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Contents

A Review of Open-Ended Mathematical Problem

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This paper aims to understand the use of open-ended mathematical problem to stimulate students' ability in problem solving. There were five mechanical engineering participating in this study. Their works were video-taped as to reveal their process of problem solving. Intervention of creative problem solving was used as to help the students to come out with solutions. They were also interviewed individually after they had solved the problem. All the process of problem solving and their conversations were video-taped and audio-taped, transcribed and then analyzed into sub-themes, namely: problem definition, ideas generation, ideas evaluation, ideas judgment, and solution implementation. Questionnaire was also distributed to three classes of 74 mechanical engineering students as to find out their preference in all the stages of creative problem solving. The result showed that the students were able to solve the open-ended mathematical problem collaboratively based on all the stages of creative problem solving..

Key words: open-ended mathematical problem, creative problem solving, problem solving, creativity, mathematical problem.

INTRODUCTION

Typical students have some misconceptions about the nature of mathematical problems. They believe that mathematical problem has one and only one correct solution (Lampert, 1990). Mathematical problems which have only one correct answer will discourage students to use their diverse ideas to find out the answer (Kwon & Park, 2006). Wu (1994) said that traditional mathematical problems allow students to obtain only one correct solution and this is too rigid for the students to show their understandings in mathematical problem solving. Therefore, most students faced a great difficulty when they came across open-ended mathematical problems. Foong (2002) also stated that open-ended problems are ill-structured and there are many missing data and therefore there is no fixed procedure to guarantee to get a correct solution . In fact, there are more than one solution for these types of problems and students can use

multiple approaches to solve the problems with little constraints on their methods using (Hancock, 1995). Kwon and Park (2006) also said that open-ended mathematical problems can encourage students to use multiple approaches to find a solution for their problem base on their own scope and mathematical abilities. In the process of problem solving, students can discuss their solutions with diverse inferences and this will also cultivate their mathematical communication skills (Kwon & Park, 2006). According to Sullivan (2006), open-ended mathematical problems can also help students to engage in their active learning and construct their own mathematical knowledge. Capraro and Cifarelli (2007) mentioned that open-ended mathematical problems can allow students to use different strategies to obtain their solutions and this gives them the opportunity of developing their mathematical understandings and skills.

Schoenfeld (1983) revealed one of the goals in the mathematical problem solving courses is to train the students to solve mathematical problems creatively with heuristic strategies and also using new approach with critical thinking skills. Perveen, (2010) also showed that by using Polya's (1945) heuristic strategies and Sherreen's (2006) guideline as the approach for problem solving can help students to improve their mathematical achievements compared with the use of expository strategy. According to Bay (2000), the teaching of heuristic strategies can be used as the teaching of problem solving in order to solve mathematical problems. Skinner (1984) stated that problem solving can be defined as the framework for creative thinking and learning of mathematics.

Mathematics problems can be solved in my different ways and from different approaches; some problems have even more than one solution. For example, we can solve simultaneous equations by using substitution, elimination; by using graph and also by using matrices. Chinese mathematician "Chang Chiu Chen" in the sixth century once gave a famous mathematics problem "Hundred Fowls" and students can use many approaches to solve this problem; for example, they can solve the problem algebraically, by trial and error; by using table or graph. There was also more than one solution for this problem and students can use their own interpretation to make sense of the problem. At the end of solving this type of ill-defined problem, the students can develop their creativity in the features of fluency, flexibility and novelty. Students were also given more freedom, openness and selection to solve mathematics problems and they were motivated to become more independent and self-confident in the process of learning mathematics (Silver, 1997).

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METHOD

The famous mathematical problem "Hundred Fowls" which stated that : "If you are offered to buy a rooster with five coins, a hen with three coins and three chicks with only one coin. How many roosters, hens and chicks can be bought with only 100 coins and you can only buy altogether 100 of them?" This mathematical problem was used in this research.

Intervention of creative problem solving was used as to help the students to come out with creative solutions. Five mechancal engineering students took part in this study and they were also interviewed individually after they had solved the open-ended mathematical problem. All the process of their problem solving and conversations were video-taped and audio-taped, transcribed and then analysed into sub-themes, namely: problem definition, ideas generation, ideas evaluation,.ideas judgment and solution implementation.

Questionnaires were also distributed to three classes of 74 mechanical engineering students in the local university. Five-points Likert scale was used as to find out the means, standard deviations and standard error means in all the categories of items. There were altogether 43 items in five categories. Each item was set against a five-point Likert scale of "strongly disagree", "disagree", "neither", "agree" and "strongly agree" with weights of 1, 2, 3, 4 and 5. The students were allowed to pick one of them as to show their favourable selections. The data were then collected and analysed by using SPSS as to find out what did the students do in all the stages of creative problem solving. The three hignhest means in each category were obtained as to find out the preference of the students in every stage of creative problem solving.

Questionnaire, observation and interview were used to triangulate all the data collected in this study.

FINDINGS

Problem Definition

From the table I, the first category of the result showed that as the students before they started to solve the problem, first they will identify all the relevant information such as all the data and condition of the problem in order to define the problem. They also would like to find out all the unknowns and variables in the problem as to help them to find out whether there was enough information to solve the problem.

Table 1

Problem Definition

	N	Mean	Std. Deviation	Std. Error Mean
A1	74	4.15	.932	.108
A2	74	3.91*	.924	.107
A3	74	3.69	1.122	.130
A4	74	3.92	.754	.088
A5	74	3.91*	.779	.091
A6	74	3.66	.880	.102
A7	74	3.72	.852	.099
A8	74	3.73	.926	.108
A9	73	3.70	.996	.117
A10	72	3.56	.963	.113

Note

Item A1 - I identify all the relevant information.

Item A2 - I find out whether there is enough information to solve the

problem. Item A3 - I highlight the key terms.

Item A4 - I find out all the unknowns and variables in this problem

Item A5 - I find out all the data and condition (constraint of the problem).

Item A6 - I separate the different conditions

Item A7 - I find out whether the condition is sufficient to determine the

unknown. Item A8 - I define all the unknown with suitable notation.

Item A9 - I relate all the unknown with equations or formula.

Item A10- I introduce notation or symbol.

From the table, we found out that the three items with the highest means were items A1, A4 and A2/A5 (A2 and A5 had the same mean.)

From the first movie clip, one of the students showed that they can suggest a way to define the problem before solving it.

Student Yap: *"How about we list out all the restriction and limitation so that we can see the problem clearer."*

Student Goh indicated that the number of unknown of the problem.

He said: *"But there is three unknowns. So, it should form at least one more equation to solve simultaneous."*

Student Yap suggested another way to define the problem.

He said: *"The first is that the number should not, should be whole number.. ..Can not be with that ..decimal.....integer."*

From the interview, we found out that students first read the problem and understand it before they identified all the unknowns such as fact, data or information in order to develop their solutions.

"Okay, first read the question and understand the question roughly and then, okay we need to identify all the information given, the unknown, how many equation can form." (Student Yap from interview)

Then, they listed out all the fact, data and information to find out the restrictions. They inspected what the question needed and list out all the questions asked in order to solve the problem.

"Okay, first I will read the question first and then I will identify all the unknown, unknown variable, unknown variable inside the question that it will list out all of it and then I will look at the question and we will. I will develop some equations that it will lead to the situation of the solution like....solution." (Student See from interview).

Ideas Generation

The table II showed that as the students worked on the problem, they would find out the connection between the unknown and the data in order to generate ideas to solve the problem. They also craeted an organized list of ideas at this stage. They checked whether they had used up all the data and condition for them to solve the problem.

Table 2

Idea Generation

	N	Mean	Std. Deviation	Std. Error Mean
B1	74	3.59	.890	.103

B2	74	3.58	.993	.115
B3	71	3.76	.902	.107
B4	74	3.46	.982	.114
B5	74	3.50	.910	.106
B6	73	3.26	1.028	.120
B7	73	3.36	.991	.116
B8	74	3.72	.944	.110
B9	74	3.69	.905	.105
B10	74	3.74	.861	.100

Note

Item B1 - I generate many ideas(fluency), varied ideas (flexibility) and unusual ideas(originality)

Item B2 - I analyse and review data.

Item B3 - I find the connection between the unknown and data.

Item B4 - I restate the problem and make it simple.

Item B5 - I find out many ideas to solve the problem by using

brainstorming, analogy or cross-fertilization

Item B6 - I try to solve the problem by using diagrams, tables, or graphs.

Item B7 - I play with the data by increasing or reducing certain part to come out with new ideas.

Item B8 - I create an organized list of ideas.

Item B9 - I check whether have used up all the data. Item

B10- I check whether have used up all the condition.

From the table, we found out that the three items with the highest means were items B3, B8 and B10.

The next movie clip revealed that student can generate many other ideas in order to find a method to solve the problem. They used three different methods to solve the problem.

The first method used was trial and error or inspection. The second method used was graph and the last method was computer programming.

Student Yap suggested using trial and error to solve the problem.

He said: *"I think the only way we can find is by inspection or trial and error. " "Then, we set the question first, then we can get the third equation or may be eliminate at least one unknown. For example, may be, we can set the chick equal to zero. So C equal to zero. Then try to solve it. If C equal to zero."*

"I got the two. Okay, so we can let C equals to zero, right? So, if C equals to zero, so we get the equation of five R plus three H equals to one hundred. And R plus H equals to one hundred. So, multiply by three, equation two.... "

" Ha.. R equals to zero, so you get three H plus one over three equals to one hundred. And H plus C equals to one hundred. This side is correct."

Student Goh used graph to help him to solve the problem. He drew axis and a straight line on the white board in order to figure out the problem.

Student Chai suggested student Goh to solve the problem with new idea:*" Why don't you do like this, let R and H equals to zero , then we can see what position at axis. Let R and H be zero."*

Student See suggested using computer programming to solve the problem.

He said: *"Like a.. my answer before this when we learn about programming. So what about we just use programming, program and code to trial and error for us."*

From the interview transcripts, it showed that students discussed among themselves in a group to generate ideas to solve the problem. They used brainstorming and find out a better way to solve the problem by accepting only good ideas and even correct other ideas. They wrote down their ideas on paper.

"How do I generate? Ah…. a. create ideas …,. I brainstorm…..brainstorming with my friends, then we gather all the ideas and review the ideas and theory we have discuss and then collect the good one and leave the bad one." (Student Goh from interview).

Student See suggested others to solve the problem by using programming.   He said: *"How about you try in another method? We do this trial and error in another method?"* He generated new ideas to solve the problem by using programming. (Student See from interview).

Ideas Evaluation

The third category of the data in table III showed that after the students had solved the problem, they would examine the solution obtained and also checked the result and the argument. The students would also check whether their solutions satified all the

conditions in the problem. They also generalized the solutions for the problem so that they could use it for the similar problem as they would encounter in the future.

Table 3

Ideas Evaluation

	N	Mean	Std. Deviation	Std. Error Mean
C1	74	3.57	.923	.107
C2	74	3.82	.912	.106
C3	74	3.41	.792	.092
C4	74	3.82	.881	.102
C5	74	3.97	.860	.100
C6	74	3.80	.876	.102
C7	74	3.89	.786	.091
C8	74	3.80	.965	.112
C9	74	3.73	.880	.102
C10	74	3.74	.861	.100
C11	74	3.91	.847	.098

Note

Item C1- I use second round of brainstorming by focusing on the practical ideas to be implemented.

