the regulations, pre-determined aims and objectives, performance criteria and quality standards, evaluate these processes and results in an evidence-based manner, and report results to the relevant units and persons (MEB 2017). The primary duty of the Directorate for Internal Auditing is to inspect the activities and operations of all units of the Ministry including central, provincial and overseas units, carry out economic, effective and efficient management of the resources of the Ministry, perform financial, system and performance inspections, inspect information technologies, carry out inspection and counseling activities based on approval by the internal inspection plan and annual program, carry out inspections and counseling activities requested by the top executives, evaluate the

effectiveness and adequacy of risk management, internal control and governance processes of the Ministry, and execute duties assigned by relevant laws and regulations (MEB 2014b). The primary duty of Education Inspectors is to plan and execute the guidance, inspection, research, examination and investigation services of organizations in the province (MEB 2014).

All these regulations are put into force and practice in order that inspections increase the productivity of schools and to create a more productive and effective education system. Inspections aim to develop education, and thus the teacher who delivers it, and to guide him in his role. According to Basar (1996, 1), the objective of inspection is to correct and develop educational activities and processes in the attainment of educational goals. According to Aydin (2005), it is a technical and social process designed to effectively use and develop human and material resources. According to Oz (2003), the most important objective of inspection is to offer help to the teacher when he needs it most (Ceylan and Agaoglu 2014, 545).

Types of inspection are mainly institution inspection, lecture inspection and internal inspection. The type of inspection that is given priority in the development of teaching is teacher inspection (Altun 2014, 32). Development of teaching is only possible through developing the teacher. For this reason, inspectors should have all the qualifications that will offer opportunities to help and guide teachers and satisfy needs. In this context, lecture inspections should be carried out with ultimate care and be effective in guiding teachers.Firstly, the concept of lecture inspection should be examined and internalized by inspectors and evaluations and guidance should be carried out accordingly. Taymaz (1984, 9) defines lecture inspection as the action that is performed to observe the behavior of the teacher during both teaching and the periods when he is interacting with students and to examine and evaluate pre-lecture and post-lecture activities in an educational institution.

Burgaz (1992, 2) argued that the objective of lecture inspections is to evaluate and develop the process of teaching and learning as a whole while examining all the active elements within the process and the continuous interactions between them (Dagli 2000, 44).

The school administrator is viewed as being the primary authority responsible for controlling and evaluating the teaching process in schools (Bursalioglu 2012, 34). In other words, the primary responsibility of school principals can be expressed as leadership in education and employee evaluation (Donmez 2002). In this context, the key point in inspections is the inspection by the school principal of teaching and, by implication, of the teachers. Similarly, according to Basar (1996, 2), the majority of the inspection should be performed by the school administration; inspectors should not spend too much time on this task. The entry point of this situation is that principals have been assigned the role of teaching leader in recent years. As the teaching leader, the principal inspects the in-class teaching activity of the teacher and plans actions to improve it (Yilmaz 2009, 24).

School principals' behaviors and approaches significantly affect the success of teachers. Restrictive administrator behaviors, unlike supportive behaviors, maintain a negative relationship with various dimensions of a collaborative school culture and thus prevent its evolution towards a more collaborative environment. In particular, these two main categories of behavior are very important, especially when considering collaborative leadership and professional development. Also, supportive basic behaviors were positively associated with peer support; this could mean that basic behaviors provide a model for the behavior of other employees and perhaps students (Tlusciak-Deliowska, Dernowska and Steve Gruenert, 2017, 20).

Additionally, the inspection duty of the school principal is expressed by the Regulations on Primary Education Institutions as: “The principal is responsible for administering, evaluating and improving the school on the basis of its objectives” (MEB 2003). In this case, it can be said that the principal is responsible for lecture inspections in both formal and informal terms.

On that basis, this research aims to identify the attitudes of middle school teachers and school principals on lecture inspections. To this end, the research seeks to find answers to the following sub-problems;

1. What is the expectation from the school principals in terms of duties and competence?

2. What kind of leader should the school principal be throughout the process of inspection?

3. What style of evaluation and feedback should the school principal adopt throughout the process of inspection?

METHOD

This research uses case study, which is a qualitative research design. Case study is a methodological approach that involves an in-depth study of a restricted system using multiple data collection to gather systematic information about how and how it works (Chmiliar 2010). The data collection tool was used in interviews because it aimed to help principals access more extensive data in relation to the comments of middle school teachers on lecture inspection. The study group, data collection tool and validity and reliability of the data collection tool are explained in detail below.