Item C2 - I evaluate ideas based on criteria.

Item C3 - I rank a list of ideas based on their pros and

cons. Item C4 - I examine the solution obtained.

Item C5 - I check the result.

Item C6 - I check the argument

Item C7 - I check whether the solution satisfy all of the given conditions in the problem.

Item C8 - I check whether the answers make sense.

Item C9 - I check whether it answers all parts of the question.

Item C10-I recheck any computations made while finding the answer for errors.

Item C11-I generalize the solution for this problem so that it can be used for the similar problem in the future.

From the table, we found out that the three items with the highest means were items C5, C7 and C11.

In this stage, the observation transcipts showed that the students justified their answers and checked whether their solutions made sense.

Student Yap said:*" Seventy eight divided by three .. twenty six.. so the second answer is correct, how about the third one?"*

Student Yap said: *"Wait, we still need to measure that the sum of the .. sum of the fowls are …"* *"Seventy eight divided by three .. twenty six.. so the second answer is correct, how about the third one?"*

Student See said: *"If integer, it fulfils that two equations."*

From the interview transcripts, the results showed that the students evaluated their answer by substituting it into the equations to make sure the answer is valid.

"I basically check my result based on the , based on the problem and sometime I will check the answer whether it is valid or not. If the question asks for real number, then my answer is not real number, then my result is wrong. I can know my result is wrong." (Student See,from interview).

"We actually sub. in the..er…..a…...the answer we got.to redo it so that the right hand side is equal to the left hand side which means. ..a…. equation and the answer is valid itself". (Student Lee, from interview).

The students worked backward in order to check whether the answer makes sense, whether the answer meets the limitation and restriction. They also checked one by one for any error in the equation.

"I substitute it all the answer inside the equations. So, if the, if the answer in the left hand side of the equation and the answer in the right hand side of the equation is the same one, then it is correct. And then we will check the sign, positive, negative and if got right, wrong or not." (Student See from interview).

"Counting from the back, backward method like .. ,working backward to get the answer." (Student Lee from interview).

Ideas Judgment

The next category of data in table IV showed that students would make their decisions and selected the best solution for their problem based on their judgment. They also

justified the reasons to select the solution as the best method to solve the problem. They eliminated all the impractical ideas or modified them to become more practical.

Table 4

Ideas Judgment

	N	Mean	Std. Deviation	Std. Error Mean
D1	74	4.04	.883	.103
D2	74	3.99	.852	.099
D3	74	3.77	.884	.103
D4	74	3.91	.878	.102
D5	74	3.97	.776	.090
D6	74	3.93	.800	.093

Note

Item D1 - I decide to select the suitable method to solve the problem based on judgment

Item D2 - I justify the reason to select it as the best method.

Item D3 - I select best ideas to be implemented

Item D4 - I look at the criteria to make a final choice

Item D5 - I eliminate impractical ideas or modify it to become practical.

Item D6 - I defer judgment and benefits of using it.

From the table, we found out that the three items with the highest means were items D1, D2 and D5.

The following observation transcripts revealed that student made decision to select the best method to solve the problem. They drew tables and voted for their selection and also gave reason for their selections.

Student Lee believed that drawing graph can help him to solve the problem, he said: *"Because, er.. I think when we draw a graph, we see clearly, and we can get a clearer picture of it."*

Student Yap first selected trial and error as the best method to solve the problem: *"I think trial and error is then a good choice to solve this problem."*

Finally, Student Yap also agreed to select computer programming as the best method, he said: *"I agree with their opinions, because is the fastest way, and you can find out all possible answer for that question."*

The interview transcripts showed that students first devised a table and then listed out all the possible method to solve the problem in order to find out the best solution to solve the problem.

"Okay… just like mm….may be, we can devise a table, then list out all the possible method to solve the problem, then write down the pros and cons of using those methods, then vote for all the method and the highest mark .." (Student Goh from interview).

Then, they listed out all the cons and pros of using these methods and compared the different methods based on efficiency, accuracy, flexibility, simplicity, originality, convenient and time saving.

"Okay, first, we will do the question, different solution first, method first and then we will compare with each other. We discuss about it. So, we think that which one is the easiest one. Which one is the fastest one and the most efficient one, then we will select the one which are, are…., the best one, the best solution. The fastest solution and the efficient solution." (Student See from interview).

Then, they identified the method to solve the problem and selected the best method by voting.

"Okay….I think we will vote it. Voting, by voting…are…., So……ar. We will leave out the method first and we will vote. We get the most number of voting that is the decision we make." (Student See from interview).

Solution Implementation

The last category of data as showed in Table V indicated that after the students had solved the problem, they would examine the solution obtained and also checked the result and the argument. The students would also check whether their calculations were correct in each steps as they carrying out their plan.

Table 5

Solution Implementation

	N	Mean	Std. Deviation	Std. Error Mean
E1	74	3.58	.876	.102
E2	74	3.93	.782	.091

E3	74	4.04	.801	.093
E4	74	3.97	.776	.090
E5	74	4.01	.785	.091
E6	74	3.61	.963	.112

Note

Item E1 - I prove that the answers are correct.

Item E2 - I carry out the plan that has been chosen.

Item E3 - I explain clearly for carrying out the steps.I justify the reason to select it as the best method.

Item E4 - I check each steps carefully.

Item E5 - I check to see whether each step is correct.

Item E6 - I justify my answers.

From the table, we found out that the three items with the highest means were items E3, E4 and E5

The last observation transcripts showed that student implemented and came out with a solution. They also checked each step carefully in the process of problem solving.

Student Goh said: *"I change to my X ,three X plus three Y plus three Z equals to one hundred, the second equation is X plus Y plus Z equals to one hundred." "What, if you put y equals to Z is equals to zero, then x is equals to hundred. Let Y equals to zero, X is equals to hundred, x equals to zero, y equals to…" "So the range for the C must be within zero to one hundred. Must be multiplier of three."*

Student Yap said: *"Then x plus y should be.., because we have chicken already.. er, chicks already eighty one.. so nineteen .. nineteen… seventy six minus four y plus two y …."*

From the interview transcripts, it showed that students implemented the solution by listing out all the solution so that they can transform their ideas into practical solution. They solved the problem by drawing a graph, calculating on paper or running a programme. They can even use their imagination to assume that the problem as the real world problem.

"Okay, we will come up with paper first and then list out all the, list out all the solution

and then if the question needed, ar…,.. to draw a graph., we draw a graph. And then calculating, we work it on the paper, ar…., then we get the answer." (Student See from interview).

"Transfer,….m….. for example, we select like the programming , then we .. you know, .with the equation we get, actually involve both the simultaneous and the trial and error if we use the programming method, then we try to design our code." (Student Yap from interview).

"I transform the idea like a…..like I don't do, I don't like solve the problem basically by using the theory that I have learnt. Sometime, I will just like …...ah.…... like imagine that problem into the real, the real world problem and then I solve it by, solve it by my idea." (Student See from interview).

Triangulation of data

The collected data form questionnaire, interview and observation were triangulated as below.

Table 6

Triangulation of Data

Stage 1: Problem Definition

From Questionnaire	From Interview	From Observation	Triangulation
1. Identify all the relevant information. 2. Find out whether there is enough information to solve the problem. 3. Find out all the unknowns and variables in this problem. 4. Find out all the data and condition (constraint of the problem).	1. Identify all the unknowns to develop the solution. 2. Read the problem and understand it	1. List out all the restriction and limitation to make the problem clearer. 2. Suggest ways to define the problem.	In the first stage, the students would define the problem by finding out all the information in order to help them to solve it.

Stage 2: Ideas Generation

From Questionnaire	From Interview	From Observation	Triangulation
1. Find the connection between the unknown and data. 2. Create an organized list of ideas. 3. Check whether have used up all the condition.	1. Discuss among themselves in order to generate ideas to solve the problem. 2. Use brainstorming to come out with alternative ideas.	1. Generate many ideas to solve the problem. 2. Generate alternative ways to solve the problem such as using trial and error, using graph and computer programming.	In the second stage, the students would discuss and generate many ideas to solve the problem.

Stage 3: Ideas Evaluation

From Questionnaire	From Interview	From Observation	Triangulation
1. Check the result. 2. Check whether the solution satisfy all of the given conditions in the problem. 3. Generalize the solution for this problem so that it can be used for the similar problem in the future.	1. Substitute the answers into the equations to check whether it is valid. 2. Work backwards to check the solutions.	1. Justify their answers 2. Check whether their solutions make sense.	In the third stage, the students evaluate their solution by working backwards, substitute their answers into the equations and also justify their solutions.

Stage 4: Ideas Judgment

From Questionnaire	From Interview	From Observation	Triangulation
1. Decide to select the suitable method to solve the problem based on judgment 2. Justify the reason to select it as the best method.	1. Use a table to list out all their solutions with pros and cons. 2. Select their best solutions by voting.	1. Make their decisions in order to select the best solution for their problem. 2. Vote for their selection of solutions and	In the fourth stage, the students would make their decisions to vote and select the best the solution to their problem.

3. Eliminate impractical ideas or modify it to become practical.		also give their reasons to select them.	

Stage 5: Solution Implementation

From Questionnaire	From Interview	From Observation	Triangulation
1. Justify the reason to select it as the best method. 2. Check each steps carefully. 3. Check to see whether each step is correct.	1. List out all the solutions and transform them into practical solutions. 2. Use their imagination to assume that they solve the real world problem.	1. Implement and come out with a solution. 2. Check their steps carefully to implement the solution.	In the final stage, the students implement their solutions by checking their steps carefully, transforming their solutions into practical and realistic solutions.

CONCLUSION, DISCUSSION AND SUGGESTIONS

The result showed that this mathematical problem is ill-structured as we could use different methods or mathematical rules and concepts to solve the problem. We could even use computer programming to solve the problem as long as we justified our answers at the end of problem solving.

Yee (2002) considered open-ended problems as ill-structured problems and they lacked of sufficient data and standard procedures to find a correct answer for the problems. However, real world problems were actually made up of open-ended problems. This required students to foster their higher order thinking skills to create solutions for their problems (Dyer & Moynihan, 2000). The students had to solve the problems by using their mathematical knowledge and also creative thinking skills. According to Klavir and Hershkovitz (2008), open-ended mathematical problems could even help students to deepen their mathematical understandings and developed their mathematical thinking by learning how to use different strategies to solve open-ended mathematical problems. The students could solve the same type of problems according to their abilities and thus it would release their creative thinking skills.

According to Byun and Lee (2014) there were many definitions for ill-structured problem. Kim and others (2011) defined it as the problem with authenticity, openness and complexity. Authenticity indicated that the problem have to be related to daily life context, openness with many solutions, solution paths or even no solution at all and also complexity of using rules, principles and concepts to solve the problems. Shekoyan and

Etkina (2007) stated that there were few characteristics for ill-structured problem such as there were uncertainty of using any concepts, principles and rules to solve the problem, many possible paths to solve the problem and also many criteria to evaluate its solutions.

This research enabled us to apply CPS skills to solve open-ended mathematical problems as to foster creativity among the students. There were also many benefits of using CPS such as encouraged dynamic balance between critical and creative thinking; stimulated effective teamwork and cooperation; focused our attention in a correct direction; framed our problems by building motivation and commitment (Isaksen, Dorval & Treffinger, 2011). It enabled us to stretch our imagination and stimulated many unusual creative ideas to solve a problem and also helped us to turn our creative ideas into workable and usable solutions (Isaksen, Dorval & Treffinger, 2011). CPS could help us to understand our goals and avoided us from being distracted by many opportunities and challenges in a new situation and thus it could provide a flexible framework to organize tools and strategies to solve a problem (Isaksen, Dorval & Treffinger, 2011).

Constructivism was used as the theoretical framework in this research as students could actively construct their own mathematical knowledge and made sense of mathematical concepts and thus developed their problem solving skills during the process of social interaction with their peers. In the process of creative problem solving, they also had to depend on the helps of other in order to come out with many creative ideas with the use of group discussion and brainstorming. They could discuss and interpreted their previous experience in solving the problems based on their existing knowledge. Thus, constructivism used in the process of creative problem solving could create a learning environment to develop mathematical creativity and problem solving skills. In this research, the students were able to apply all the stages of creative problem solving, namely: problem definition, ideas generation, ideas evaluation, ideas judgment and solution implementation as they came out with their alternative ideas to solve open-ended mathematical problem. This was in line with the all stages of creative problem solving from Lumsdaine (2007).

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Researchers And Teachers' Difficulties And Solution Proposals In Research Conducted At Goverment Schools

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This paper aims to define difficulties and solution proposals of teachers and researchers for the researches conducted at government schools. Phenomenology design was used. Data were collected with interview form consist of three questions. Research group was created with purposive sampling. Research group was participated in eight researchers and eight teachers. Data were analyzed with content analysis, theme was created and frequencies are calculated. According to the results, participants reported the following research difficulties: long duration of research approval process, absence of feedback to teachers, involuntary participation to research, and the burden of research. The participants suggested to shorten the duration of approval process, giving feedback to teachers, reducing the burden of research with conducting high quality research rather than research like undergraduate theses, and designing activities that teachers and researchers come together and develop mutual positive attitudes.

Keywords: The research process, research problems, perceptions of teachers, perception of researchers

Devlet Okullarinda Yürütülen Araştirmalarda Araştirmacilar Ve Öğretmenlerin Karşilaştiklari Sorunlar Ve Çözüm Önerileri

Bu araştırmanın amacı, Milli Eğitim Bakanlığı (MEB)'na bağlı okullarda yürütülen araştırmalarda, araştırmacı ve öğretmenlerin karşılaştıkları sorunları ve çözüm önerilerini belirlemektir. Bu amaç doğrultusunda olgubilim deseni kullanılmış ve üç maddelik bir görüşme formu ile veriler toplanmıştır. Araştırmaya sekiz araştırmacı ve sekiz öğretmen olmak üzere toplam on altı birey katılmıştır. Veriler içerik analizi ile çözümlenmiş, temalar oluşturulmuş ve frekans analizi yapılmıştır. Analiz sonuçlarına göre; izin sürecinin uzun olması, geribildirim verilmemesi, veri toplama araçlarına gönülsüz katılım, öğretmenlerin araştırma yükünün fazla olması öncelikli sorunlar olarak belirtilirken; izin sürecinde bürokrasinin azaltılması, araştırma sonuçları hakkında katılımcılara geribildirim verilmesi, bitirme tezleri gibi lisans düzeyindeki araştırmalar yerine nitelikli araştırmaların okullarda yürütülmesi ve böylece öğretmenler üzerindeki araştırma yükünün azaltılması, öğretmen ve araştırmacıların bir araya gelebileceği etkinliklerin düzenlenmesi ve karşılıklı olumlu tutumların geliştirilmesi ise çözüm önerileri olarak öne çıkmaktadır.

Anahtar Kelimeler: Araştırma süreci, araştırmada karşılaşılan sorunlar, öğretmen görüşleri, araştırmacı görüşleri

GİRİŞ

Araştırmadan araştırmaya değişmekle birlikte, araştırmacılar araştırma sürecinin farklı aşamalarında farklı sorunlarla karşılaşabilmektedir. Bilimsel araştırma basamakları göz önüne alındığında veri toplama süreci, denencelerin kurulmasından hemen sonra yer almakta ve araştırma probleminin çözülmesinde nesnel ve sistematik bir yaklaşım sağlamaktadır. Dolayısıyla verilerin toplanması, araştırma sürecinin en önemli aşamalarından biridir. Nitekim Turgut (1983) özellikle doğa ve toplum bilimlerinin teori ve gözlem arasındaki bağıntıların derinleştirilmesiyle gelişeceğini; bunun ise ölçme işlemi ile kesin verilere dayanmasıyla mümkün olacağını ifade etmiştir.

Genel olarak eğitim bilimlerinde yapılan araştırmalarda veliler, öğrenciler, öğretmenler ve yöneticiler başta olmak üzere ilgili paydaşların araştırma sürecinde yer almasını gerektiren araştırma konuları ele alınmaktadır ve okulların eğitim bilimleri için çok önemli bir bilgi kaynağı olduğu açıktır. Bu noktada, araştırmacılar çalışmalarını Milli Eğitim Bakanlığı (MEB)'na (MEB) bağlı okullarda yürütmek durumunda kalmaktadır. Araştırmacıların, bu okullarda araştırmalarını yürütebilmeleri için Milli Eğitim Bakanlığı'na Bağlı Okul ve Kurumlarda Yapılacak Araştırma ve Araştırma Desteğine Yönelik İzin ve Uygulama Yönergesi (Milli Eğitim Bakanlığı [MEB], 2007) doğrultusunda uygulama izinlerini alması gerekmektedir. Uygulama izinleri alınmasına rağmen, okullarda öğretmen ve okul müdürlerinin yaklaşımları veri toplama sürecini

etkileyebilmektedir. Özellikle hem öğretmenleri hem de öğrencileri konu edinen araştırmalarda öğretmenler araştırma sürecinde oldukça önemli bir role sahiptir.

Shkedi (1998), araştırma sürecindeki önemli rolüne karşılık öğretmenlerin akademik makaleleri okuma konusunda istekli olmadıklarını belirtmiştir. Bunun nedeni olarak ise akademik dilin anlaşılabilirliğinin öğretmenlere zor gelmesini, akademik makalelerin teoride kalmasını ve makalede yer alan sonuçların uygulanabilir olmamasını göstermişlerdir. Bununla birlikte Williams ve Coles (2007) ise, yaptıkları çalışmada 20-30 yaş aralığındaki öğretmenler ile daha önce bir araştırmada yer almış ya da halen bir araştırmada yer alan öğretmenlerin araştırmalara daha olumlu baktıklarını belirtmiştir. Öğretmenlerin araştırmalara ilişkin yaklaşımları özellikle veri toplama aşamasında araştırmacıları zorlayabilmektedir. Akbulut, Şahin ve Çepni (2013) tarafından yapılan araştırmada lisansüstü öğrencilerinin tez yazım sürecinde karşılaştıkları problemler derinlemesine incelenmiş ve araştırmaya katılan altı katılımcından beşi tezin uygulama aşamasında izin sorunu ve öğretmen problemi yaşadığını belirtmiştir. Akbulut ve diğerleri (2013, s.57) tarafından yapılan nitel çalışmada araştırmacılara ait bazı ifadeler şu şekildedir;

"Okulda onların dersine engel olacak bir durum olduğu zaman izin almak zor.....İzin alsanız bile gittiğiniz okulda problem çıkartıyorlar."

"...Öğretmen problemi yaşadık çünkü çalışmamızı kabul edecek öğretmen bulmada biraz zorlandık..."

"Tezimi, öğretmen adayları ile yürüttüğüm için lisede çalışma yürütmeye göre daha az zahmet çektim diyebilirim.

Eğitim araştırmacılarının araştırma sürecinde yaşadıkları sorunlar özellikle deneysel araştırmalarda uygulamaların sağlıklı bir şekilde yapılamamasına, sürecin uzamasına veya kullanılan yöntemin mecburen değiştirilmesine neden olabilmektedir. Uygulama sürecinde yaşanan aksaklıklar sonuç olarak toplanan verilerin geçerliğini olumsuz yönde etkileyebilmektedir. Bununla birlikte araştırmacıların yaşamış oldukları sıkıntılar dikkate alınırken araştırma sürecine ilişkin öğretmen görüşleri ihmal edilebilmektedir. Oysaki öğretmenlerin uygulayıcı veya katılımcı olarak yer aldıkları araştırmalarda araştırmanın sağlıklı bir şekilde yürütülmesi için araştırmacı ve öğretmen arasındaki işbirliği oldukça önemlidir. Bu önemine karşın literatürde araştırma sürecinde yaşanan sorunlara ilişkin olarak öğretmen ve araştırmacıların görüşlerinin derinlemesine incelendiği bir araştırmanın bulunmaması bu araştırmanın problemini oluşturmaktadır.

Türkiye'de eğitim bilimleri alanında yayınlanan yaklaşık 18 süreli yayın, üniversitelerce yayınlanan yaklaşık 40 dergi ve çevrimiçi olarak yayınlanan yaklaşık 35 dergi bulunmaktadır (WEB_1, 2012). Bu dergiler farklı alanlarda hazırlanan araştırmaları

yayınlamakla birlikte özel olarak sadece ilköğretim alanında yapılan araştırmaları içeren dergilerde bulunmaktadır. Eğitim bilimleri alanında yayın yapan dergiler, ülkemizde bu alanda sarf edilen enerji ve kaynaklar düşünüldüğünde araştırma sürecinde yaşanan aksaklıkların belirlenmesi ve giderilmesi konusundaki gerekliliği gözler önüne sermektedir.

Bu araştırmanın amacı, MEB'e bağlı okullarda yürütülen araştırmalarda, araştırmacı ve öğretmenlerin karşılaştıkları sorunları ve çözüm önerilerini belirlemektir. Bu genel amaç doğrultusunda aşağıdaki sorulara cevap aranmıştır:

1. Araştırmacıların ve öğretmenlerin, MEB'e bağlı okullarda yürütülen araştırmaların bilimsel bilgi birikimine katkı sağlaması konusundaki düşünceleri nelerdir?

2. Araştırmacı ve öğretmenlerin, MEB'e bağlı okullarda yürütülen araştırmalar sırasında *varsa* yaşadığı sorunlar nelerdir?

3. Araştırmacı ve öğretmenlerin, MEB'e bağlı okullarda yürütülen araştırmalar sırasında yaşadıkları sorunlara ilişkin çözüm önerileri nelerdir?

YÖNTEM

Bu araştırma nitel araştırma türünde bir araştırmadır. Araştırma deseni olarak olgubilim deseni kullanılmıştır.

Çalışma Grubu

Araştırma grubunun oluşturulmasında olasılığa dayalı olmayan örnekleme yönteminden amaçlı örnekleme tekniği kullanılmıştır. Amaçlı örneklemede araştırmacı ve öğretmen olacak şekilde iki grup oluşturulmuştur. Araştırmacıların araştırma grubuna seçilmesinde ölçüt olarak MEB'e bağlı okullarda en az iki araştırma yapmış olması şartı aranmıştır. Öğretmenlerin araştırma grubuna seçilmesinde ise en az bir bilimsel araştırmada katılımcı/denek vb. rollerde bulunmuş olması ölçüt olarak belirlenmiştir. Ulaşılabilirlik açısından katılımcılar, Eskişehir ve Sivas illerinde bulunan ve bu şartları sağlayan bireylerden seçilmiştir. Bu şekilde Sivas ilinden 4 araştırmacı, 4 öğretmen ile Eskişehir ilinden 4 araştırmacı, 4 öğretmen araştırma grubunu oluşturmuştur.