STUDY GROUP

The study group of the research was five teachers working in different branches of the Buca Otuken Middle School in the academic year 2016-2017. The School that the study is carried has 21 teachers and 350 students in Izmir City Center. Parents have low socio economical class and educational status. There are approximately 20 or 22 students in each class, which makes the atmosphere suitable for effective classroom management. The sample in the research was determined with convenience sampling. This sampling was preferred because it is fast and convenient for the researcher (Yildirim and Simsek 2000). The study group included teachers from different branches of the school who volunteered to support the research and present their opinions. Information on the teachers from which the research data were obtained is listed in Table 1.

Table 1: The Study Group

Teacher Code	Gender	Age	Branch	Duration of Service	Educational Background
T1	Female	36	Music	11	Undergraduate
T2	Female	42	Visual Arts	19	Undergraduate
T3	Female	29	Turkish	5	Undergraduate
T4	Female	33	Physical Science	6	Undergraduate
T5	Male	36	Social Science	10	Undergraduate

DATA COLLECTION TOOL

The data for the research were obtained through the semi-structured interview form prepared by the researchers after a literature review. The interview form was re-arranged after a pilot application with two teachers and then the real application was carried out.

The semi-structured interview form used in the qualitative research conducted to obtain thorough information about the lecture inspections of principals from the teachers included five questions to determine their opinions on the lecture inspections of the principals, their thoughts on attendance of support and improvement training courses, what type of leadership the school principals adopt during the

process of inspection and what style of evaluation and feedback the principals adopt.

Validity and Reliability of Data Collection Tools

The validity of the interview form used in obtaining research data was considered stepwise in terms of criteria. The first was participation confirmation by the teachers whose opinions were sought. It was essential that the teachers included in the study group participated voluntarily, and they were informed that their answers would remain confidential. The other criterion was that the interview data would be obtained by extensive face-to-face interviews with participants. Additionally, it was an

important criterion that the interview form be confirmed by an expert. To meet this criterion, three teachers who were experts in the subject and a linguistics teacher were consulted for their opinions and the interview form modified in accordance with their comments.

FINDINGS

This section contains the findings on the comments of the teachers in the school in which

the research was performed on lecture inspections by principals. The findings are considered separately as sub-problems.

Findings on the First Sub-Problem

The first sub-problem of the research was “What duties and what type of competence are expected from the school principal as an inspector?”. The opinions of the participants are given in Table 2 as a theme and in categories.

Table 2. Theme of Opinions of Participants on Expected Duties and Competences of the School Principal as an Inspector

Categories	f
Leader as a teacher; principal as a listener	4
Management while keeping in mind that he used to be a teacher	2
Management while putting aside ego	2
Giving priority to the inspection of teaching	2

Examining Table 2, it can be seen that the top expectation of the principal is equal treatment of everyone. Primarily, the teachers want him to adhere to the principle of equality. A participant expressed this opinion:

T5: "The school principal should be at an equal distance from all the teachers and be fair when making an evaluation. The evaluation should be objective for each teacher. This is what I expect from our school principal during an inspection”

In addition, one of the greatest issues of teachers is that while carrying out their duties the principals forget that they are also teachers and act like a boss, and this situation was also observed here. A participant who has problems with this said: T2: "I want school principals to remember that they were once teachers too and make their evaluations accordingly. After all, they also went through the same experiences in classes. I think they should be able to empathize.”

In the context of the first sub-problem, the opinions of the participants on the inspector role of their principal taken in order to present how the principal is perceived to fulfill this role are given in Table 3 as a sub-theme and in categories.

Table 3. Theme of Opinions of Participants on Fulfilment of Inspector Duties by Their School Principal

Categories	f
Inappropriateness of single-lecture inspection	4
Inspection of different classes at different times	2
Inadequacy of the principal for inspecting	2

Examining Table 3, it can be seen that most of the participants were not content with single-lecture inspections by their principal. It was observed that they were uncomfortable with the fact that the inspections were only carried out in one class. They argued that teachers should be evaluated in all aspects including in-class and out-of-class activities. A participant with this opinion said:

T4:"I do not find it right to perform the inspection only on one lecture in a term. I do not think this kind of inspection is effective. He should observe and analyze the efforts throughout the year and make evaluations accordingly." Additionally, the participants stated that the inspections differed from class to class and lecture to lecture. For this reason, they suggested that it would be more appropriate to observe and evaluate a teacher in various classes and at various times rather than in a single lecture. They stated that inspections would differ according to class climate and student-teacher interaction and hence each teacher would perform differently in each class.