Veri Toplama Araçları

Araştırmada, araştırmacılar tarafından hazırlanan yarı yapılandırılmış bir görüş formu kullanılmıştır. Formun hazırlanmasında iki ölçme değerlendirme uzmanından görüş alınmıştır. Verilerin toplanması için kullanılan görüş formunda yönerge ile birlikte aşağıdaki sorular yer almıştır.

1. Sizce Milli Eğitim Bakanlığı'na bağlı okullarda yürütülen araştırmalar bilimsel bilgi birikimine katkı getirmekte midir? Neden?

2. Milli Eğitim Bakanlığı'na bağlı okullarda yürütülen çalışmalar sırasında –varsa– karşılaştığınız sorunlar nelerdir?

3. Yaşadığınız sorunlara ilişkin çözüm önerileriniz nelerdir?

İşlem

Araştırma verilerinin toplanması için görüş formu çevrimiçi ortama (e-anket.net) aktarılmış ve bağlantı adresi araştırmaya gönüllü olarak katılmayı kabul eden sekiz araştırmacı ve sekiz öğretmenin e-posta adreslerine gönderilmiştir. Bir hafta içerisinde katılımcılardan dönüş sağlanmıştır. Araştırmacı katılımcıların tamamı formu eksiksiz doldururken, öğretmen katılımcılardan altısı geri dönüş yapmış ve geri dönüş yapmayan iki öğretmenin yerine iki yeni öğretmene daha formlar gönderilerek geri dönüş sağlanmıştır. Bu şekilde toplanan görüş formları ile nitel veri seti oluşturulmuştur.

Verilerin Analizi

Verilerin incelenmesi aşamasına geçilmeden önce ardışık kelime grupları ve cümleler kayıt birimi olarak seçilmiştir. Daha sonra katılımcıların görüşleri iki kodlayıcı tarafından bağımsız olarak içerik analizi tekniği kullanılarak çözümlenmiştir. İçerik analizinin yapılmasında Nvivo 8 paket programı kullanılmıştır. Kodlama güvenirliği için Cohen's Kappa katsayısı incelenmiş ve κ=.91 bulunmuştur. Kodlama güvenirliğinin yüksek olması sonucunda ilgili temalar için frekanslar belirlenmiş ve çıktılar raporlanmıştır.

BULGULAR

Bilimsel Bilgi Birikimine Katkı Getirmesine İlişkin Görüşler

Araştırmacı ve öğretmenlerin, MEB'e bağlı okullarda yürütülen çalışmaların bilimsel bilgi birikimine katkı getirip getirmediğine ilişkin görüşleri temalar halinde Tablo 1'de verilmiştir.

Tablo 1

MEB'e Bağlı Okullarda Yürütülen Araştırmaların Bilimsel Katkısı Hakkındaki Görüşler

Katkı Getiriyor	Araştırmacı	Öğretmen
Araştırmanın Geçerliği	3	1

Saha Çalışmalarının Önemi	3	1
Sorunların Tespit Edilmesi	5	2

Katkı Getirmiyor	Araştırmacı	Öğretmen
Verilerin Geçerliğinin Düşük Olması	1	5
Gönülsüz Katılım	*1*	*3*
Ölçme İşleminin Geçerliği	*1*	*5*
Sonuçların Dikkate Alınmaması	3	3
Popüler Konuların Seçilmesi	0	1

$N_{Araştırmacı} = 8$; $N_{Öğretmen} = 8$

Temalar incelendiğinde katılımcılar, araştırmaların, araştırma geçerliğinin sağlandığı durumlarda bilimsel bilgi birikimine katkı getirildiğini; okulların eğitim araştırmaları için birer saha görevi gördüğünü ve bu araştırmaların eğitim sistemindeki sorunların tespitinde önemli rol oynadığını ifade etmişlerdir. Katılımcıların ilgili temalara dağımı incelendiğinde; araştırmacıların büyük bir kısmının öğretmenlerin ise çok az bir kısmının MEB'e bağlı okullarda yürütülen araştırmaların bilimsel bilgi birikimine katkı getirdiğini düşündükleri görülmektedir.

Araştırmacı ve öğretmenlere ait örnek görüşler şu şekildedir:

A3 (Araştırmacı-3): *"Araştırmanın bilimsel ilkelere uygunluğu ile doğru orantılıdır. Bilimsel, geçerliği ve güvenirliği kanıtlanmış bir araştırma elbette alana katkı sağlayacaktır."* (Araştırmanın geçerliği)

A1: *"MEB'e bağlı okullarda ne kadarının uygulamaya koyulduğu konusunda sıkıntılar mevcut."* (Sonuçların dikkate alınmaması)

Ö1 (Öğretmen – 1): *"Elbette, Milli Eğitim Bakanlığı bu işin mutfağıdır."* (Saha çalışmalarının önemi)

Ö8: *"Araştırmanın sonuçlarından haberdar edilmiyoruz, yani bilimsel bir katkı getiriyorsa da bunu formu yanıtlayanlar bilmediği için bir sonraki çalışmaya da isteksiz biçimde katılıyor/katılmıyorlar."* (Sonuçların dikkate alınmaması)

MEB'e bağlı okullarda yürütülen araştırmaların bilimsel bilgi birikimine katkı getirmediğini düşünen katılımcıların görüşleri ise katılımın gönülsüz olduğunu, ölçme işleminin geçerliğinin olmadığını ve dolayısıyla araştırmalarda toplanan verilerin geçerliğinin düşük olduğunu; araştırma sonuçlarının dikkate alınmadığını ve popüler konuların araştırma konusu yapıldığı yönündedir. Katkı getirilmediğini düşünen araştırmacı ve öğretmenlere ait örnek görüşler şu şekildedir:

A1: MEB'e bağlı okullarda ne kadarının uygulamaya koyulduğu konusunda sıkıntılar mevcut. (Sonuçların dikkate alınmaması)

A4: Bu konuda çok fazla ölçme aracıyla karşılaştıklarından artık ciddiyetsiz bulmaları (Gönülsüz katılım)

Ö8: Araştırmanın sonuçlarından haberdar edilmiyoruz, yani bilimsel bir katkı getiriyorsa da bunu formu yanıtlayanlar bilmediği için bir sonraki çalışmaya da isteksiz biçimde katılıyor/katılmıyorlar. (Sonuçların dikkate alınmaması)

Ö5: Öğretmenlerin, tamamına yakınının, anket formlarını ciddiyet ve dürüstlükle doldurduğunu düşünmüyorum. (Verilerin geçerliğinin düşük olması)

Okullarda Karşılaşılan Sorunlara İlişkin Görüşler

Araştırmacı ve öğretmenlerin MEB'e bağlı okullarda yürütülen araştırmalarda varsa yaşadıkları sorunlara ilişkin görüşleri temalar halinde Tablo 2'de sunulmuştur.

Tablo 2

MEB'e Bağlı Okullarda Yürütülen Araştırmalarda Karşılaşılan Sorunlar Hakkındaki Görüşler

Karşılaşılan Sorunlar	Araştırmacı	Öğretmen
Olumsuz Tutumlar/Önyargılar	6	3
İzin Süreci	7	3
İzin Sürecinin Uzun Olması	*7*	*0*
Araştırmaların İzinsiz Yapılması	*0*	*3*
Geçersiz Veri Toplama Süreci	4	4
Gelişi-güzel Yanıtlama	*3*	*3*
Katılım Olmaması	*4*	*0*
Nitelikleri Düşük Ölçme Araçları	*2*	*2*
Yönerge Eksikliği	*1*	*1*
Plansız Çalışma	*1*	*1*
Araştırma Yükü	3	4
Araştırma Sayısının Fazla Olması	*1*	*1*
Araştırmaların Zaman Alıcı Olması	*2*	*4*
Araştırmaya Müdahaleci Yaklaşımlar	4	1

$N_{Araştırmacı} = 8$; $N_{Öğretmen} = 8$

Araştırmacılar yaşadıkları sorunların başında izin süreci (f = 7) ve olumsuz tutum/önyargıların (f = 6) geldiğini belirtmişlerdir. İzin süreci ve olumsuz tutum/önyargılar temalarında az sayıdaki öğretmende görüş bildirmektedir. Ancak içerikleri incelendiğinde olumsuz tutum/önyargılar teması altında görüş bildiren araştırmacıların öğretmenlik ve bakanlık çalışanlarından araştırmacılara yönelik olumsuz tutum ve önyargıların olduğunu belirttikleri görüşmüştür. Aynı tema altında görüş bildiren öğretmenler ise olumsuz tutum/önyargıların öğretmenlerden araştırmacılara yönelik olduğunu doğrulamakla birlikte bunların yapılan araştırmalarla ilişkili olduğunu ifade etmişlerdir. Olumsuz tutum/önyargılarda teması altındaki örnek araştırmacı ve öğretmen görüşleri şu şekildedir;

Ö1: *Bu veri toplama araçlarından bazıları sınav niteliğinde oluyor ki bu da öğretmenler içinde hoş karşılanmayan bir durum* (Olumsuz tutum/Önyargılar)

Ö6: *Öğretmenlerin yöneticilerin bu işleri formalite olarak görmeleri, bu işlerin gereksizliğine inanmaları* (Olumsuz tutum/Önyargılar)

A1: *Bunun yanında en önemli sorun, bence öğretmenlerin araştırmacılara fazlaca önyargılı olmaları* (Olumsuz tutum/Önyargılar)

A4: *Milli Eğitim Bakanlığına bağlı okullarda yürütülen araştırmalar sırasında en fazla karşılaşılan sorunların başında bakanlık ya da okul yetkililerinin araştırmalara karşı olumsuz tutumlarıdır* (Olumsuz tutum/Önyargılar)

Bununla birlikte izin süreci teması altında yer alan görüşler incelendiğinde araştırmacı ve öğretmenlerin farklı düşündükleri görülmektedir. Araştırmacıların büyük bir kısmı izin sürecinin uzun olduğunu, öğretmenler ise izinsiz uygulama yapıldığını belirtmiştir. Bu temaya ilişkin örnek araştırmacı ve öğretmen görüşleri şu şekildedir;

A2: *En ufak bir iş için bile izin soruyorlar, tanıdık yoksa iş yaş. izin süreci ise tam bir işkence* (İzin Sürecinin Uzun Olması)

Ö7: *İzinsiz gelen çalışmalar oluyor* (Araştırmaların İzinsiz Yapılması)

Çizelge 2 incelendiğinde öğretmenlerin çoğunlukla araştırma yükü (f = 4) ve veri toplama sürecinin geçerliği (f = 4) teması altında görüş bildirdiği görülmektedir. Nitekim Büyüköztürk (2005) ankette yer alan madde sayısının artmasına bağlı olarak cevaplama süresinin arttığını, cevaplamaya ilişkin güdünün azaldığını, yorgunluğa bağlı olarak düşünmeden cevap verme olasılığının arttığını belirtmiştir. İlgili temalar altında örnek araştırmacı ve öğretmen görüşleri şu şekildedir;

Ö1: *Öncelikle üniversiteye çok yakın bir okul olduğumuz için çok fazla veri toplama aracı geliyor* (Araştırma Sayısının Fazla Olması)

Ö6: *Öğretmenlerin yöneticilerin bu işleri formalite olarak görmeleri ve anket doldurmaktan sıkıldıkları için okumadan yanıtlamaları* (Gelişi-güzel Yanıtlama)

Ö8: *Gelen formlarda maddeler arasında çoğu zaman tutarsızlıklarla karşılaşıyoruz, ya da maddelerin konu alanı çok dağınık oluyor, neyi nasıl ölçmeye çalıştığı konusu net anlaşılmıyor* (Nitelikleri Düşük Ölçme Araçları)

Karşılaşılan Sorunlara İlişkin Çözüm Önerilerine İlişkin Görüşler

Araştırmacı ve öğretmenlerin, MEB'e bağlı okullarda yürütülen araştırmalarda karşılaştıkları sorunlara ilişkin çözümlerine dair görüşleri temalar halinde Tablo 3'te verilmiştir.

Tablo 3

MEB'e Bağlı Okullarda Yürütülen Araştırmalarda Karşılaşılan Sorunlara Yönelik Çözüm Önerileri Hakkındaki Görüşler

Çözüm Önerileri	Araştırmacı	Öğretmen
İzin Süresinin Kısaltılması	8	3
Bürokrasinin Azaltılması	*6*	*1*
İzin Alınmasının Kaldırılması	*1*	*0*
MEB'nın Nitelikli Personel Bulundurması	*2*	*2*
Karşılıklı Olumlu Tutumların Geliştirilmesi	3	2
Geri Bildirim Verilmesi	2	2
Araştırma Yükünün Azaltılması	2	2
Nitelikli Araştırmalara İzin Verilmesi	*2*	*0*
İzinsiz Araştırma Yapılmaması	*1*	*2*
Araştırmaların Teşvik Edilmesi	1	1

$N_{Araştırmacı} = 8$; $N_{Öğretmen} = 8$

Katılımcılar çoğunlukla izin süresinin kısaltılması yönünde görüş bildirirken ($f_{A+Ö} = 11$), karşılıklı olumlu tutum ve davranışların geliştirilmesi ($f_{A+Ö} = 5$), geri bildirim verilmesi ($f_{A+Ö} = 4$) ve araştırma yükünün azaltılması ($f_{A+Ö} = 4$) da çözüm önerileri arasında yer almıştır. Çizelge 3 incelendiğinde araştırmacıların çözüm önerisi olarak bürokrasinin azaltılması ($f = 6$) yoluyla izin süresinin kısaltılması ve karşılıklı olumlu tutum geliştirilmesini ($f = 3$) önemsediği görülmektedir. Ayrıca araştırmacılar araştırmalar sonucunda geri bildirim verilmesi gerektiği ($f = 2$) ve nitelikli araştırmalara izin verilerek ($f = 2$) okullardaki araştırma yükünün kaldırılması gerektiğini ifade etmişlerdir. Bu temalarda öğretmenler ile benzer ölçüde savunulan temaların geribildirim verilmesi ve araştırmaların teşvik edilmesi olduğu söylenebilir. İlgili temalardaki örnek araştırmacı görüşleri şu şekildedir;

A1: *Her iki kurum çalışanlarının birbirine karşı olan önyargılarını yıkabilmek için ortak projeler, buluşma günleri vs. yapılabilir* (Karşılıklı Olumlu Tutum Geliştirilmesi)

A4: *Bu konuda yapılan araştırma sonuçlarının yetkililerle paylaşılması araştırmaya yönelik duyarlılığı geliştirebilir* (Geribildirim Verilmesi)

Öğretmenlerin çözüm önerileri incelendiğinde ise en önemli çözüm önerileri olarak izin süresi temasının altında bürokrasinin azaltılması ($f = 1$) ve MEB'nın nitelikli personel bulundurulması ($f = 2$), geribildirim verilmesi ($f = 2$), araştırma yükünün azaltılması ($f =$

2) ve karşılıklı olumlu tutumun geliştirilmesi (f = 2) belirtilmiştir. Bu temalara ilişkin örnek öğretmen görüşleri şu şekildedir;

Ö8: Araştırma sonuçları mutlaka bizimle paylaşılmalı ya da en azından tamamlandığında sonuçlarına nasıl ulaşabileceğimiz konusunda bir bilgilendirme yapılmalı (Geribildirim Verilmesi)

Ö7: Araştırmalar daha uygun şekilde yürütülmeli özellikle bitirme tezleri gibi çalışmalarda gerçek araştırmalar yapılmalı çok araştırma yapalım derken geçersiz formalitelere dönüştürülmemeli (Araştırma Yükünün Azaltılması)

TARTIŞMA

Katılımcıların görüşleri incelendiğinde; araştırmacıların çoğunluğu, MEB'e bağlı okullarda yürütülen araştırmaların bilimsel bilgi birikimine katkı getirdiği görüşündeyken, öğretmenlerin çoğunluğu bu araştırmaların bilimsel bilgi birikimine katkı getirmediği görüşündedir. Araştırmacılar çoğunlukla izin süreci, araştırma sırasındaki olumsuz tutum ve davranışlar, araştırmaya katılımın sağlanamaması ve yürütülen araştırmaya müdahaleci yaklaşım sorunlarını yaşarken; öğretmenler çoğunlukla, araştırmaların zaman alıcı olması, araştırma yükünün fazla olması, veri toplama sürecinin geçersiz olması sorunlarını yaşamaktadır.

Araştırmacılar karşılaştıkları başlıca sorunun izin süresinin uzun olması ile bakanlık çalışanları, yöneticiler ve öğretmenlerin araştırmalara karşı olumsuz tutuma sahip olmaları olduğunu belirtmiştir. Ayrıca gerekli izinlerin alınmasına rağmen araştırmaya yönelik engelleyici yaklaşımların ve gelişi-güzel yanıtlamalar, araştırmaya katılım gösterilmemesinden dolayı oluşan geçersiz veri toplama sürecinin de karşılaşılan önemli sorunlardan biri olduğunu ifade etmişlerdir. Öğretmenler sorun olarak belirttikleri durumlar ise araştırmacılardan farklı olarak izinsiz araştırma yapılması, araştırmacıların olumsuz tutum ve davranışları, çok sayıda araştırma ve veri toplama aracının kullanılmasının yük getirmesi bunlara bağlı olarak da geçersiz veri toplama sürecidir.

Araştırmaların, alanına bilimsel olarak katkı getirebilmesi için araştırmalarda kullanılan ölçme araçlarından elde edilen bilgilerin geçerli olması gerektiği açıktır. Katılımcıların da belirttiği nedenler de dahil olmak üzere, toplanan verilerin geçerliği çeşitli nedenlerle tehlike altına girmektedir. Özellikle niteliksiz ölçme araçlarının çok sık uygulandığı okullarda çalışan öğretmenler, veri toplama sürecine gönülsüz olarak katılabilmektedir. İzin sürecinin uzun oluşu ve okullarda karşılaşılan olumsuz tutumlar da, araştırmacının motivasyonunu düşürebilmektedir. İzin süreleri kısaltılarak, karşılıklı olumlu tutum ve davranış gelişiminin sağlanması ve öğretmenler üzerindeki araştırma yükünün azaltılmasıyla araştırmaların verimliliği artabilir.

Araştırma sonuçlarına dayanılarak ilgili kurumlara ve araştırmacılara ilişkin geliştirilen öneriler şu şekildedir;

1. MEB'e bağlı okullarda yürütülecek olan çalışmalar için izin alma sürecindeki bürokratik işlemlerin azaltılması ile izin sürecinde yaşanan aksaklıkların giderilmesi.

2. Öğretmenlere araştırma eğitimleri verilerek, araştırmacı öğretmenlerin yetişmesinin yanı sıra, araştırmacılar ile öğretmenleri bir araya getirebilecek seminerler, panel v.b. bilimsel toplantılar düzenlenerek karşılıklı olumlu tutum geliştirilmesi.

3. Araştırma sürecinin iyi planlanması ve veri toplama sürecinde okulların programlarının da dikkate alınarak en uygun zamanın öğretmenler ile birlikte belirlenmesi.

4. Araştırmalarda kullanılacak veri toplama araçlarına ilişkin en az bir alan uzmanı ile birlikte bir ölçme değerlendirme uzmanından görüş alınması ve görüşler doğrultusunda ölçme araçlarının niteliğinin geliştirilmesi.

5. Araştırma sonuçlandıktan sonra katılımcılara ve mümkünse ilgili okullara geribildirim verilmesi ile öğretmenlerin araştırmalara ilişkin duyarlılıklarının ve güdülenmelerinin artırılması.

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SUMMARY

INTRODUCTION

Generally, in the researches carried out in the field of education, the research topics which involve the participation of mainly parents, students, teachers and administrator along with other stakeholders in the research process are taken as the basis of the research and it is clear that the schools are an important source of information for the field of education. At this point, the researchers have to carry out their studies at schools that are connected to the National Education Ministry (MEB). In for them to carry out their studies, the researchers have to have a permission granted them by order. Although the permission is taken, the approaches of the teachers and the administrator at the school may make the data gathering process more difficult. Especially teachers have an important role in gathering data both from themselves and from the students.

The purpose of this study is to designate the problems that the researcher and the teachers face during the research process and to propose solutions for these problems.

METHODOLOGY

For the purpose of this study qualitative method has been taken. The research group of the study consists of 4 researchers and 4 teachers from Sivas, Turkey and 4 researchers and 4 teachers from Eskisehir, Turkey. An interview form developed specifically for the purposes of this study by the researchers has been used in the study. In the preparation of the form, two experts in measurement and evaluation field have been consulted. For the reliability of the encoder, Cohen's Kappa coefficient has been used and it has been found out that $\kappa=.91$. Since the reliability of the encoder turned out to be high, for the related themes, frequencies has been designated and results have been made into a report.

FINDINGS AND DISCUSSION

The participants have stated that the researches contribute to the accumulation of scientific knowledge when the validity of the research has been established; that the school have functioned in a field duty for educational research purposes and that these researches play an important role in designating the problems in the education system. When the distribution the participants according to the themes, it is seen that majority of the researchers think that a small number of teachers can contribute to the accumulation of scientific knowledge regarding the researches carried out in the school connected to MEB. The views of the participants who think that there is no contribution at all related to the accumulation of scientific knowledge at schools connected to MEB include that the participation was not voluntary, that the measuring and evaluating process was not valid and therefore, the reliability of the data gathered in the researches is low; and that the results of the study have not been taken into consideration and only the popular topics have been made into the research topics.

The researchers stated that their main problems are caused when they tried to get the work permit and by negative attitudes/prejudices. A number of teachers comment on the themes of work-permit process and negative attitudes/prejudices. The teachers who commented on the same theme verified that the negative attitudes/prejudices are directed at the researchers and stated that these were connected with the research carried out.

While most of the researchers stated that the permission period should be reduced, other solutions included the development of mutual positive attitude and behaviors, giving feedback and giving less research burden on the researchers. When Figure 3 is analyzed, it is seen that the permission period should be shortened through shortening the bureaucracy and that the researchers care about developing a positive attitude. Moreover, at the end of the research, the researchers stated that feedback should be given at all times and the research burden in the schools should be lifted by giving permission for more qualified researches. It can be suggested that the teachers and the similar themes should be given feedback and the researches should be encouraged.