Moreover, they emphasized that principals should have the properties and competence of an inspector. A participant with this opinion stated:

T1:"I expect the principal who is to be an inspector to have professional competence. The principal should know how and on what aspects to inspect a teacher during and after inspection and how to provide feedback. It would not be correct for him to evaluate and make a judgment about me without knowing this. I expect him to be competent in areas where he warns me and to apply what he knows in the best way possible."

Findings on the Second Sub-Problem

The second sub-problem was “What type of a leader should the school principal be during the process of inspection?” to determine the opinions of the participants on the leadership roles of school principals during lecture inspections. The opinions of the participants are given in Table 4 as a theme and in categories.

Table 4. Theme of Opinions of Participants on Leadership Role of School Principals during Lecture Inspections

Categories	f
Leader as a teacher; principal as a listener	1
A leader who can balance style and level of criticism	2
A leader who does not simply perform leadership with the inspection chart provided	1
A leader who does not forget his prior teaching position and empathizes	1

Examining Table 4, the most desired leadership role from the principal was that of a leader who pays attention to the style and level of criticism. The teachers want the principal to use constructive language in criticism during and after inspection and not make the inspections too long. A participant with this opinion said: T2: "When evaluating teachers, the principal should control the tone of criticism properly and be constructive not destructive. He should not exceed the use of leadership powers. When negatively criticized for too long, teachers may become lower in performance." Additionally, one of the participants stated that the principal should be a passive listener and observer during inspections. Another participant said that if he simply follows the inspection chart, he cannot exhibit the leadership role expected from a school principal. The participant said that while it is possible to make a healthy evaluation through the existing chart, a principal who is confined by the format during inspection and evaluation cannot be a leader with independent thinking and observation.

Findings on the Third Sub-Problem

The third sub-problem of the research was “ What style of evaluation and feedback should the school principal adopt throughout the process of inspection?”. The opinions of the participants on the evaluation style of the school principals are given in Table 5 as a theme and in categories.

Table 5. Theme of Opinions of Participants on the Evaluation Style of School Principals

Categories	f
Inappropriateness of use of the same charts obtained online and applied to all branches	4
Appropriateness of the evaluation method he uses	1

Examining Table 5, most participants did not find the method the school principal used during inspection to be correct. According to the participants, the charts downloaded online are not a good way to make a valid and reliable evaluation after inspection. Moreover, they said that each branch should be evaluated with different criteria. A participant with this opinion stated: T4:"I find it incorrect to inspect all the branches with charts downloaded from the internet and not prepared specifically for a branch. Our principal used the same chart both in English and Visual Arts classes. This is wrong."In the context of the third sub-problem, the opinions of the participants on the feedback style of their principal are given in Table 6 as a sub-theme and in categories.

Table 6. Theme of Opinions of Participants on the Feedback Style of School Principal

Categories	f
Positive feedback from the school principal	4
Feedback duration too long	3
Criticism too long	1
Failings of giving feedback from a checked list	1

In Table 6, the majority of the participants said that the feedback style of the school principal was positive. It is essential for the principal to provide feedback to teachers after an inspection. In this process, it is a key element in whether the teacher will develop a positive or negative attitude to feedback. The participants were also aware of this situation and said that the style of feedback is essential. One of the participants with this opinion stated:T3: "Feedback after inspection is important for me. Of course, it is more important how the principal does it. The feedback of the school principal after inspection was positive and constructive."

Additionally, while the participants find the style positive, they also found it boring that the principal evaluated each behavior and activity for too long. The participants argued that feedback should be brief and would be more effective this way. A participant with this opinion said: T4: "...however, it was really too much when it took two hours for the feedback after inspection. After a while, too many unnecessary details became boring and ineffective. I think it would be more efficient if it was shorter and brief."

RESULT AND DISCUSSION

The teaching profession is in the limelight at an unprecedented level due to social, political and professional debates. This may be because teachers have a pessimistic vision of their profession. Wear-out is a huge challenge for teachers to be motivated. It can be thought to be related to workplace satisfaction, long-term training plans and professional visions that will increase their motivation to work (Katalin and Toth 2016). Inspection mechanisms that should be present at every level of teaching differ between countries, among education systems, and from time to time. All education systems are in search of an inspection mechanism that is appropriate for them. The current applications serve the purpose of establishing whether teaching is done in accordance with its objectives. The Turkish Education System has struggled to make the inspection mechanism functional with laws and regulations. It creates and implements different applications based on the needs of the era and the system. According to Item 43 of the Ministry of National Education Elementary Education Inspectors Presidency Regulation, the role of lecture inspection that falls under the on-the-job training statement on the definition of duties and authorization of inspectors gave the role of lecture inspections to school principals after a modification in 2014 – although it was also the responsibility of school principals prior to the modification it was carried out by inspector. This has positive and negative aspects from the point of view of teachers. In order to determine the negative and positive aspects of lecture inspections by school principals, the teachers were asked what role and competence they expected of principals in inspection, how they think the principal fulfilled this inspector role and what they think the feedback and evaluation style of the principal should be.