When the views of the participants are analyzed, while majority of the researchers think that the researches carried out at the schools connected to MEB contribute to accumulation of scientific knowledge, majority of the teachers think that they do not contribute at all. While the researchers experience problems mainly about work-permit, negative attitudes and behaviors in the research process, the lack of participants in the research and intrusive approaches during the application process, teachers experience problems about researches taking much time, the bur den being too heavy and that the data gathering is invalid.

The Adaptation Of Multidimensional State Boredom Scale Into Turkish

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The purpose of this study was to adapt Multidimensional State Boredom Scale developed by Fahlman, Mercer-Lynn, Flora and Eastwood (2013) into Turkish language and culture. the scale was applied to a total of 305 students attending Afyon Kocatepe University in Turkey. After Confirmatory Factor Analysis was conducted for testing construct validity, it was determined that the adapted scale consisted of 27 items and five factors (Disengagement, High-Arousal, Low-Arousal, Inattention, Time-Perception). The internal consistency coefficient was found as .91 for the whole scale. According to the results obtained through the study, Turkish version of Multidimensional State Boredom Scale is an instrument that can be used in the assessment of boredom proneness.

Keywords: Boredom proneness, Turkish, adaptation, validity, reliability

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Çok Boyutlu Can Sıkıntısı Eğilimi Ölçeğinin Türkçe'ye Uyarlanması

Bu çalışmanın amacı Fahlman, Mercer-Lynn, Flora ve Eastwood (2013) tarafından geliştirilen Çok boyutlu Can Sıkıntısı Eğilimi Ölçeği'ni Türk diline ve kültürüne uyarlamaktır. Ölçek maddelerinin çevirme-geri çevirme yöntemi ile çevirisi yapıldıktan sonra çevrimiçi olarak oluşturulan ölçek Afyon Kocatepe Üniversitesi'nde eğitim gören 305 öğrenciye uygulanmıştır. Doğrulayıcı Faktör Analizi sonuçlarına göre testin 27 madde ve 5 faktör (İlişki Kesme, Yüksek Uyarılma, Düşük Uyarılma, Dikkat Etmemek, Zaman Algısı) olarak kullanılmasına karar verilmiştir. Tüm ölçek için iç tutarlılık güvenirlik değeri .91 olarak bulunmuştur. Çalışma sonuçlarına göre, Çok Boyutlu Can Sıkıntısı Eğilimi Ölçeği'nin Türkçe versiyonunun psikometrik özellikleri bu ölçeğin can sıkıntısı eğilimini ölçmek için kullanılabileceğini göstermiştir.

Anahtar Kelimeler: Can sıkıntısı eğilimi, Türkçe, uyarlama, geçerlilik, güvenirlik

INTRODUCTION

Boredom has been one of the most common feelings experienced in everyday life across all cultures in the world. Although it is common and has been the subject of scientific interest of various fields of study, there is no specific definition accepted universally since the reason of this feeling cannot be known completely. Boredom is defined as 'the experience of being disengaged from the world and stuck in a seemingly endless and dissatisfying present' (Mercer-Lynn, Flora, Fahlman, & Eastwood, 2011, s. 1). On the other hand, Vodanovich defined boredom as a personality trait which is similar to impulsiveness, neuroticism and extraversion rather than a state derived from monotonous situational factors (Vodanovich, 2003). Boredom might be a temporary feeling which stems from dissatisfaction of a situation or might be a permanent feeling that is experienced in all situations as if it is a part of personal trait. Besides its being a temporary or permanent feeling, its serious effects on different fields is observed clearly. Boredom may cause significant problems for individuals in areas from education or health to socialization and so on. Additionally, it may lead to severe outcomes such as dropping out of school, gambling, drug or alcohol abuse, depression, anxiety, eating or psychological disorders, overeating and binge eating (Eastwood, Cavaliere, Fahlman, & Eastwood, 2007; Mann & Robinson, 2009; Mercer & Eastwood, 2010; LePera, 2011). Moreover, boredom is associated with lower psychological well-being such as dissatisfaction with life or job, lower levels of life meaning and even death (Alda et. al, 2015).

There have been many studies in the literature conducted on boredom itself and its relation with anger, anxiety, personality, psychological well-being, neuroticism, and other subjects (Watt & Vodanovich, 1999; MacDonald & Holland, 2012; Barnett &

Klitzing, 2006; Shaw, 1996; Weissinger, 1995). However, when it comes to measuring boredom, not many scales can be found. In order to measure boredom proneness of individuals, there were some sub-scales of inventories and main scales that were developed. There are two commonly used scales measuring boredom: Farmer and Sundberg's Boredom Proneness Scale (BPS) and the Boredom Susceptibility Scale (BSS), which is the subscale of Zuckerman's Sensation Seeking Scale. Farmer and Sundberg developed Boredom Proneness Scale in true-false format in order to address the need measuring general construct of boredom. Since BPS's development, various factor analysis studies have been conducted. Ahmed (1990) conducted an exploratory factor analysis and found two constructs: apathy and inattention. On the other hand, Vodanovich and Kass (1990) carried out EFA by using 7-point Likert type format and found five factors called as external stimulation, internal stimulation, affective responses, perception of time and constraint. Even though BPS and BSS was thought to measure the same construct, Mercer-Lynn and colleugues have found that higher BPS scores were related to higher levels of neuroticism, depression, experiential avoidance, and anxiety. In contrast, higher BSS scores were associated with higher levels of gambling, alcohol use, motor impulsivity, sensitivity to reward and lower level of neuroticism, experiential avoidance, and sensitivity to punishment (Mercer-Lynn, Flora, Fahlman, & Eastwood, 2011).

In further research, Vodanovich, Wallace and Kass omitted some items from BPS after some factor analyses studies and developed a short form of it with two subscales consisting of 6 items for internal stimulation and 6 items for external stimulation (Vodanovich, Wallace, & Kass, 2005). Turkish adaptation study of BPS-Short Form was conducted and results led to two factors as in the original scale. However, internal consistency coefficients of the two subscales were low (Dursun & Tezer, 2013). Additionally, Vodanovich and Watt (1999) explained that boredom was mostly related to a concept of time in which individuals did not have meaningtful activities to participate in their leisure times. Likewise, Iso-Ahola and Weissinger (1990) developed Leisure Boredom Scale (LBS) to evaluate the perception of boredom in leisure times. LBS has one dimension and consists of 16 items. LBS has been used in many studies so as to analyze the relationships between perceived boredom in leisure times and alcohol use, personality, internet addiction, school dropout, drug abuse, depression and suicidal issues (Wegner, Flisher, Muller, & Lombard, 2006; Wegner & Flisher, 2009; Patterson, Pegg, & Dobson-Patterson, 1999; Lin, Lin, & Wu, 2009; Belton & Priyadharshini 2007; Iso-Ahola & Crowley; 1991). Turkish adaptation study of Leisure Boredom Scale was conducted and items were found to be valid in Turkish version, as well (Kara, Gürbüz, & Öncü, 2014). There are also scales aiming at measuring boredom such as Job Boredom Scale (Lee, 1986), Sexual Boredom Scale (Watt & Ewing, 1996) and Free

Time Boredom Scale (Ragheb & Merydith, 2001). However, all of these scales lack efficacy since they focus on boredom in a particular context such as sexual relations, free time or job environment. Except for BSS and BPS, these scales on boredom in fact have received little attention in the literature.

With the aim of expanding the measurement of boredom, Fahlman and colleugues (2013) developed a new model called Multidimensional State Boredom Scale (MSBS): the scale aimed at measuring boredom felt both at the time being and in general. The scale consists of five factors which are disengagement, high arousal, low arousal, inattention and time perception. The results of the study showed that MSBS scores were well-correlated with measures of life satisfaction, neuroticism, depression, anger, anxiety, and purpose in life (Fahlman, Mercer-Lynn, Flora, & Eastwood, 2013).

Boredom is a common problem experienced in all societies around the world and it may lead to many serious psychological problems or disorders if necessary importance is not given to this feeling. In Turkey, boredom has been a problem experienced widely by individuals of all ages. However, the scales that are present in Turkish have not been used yet. Thus, an updated version of scales aiming at measuring boredom proneness of individuals is needed. Adapting MSBS into Turkish will help researchers study and measure boredom proneness of the individuals in Turkey. Studying this subject may enable researchers to reach the individuals who experience boredom in a problematic level and to prevent possible serious outcomes.

METHOD

Participants

Participants were selected through randomized cluster sampling. The cluster was the school. The sampling was all the students studying at Afyon Kocatepe University in Turkey. Students studying in the Faculty of Economics and Administrative Sciences were selected since they constitute the majority of the college. However, some students from other faculties participated voluntarily in our study, as well. A total of 305 students (128 males and 177 females) filled out the questionnaire online. Participants studied in the departments of Economics (18.7 %), Business Administration (28.2 %), International Trade and Finance (46.9 %), Engineering (4.6 %) and others (1.6 %). Of the 305 participants, 9.8 % were attending preparatory class, 50.2 % were freshman, 1.2 % were sophomore, 1% were junior, 36.1 % were senior students and %1.3 were undergraduate and suspension students. Of the 305 participants, 18 was from Black Sea Region, 104 was from Aegean Region, 34 was from Mediterranean Region, 62 was from

Marmara Region, 60 was from Central Anatolia Region, 7 was from Eastern Anatolia Region, 16 was from Southeastern Anatolia Region and 4 was from other countries (Russia, Azerbaijan, Turkmenistan).

Data Collection Tools

The Personal Information Form: This form was developed by the conductors of the study so as to gather information about the participants related to independent variables such as their gender, department in which they study, their grades and hometowns. With the hometowns, we would know how disperse the sample was.

Multidimensional State Boredom Scale (MSBS): The original scale was developed by Fahlman et.al. (2013) so as to examine the boredom proneness in a broad scope both in general and at the time of filling the scale. MSBS was figured in five-dimensional-structure (Disengagement, High Arousal, Low Arousal, Inattention and Time Perception) and it consisted of 29 items. The responses were rated from one to seven in 7-point Likert type ranging from (1) 'strongly disagree' to (7) 'strongly agree'. MSBS was applied to different undergraduate students for four different studies aiming at creating items, analyzing initial item pool, increasing the number of items and validating the final version of the scale. The original scale had .97 for CFI score and .067 for RMSEA score. The Cronbach Alpha reliability coefficient was .87 for disengagement, .85 for high-arousal, .86 for low-arousal, .80 for inattention, .88 for time perception and .94 for the scores of the full scale.

The Translation-Adaptation Procedure

The necessary permission of the scale developers was received before the Turkish adaptation procedure. During the adaptation process, translation and back translation methods were used. The scale was first translated into Turkish by three independent translators who work as English Language Instructors in different state and private universities: each completed translation separately. Later on, the Turkish translations were sent to another three instructors of English Language working at School of Foreign Languages in both state and private universities for back-translation. Three back-translated versions of the scale were compared with the Turkish translated versions to provide consistency in meaning for items of each scale with those of the original scale. Items were chosen by the researchers to assure whether the meaning of each item was maintained.

Pilot Study

The final version of the scale was pretested for the clarity of the items by applying on a small random sample of pilot subjects (*n* = 42). The scale was well received and

participants did not report any problems in responding the items. The Cronbach Alpha reliability coefficient was .918 for the scores of 29 items from the pilot study. All of the 29 items were included to the main adaptation study. After all these procedure, the adapted Multidimensional State Boredom Scale was made ready to test psychometric properties.

Procedure

Before the application of the scale, necessary explanations about the goal of the study and how to fill out the instrument were given. The researchers informed the students that their participation was voluntary, anonymous and confidential and their answers would be used for scientific purposes. The participants filled out the forms online. The application process took 4 to 15 minutes for 305 participants. Data was collected within 2 weeks during 2016 Spring semester.

Results

First, the descriptive statistics (mean, variance, standard deviatons, skweness, and kurtosis) were calculated for each items by using the statistical package IBM SPSS 21. Kurtosis of the 29 items were between 2.115 to -1.1315. LISREL Statistical package was used to apply Confirmatory Factor Analysis. Robust Maximum Likelihood was used.

Table 1

Descriptive Statistics of the 29 items

	N	Mean	SD	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
item1	305	4.00	1.687	-.076	.140	-1.065	.278
item2	305	3.83	1.686	.157	.140	-.952	.278
item3	305	2.72	1.681	1.060	.140	.361	.278
item4	305	4.40	1.760	-.451	.140	-.855	.278
item5	305	3.93	1.894	.004	.140	-1.072	.278
item6	305	4.22	1.968	-.297	.140	-1.249	.278

item7	305	3.01	1.876	.896	.140	-.234	.278
item8	305	3.68	1.866	.303	.140	-1.028	.278
item9	305	3.88	1.926	.116	.140	-1.189	.278
item10	305	3.19	1.845	.752	.140	-.466	.278
item11	305	4.16	1.741	-.235	.140	-1.101	.278
item12	305	4.05	1.962	-.017	.140	-1.213	.278
item13	305	3.66	1.894	.358	.140	-1.006	.278
item14	305	3.76	1.844	.261	.140	-1.089	.278
item15	305	4.26	1.715	-.359	.140	-.849	.278
item16	305	3.19	1.790	.745	.140	-.445	.278
item17	305	3.92	1.889	.016	.140	-1.162	.278
item18	305	4.33	1.811	-.383	.140	-1.050	.278
item19	305	2.25	1.559	1.616	.140	2.115	.278
item20	305	3.36	1.867	.715	.140	-.653	.278
item21	305	3.79	1.971	.225	.140	-1.154	.278
item22	305	3.01	1.864	.822	.140	-.397	.278
item23	305	3.18	1.864	.804	.140	-.475	.278
item24	305	3.24	1.880	.542	.140	-.865	.278
item25	305	4.48	1.698	-.533	.140	-.668	.278
item26	305	4.29	1.772	-.317	.140	-1.057	.278
item27	305	4.02	1.855	.040	.140	-1.117	.278
item28	305	3.90	2.002	.121	.140	-1.315	.278
item29	305	4.51	1.661	-.626	.140	-.607	.278
Valid N (listwise)	305						

Reliability

Reliabilty was calculated by using SPSS 21. Turkish version of the MSBS indicated the same factorial structure as in the original. The sub-dimensions of the adapted intrument

are disengagement, high arousal, low arousal, inattention and time perception. The Cronbach Alpha reliability coefficient was .80 for disengagement, .68 for high-arousal, .78 for low-arousal, .80 for inattention, .88 for time perception and .91 for the full scale for the sample of the present study. The Tukey's Test for Nonadditivity is .169 suggesting that no multiplicative interaction between the items and the cases was found.

Validity

With the intention of confirming factors existing in the original scale, Confirmatory Factor Analysis was performed for the construct validity using LISREL. Missing data, outliers and normality of the data set were checked before the analysis. After the analysis, the result presented that the item 2 had a low factor loading (.21). Additionally, modification indices suggest to add the path from factors disengagement, high-arousal, and low-arousal to item 23 with expected decrease in Chi-square 28.6, 26.2, and 35.0 respectively. Because of these reasons, both of the item 2 and 23 were eliminated from the questionnaire's Turkish version. In consequence of conducting Confirmatory Factor Analysis, obtained values (CFA I and CFA II - before and after item 2 and 23 were left out) of Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Square of Approximation (RMSEA), Root Mean Square Residuals (RMR), Standardized Root Mean Square Residuals (SRMR), Comparative Fit Index (NNFI), Parsimony Goodness of Fit Index (PGFI) and Parsimony Normed Fit Index(PNFI) were given in Table 2.

Table 2

Results of Confirmatory Factor Analysis

Measure	Criterion	Acceptable Thresholds	CFA I	CFA II
x^2	p>0,05	-	644.39 (df= 367 P = 0.0)	549.01 (df= 314 P = 0.00)
x^2/df	-	≤3= perfect fit	1.75	1.74
RMSEA	0 (perfect fit) 1 (no fit)	≤0,05= great fit ≤0,08= good fit	0.04	0.05
RMR	0 (perfect fit) 1 (no fit)	≤0,05= great fit ≤0,08= good fit	0.19	0.18
SRMR	0 (perfect fit) 1 (no fit)	≤0,08= good fit	0.05	0.05
GFI	0 (no fit) 1 (perfect fit)	≥0,90= good fit	0.87	0.88
AGFI	0 (no fit) 1 (perfect fit)	≥0,90= good fit	0.85	0.86

Measure	Criterion	Acceptable Thresholds	CFA I	CFA II
NFI	0 (no fit)			
	1 (perfect fit)	≥0,90= good fit	0.95	0.94
NNFI	0 (no fit)			
	1 (perfect fit)	≥0,90= good fit	0.98	0.97
CFI	0 (no fit)			
	1 (perfect fit)	≥0,90= good fit	0.98	0.97
PGFI	0 (no fit)	-		
	1 (perfect fit)		0.73	0.73
PNFI	0 (no fit)	-		
	1 (perfect fit)		0.86	0.84

Note: Criterion and acceptable thresholds were taken from Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2010). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları*. Ankara: Pegem Akademi, p. 271-272.

Chi-Square value had been $x^2 = 644.39$ (N=305, df=367, p=0.00) before the item 2 and 23 were eliminated from the instrument. P value is meaningful because of the large number of sampling. In large number of sampling, where x^2/df value is under 3, it means perfect level of fit while x^2/df is under 5, it means moderate level of fit (As cited in Kılıç and Şen, 2014). Within this scope, it can be pointed out that x^2/df indicates perfect fit. When goodness of fit index values were analysed, it was observed that both CFA I and CFA II RMSEA values (0.04 and 0.05 respectively) showed perfect level of fit. Standardized RMR values (CFA I=0.05 and CFA II= 0.05) indicated good level of fit.

It can be stated that there was not much difference between the values of CFA I and CFA II. It was seen that Chi-Square value was lower in the second CFA, $x^2 = 549.01$ (N=314 df=367, p=0.00) after item 2 and 23 were eliminated from the scale. New x^2/df value was calculated as 1.74 (549.01/314) and it was not much different from the previous value in CFA I ($x^2/df = 1.75$). It was found out that PGFI value remained the same and PNFI value decresaed from 0.86 to 0.84. When all these goodness of fit index values shown in Table 2 are taken into consideration, it can be stated that Turkish version of the MSBS indicates an acceptable level of it.

The path diagram about the CFA I related to Turkish version of the MSBS was indicated in Figure 1 located at the end of the study. It is expected that the item total correlation values should be at least .30 to differentiate the features to be determined (Büyüköztürk, 2007). When factor loadings of concerning model were checked according to the findings of CFI I, it was found out that factor loading of item 2 was under .30 as seen in Figure 1. Additionally, modification indices suggest to add the path

from factors disengagement, high-arousal, and low-arousal to item 23 with expected decrease in Chi-square 28.6, 26.2, and 35.0, respectively. Item 23 that is apperant in Figure 1 was taken out for the final version.

The path diagram about the CFA II related to final Turkish version of the MSBS was indicated in Figure 2 located at the end of the study. When factor loadings of concerning model were checked according to the findings of CFI II (after item 2 and 23 were excluded), it can be stated that the items on each factor had high loadings on the whole. As it is seen in Figure 2, all factor loads obtained were higher than .30. It was found that item total correlations ranged between .35 and .88. It can be said that values of 27 items in the scale measure the sub-dimensions forming the overall construct of the MSBS. In other words, factorial validty of the MSBS-Turkish version was assured.

Discussion and Conclusion

The purpose of current study was to adapt MSBS which was originally developed by Fahlman, et. al (2013) into Turkish. The psychometric properties of the adapted scale were analyzed. Construct validity of the adapted scale was analysed and internal consistency coefficient was examined for the scores' reliability. The construct validty of the scale examined by using Confirmatory Factor Analysis. After conducting CFA, it was found that item 2 had a low factor loading (.21) and modification indices suggested to add the path from factors disengagement, high-arousal, and low-arousal to item 23 with expected decrease in Chi-square 28.6, 26.2, and 35.0 respectively. Therefore, item 2 and 23 were eliminated from the adapted scale. The adapted scale was reanalysed without item 2 and 23.

In accordance with the results obtained from the analysis, it can be stated that there are not much differences between fit index statistics. It was found that 27 item-scale resulting in 5 factors as in the original was consistent and coherent with the present data. When all the goodness of fit findings are taken into consideration, it can be stated that the relations among data attained from Turkish adapted version assort with theoretical construction. For reliability of the scale, internal consistency coeffcent of the full scale and its sub-dimensions were analysed. The Cronbach Alpha reliability coefficient was
.80 for Disengagement sub-dimension, .68 for High-Arousal sub-dimension, .78 for Low-Arousal sub-dimension, .80 for Inattention sub-dimension, .88 for Time-Perception sub-dimension and .91 for the whole scale. The Cronbach Alpha coefficient for High-Arousal sub-dimension indicates a lower result when compared to other sub-dimensions. Internal consistency coefficient obtained for the whole scale shows parallelism with the one calculated in the original scale. Overall, the results support the psychometric properties of the scale in a Turkish sample consisting of undergraduate students.

In conclusion, Turkish version of the MSBS comprises of five factors as in the original instrument. Five-factor model fit the data obtained from the students participating in the study. Internal consistency coefficients of the factors are acceptable. Findings suggest that Turkish version of the MSBS is applicable for assessing the boredom proneness of the individuals.

The adapted version of the items:

Çok boyutlu can sıkıntısı eğilimi ölçeği

1.Zaman normalde olduğundan daha yavaş geçiyor.

2.Benimle ilgisi olmadığını hissettiğim bir duruma takılıp kalıyorum. (omitted-çıkarıldı)

3.Dikkatim kolayca dağılıyor.

4.Yalnızım.

5.Şu anda her şey bana sinir bozucu geliyor.

6.Keşke zaman daha hızlı geçse.

7.Her şey çok monoton ve rutin gibi geliyor.

8. Keyifsizim.

9.Benim için hiçbir değeri olmayan şeyleri yapmaya zorlanıyormuşum gibi hissediyorum.

10.Sıkılıyorum.

11. Zaman geçmek bilmiyor.

12.Normalde olduğumdan daha karamsarım.

13.Bundan sonra ne yapacağım konusunda emin değilim ve karar veremiyorum.

14.Tedirgin hissediyorum.

15.Kendimi bomboş hissediyorum.

16.Dikkatimi toplamakta zorlanıyorum.

17.Eğlenceli bir şeyler yapmak istiyorum ama hiçbir şey ilgimi çekmiyor.

18.Zaman çok yavaş geçiyor.

19.Daha heyecan verici şeyler yapmayı isterdim.

20.Dikkat sürem normalden daha kısa.

21.Şu anda sabırsızım.

22.Başka bir şey yaparak daha verimli geçirebileceğim zamanımı boşa harcıyorum.