In the first sub-problem, we aimed to establish the expectations of the school principal in terms of duties and competence. The participants were asked to list the duties and competences they expected. The participants primarily expected their principal to behave in accordance with the principle of equality. They worry that since the principal is always at school, he develops

personal relationships. This is reflected in the inspection and evaluation process and these conditions do not allow for an objective and appropriate inspection. The school principals are expected to put aside their administrative roles and personal relationships to become an inspector and evaluate the inspections in an equal manner. Additionally, they believe that the principals should not forget that they were once teachers when they execute their duties as inspectors and administrators. Teachers did not find it acceptable that principals bring their self-centered personal attitudes to their positions as administrators.

Another emphasis of the teachers was that inspections should not be of teachers but students. The principals should use inspection mechanisms not to inspect teachers but to advance education. The main objective in inspections should be to improve learning and the evaluation should be of teaching.

In the context of the first sub-problem, the participants were asked for opinions about the fulfilment of the inspector role by the school principal. The participants viewed it as wrong that the principal inspected a single lecture and commented on the data obtained within this short period of time to identify the performance of the teacher. They argued that activities throughout the term should not be evaluated within a single class. They stated that inspections of teachers in different classes and lectures would give more reliable results. They said that the behavior of teachers might vary among classes, among lectures and from time to time. For this reason, the school principal should not carry out inspections based on data observed in a single lecture. In addition, he should have the qualifications of an inspector.

The teachers believe that the school principal should be more competent than themselves in both administration and inspection. According to Banasiak and Karczmarzyk (2018, 36), the most beneficial skills for teachers in today's educational reality seem to be the ability to react quickly to changes, to develop qualifications and to use constantly evolving technology. Management competencies are also important. All these competencies are not enough only with inspections and studies. At the same time, adult education should be maintained and provided. In today's world, society needs teachers as a manager and as leaders. Every teacher should have the managerial competencies to adapt to new world educational standards.

In the second sub-problem, the participants were asked about their opinion of the leadership role of the school principal during inspections. The participants desire a principal who is a constructive leader who can control the style and level of criticism. They said that priority in inspection should be given to style and intensity of evaluation. They believe the principal should pay attention to this as a leader. Additionally, they pointed out that if he simply marks an inspection chart, he does not display the qualifications of a leader and cannot manage the process as a good leader. Moreover, a point made by many teachers was that the principal forgets that he used to be a teacher and cannot empathize. Hence, principals should be able to empathize with the teacher and evaluate based on their own experiences. Another point of view was that the real leader during an inspection is the teacher and that the principal should be a passive listener.

In the third sub-problem, the teachers were asked for their opinions on the evaluation and feedback style of the school principal after inspection. The majority of the participants found the chart downloaded online to be insufficient and believed it should be prepared specifically for each branch. They argued that a different inspection chart should be prepared for the requirements of each class and that the inspections should be based on the headlines in these charts. In brief, each class has different expectations, requirements, outputs and class management, and inspections with a stereotyped chart would both harm the process of inspection and weaken the inspector quality of the school principal. Inspection by framework indicators cannot be a method that will improve either the principal or the teacher.

In the context of the third sub-problem, opinions on the feedback style after inspections were requested. The participants stated that the school principal had a positive attitude in the feedback stage. It can be seen that the feedback stage is one of key points of the inspection process from the point of view of participants. The participants do seek feedback but they care about the way the feedback is provided. The kind of tone the school principal uses while giving feedback is very important. When this approach is constructive, the prejudices on inspections will disappear and the teachers will be more open to improvement

with inspection, evaluation and guidance. However, one thing the participants all agreed on was that the feedback took too long. The teachers were aware of the inspection processes and thought that evaluation of activities should be relatively brief. They believed that this would help in arriving at more efficient conclusions and making decisions faster. A longer and more detailed process does not mean a more efficient process. The duration should be determined based on the teacher. As a leader, the school principal should be aware of this duration with each teacher.

RECOMMENDATIONS

Regarding the suggestions of the participants, the researchers developed the following recommendations for school principals to improve lecture inspections:

- Platforms on which principals and teachers can present the two sides of inspection
- In order to eliminate prejudices in inspections, evaluation and guidance can be given weight within the inspection process.
- School principals can be trained in modern inspection approaches and applications.
- Workshops can be organized to enable both teachers and school principals to properly manage the inspection process in collaboration with each other.

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