23.Kafam dalgın. (omitted-çıkarıldı)

24.Bir şey olmasını istiyorum ama ne olmasını istediğimi bilmiyorum.

25.Dünyayla bağlantım kopmuş gibi hissediyorum.

26.Şu anda zaman yavaş geçiyormuş gibi hissediyorum.

27.Etrafımdaki insanlara sinir oluyorum.

28.Öylece oturup bir şeyler olsun diye bekliyormuşum gibi hissediyorum.

29.Çevremde konuşabileceğim kimse yokmuş gibi hissediyorum.

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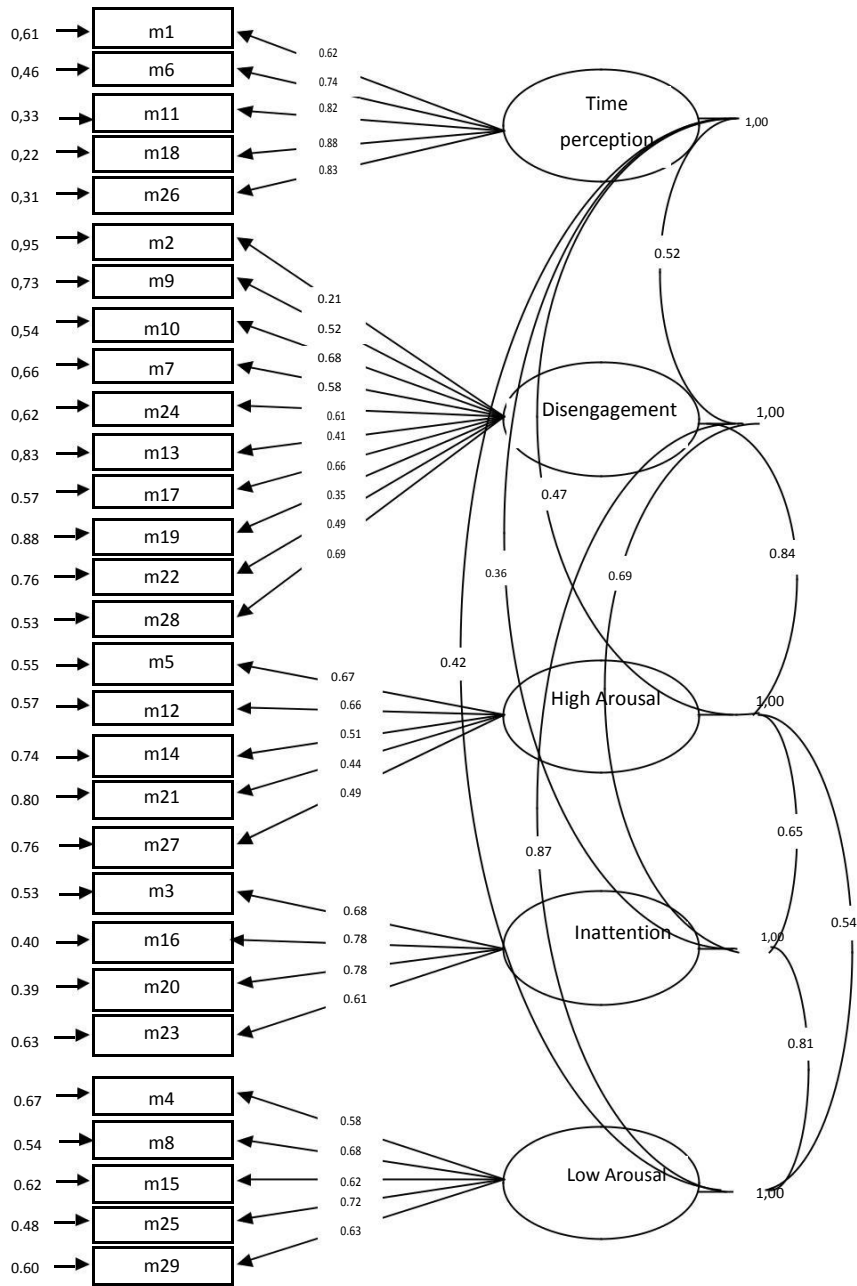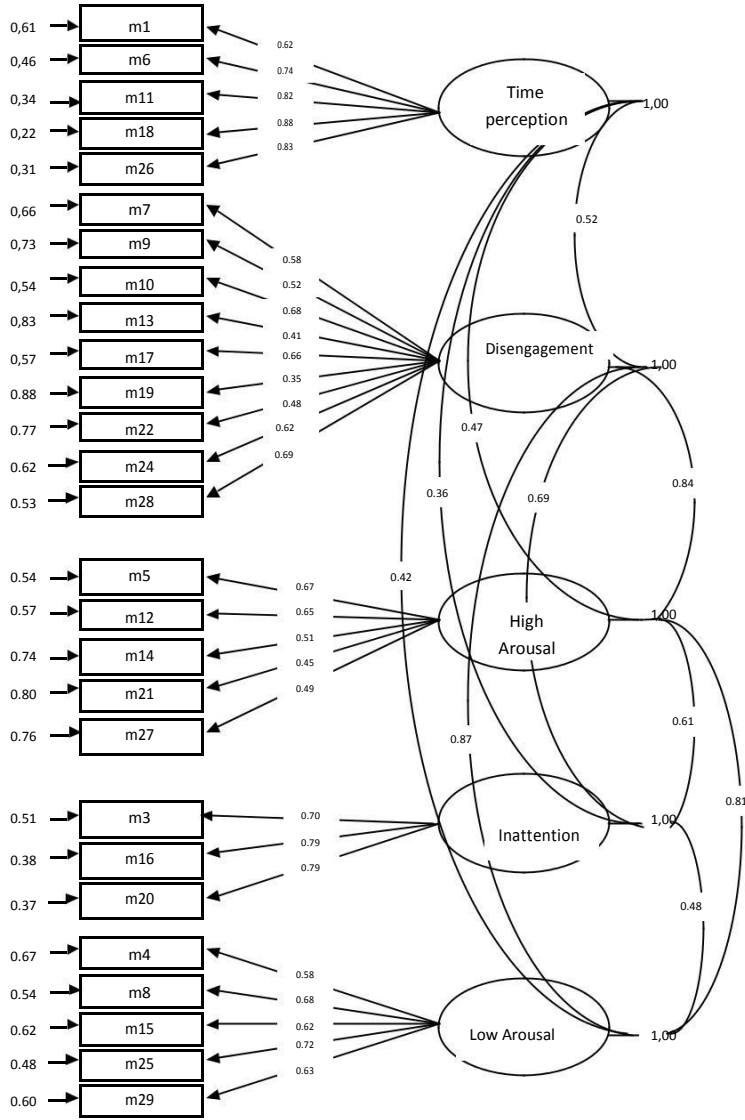
Figure 1. Path Analysis results of CFI I.

Figure 2. Path Analysis results of CFI II.

UZUN ÖZET

Can sıkıntısı tüm toplumlarda yaygın olarak deneyimlenen bir problemdir. Türkiye'de tüm yaş gruplarında görülmektedir. Can sıkıntısının ciddi psikolojik problemlere yol açtığı, okulu bırakma, kumara yönelme, depresyon ve yeme bozukluklarına yol açabilmektedir (Eastwood, Cavaliere, Fahlman, & Eastwood, 2007; Mann & Robinson, 2009; Mercer & Eastwood, 2010; LePera, 2011).

Bu çalışmanın amacı Fahlman, Mercer-Lynn, Flora and Eastwood (2013) tarafından geliştirilen Çok boyutlu Can Sıkıntısı Eğilimi Ölçeğini Türkçe'ye uyarlamaktır. Ölçek maddelerinin çevirme-geri çevirme yöntemi ile çevirisi yapıldıktan sonra çevrimiçi olarak oluşturulan ölçek önce pilot çalışma için 42 öğrenciye uygulanmış ve görüş ve önerileri alınmış, Cronbach Alfa güvenirlik katsayısı .91 bulunmuştur.

Ölçek Afyon Kocatepe Üniversitesi'nde eğitim gören 305 öğrenciye uygulanmıştır. Yüz yirmi sekiz erkek ve 177 kadın katılımcı; İktisat İşletme (% 28.2), Uluslararası Ticaret ve Finansman (% 46.9), Mühendislik (% 4.6) ve diğer (% 1.6) bölümlerde öğrenim görmektedir. Katılımcılar % 9.8 hazırlık sınıfında, % 50.2 birinci sınıfta, % 1.2 ikinci sınıfta, % 1 üçüncü sınıfta, % 36.1 son sınıfta ve % 1.3 ise beşinci yıldır öğrenimine devam etmekte olan öğrencilerdir. 18 Katılımcı Karadeniz, 104 Ege, 34 Akdeniz, 62 Marmara, 60 İç Anadolu, 7 Doğu Anadolu, 16 Güneydoğu Anadolu bölgelerinden ve 4 diğer ülkelerdendir.

Doğrulayıcı Faktör Analizi sonuçlarına göre ölçeğin 29 maddesinden iki tanesi çıkarılmıştır. Bu maddelerden Madde 2 düşük faktör yüküne (.21) sahipti. Madde 23 ise modifikasyon indeksine göre İlişki Kesme, Yüksek Uyarılma ve Düşük Uyarılma altfaktörlerinin üçü ile de ilişkilendirildiğinde Chi-square değerinde sırası ile 28.6, 26.2 ve 35.0 miktarlarında düşme olacağını belirtmekteydi. Bu sebeplerle Madde 2 ve 23 ölçekten çıkarılmış ve toplamda 27 madde olarak psikometrik değerleri tekrar ölçülmüştür.

Ölçeğin yapılan analizler sonucunda 27 madde ve 5 faktör (İlişki Kesme, Yüksek Uyarılma, Düşük Uyarılma, Dikkat Etmemek, Zaman Algısı) olarak kullanılmasına karar verilmiştir. Cronbach Alpha güvenirlik katsayısı İlişki Kesme için .80, Yüksek Uyarılma için .68, Düşük Uyarılma için .78, Dikkat etmemek için .80 ve Zaman Algısı için .88'dir. Tukey's Test for Nonadditivity değeri ise .169 olarak bulunmuştur. Tüm ölçek için iç tutarlılık güvenirlik değeri .91 olarak bulunmuştur.

Çalışma sonuçlarına göre, Çok Boyutlu Can Sıkıntısı Eğilimi Ölçeği'nin Türkçe versiyonunun psikometrik özellikleri bu ölçeğin can sıkıntısı eğilimini ölçmek için kullanılabileceğini göstermiştir.

Classroom Management Challenges: An Account of EFL Teachers at Private Language Institutes

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Classroom management is one of the most contributing yet challenging issues in a teaching career. In a language-learning classroom where foreign language is used as both the medium and the content of the teaching, EFL teachers may experience unique classroom management challenges (Linse& Nunan, 2005). This basic qualitative study focused on the main types the management challenges that EFL teachers face in their classroom and the strategies used to survive these challenges. To this end, the researchers selected 30 EFL teachers working at private language institutes in Shiraz, Iran and conducted semi-structured interviews to collect the data. Theme analyses showed three major themes in classroom management challenges: (1) instructional challenges (2) behavioral and psychological challenges and (3) contextual challenges. Instructional challenges were pertinent to the unfinished homework assignments, inconsistency in learners' level of proficiency and the learners' insistence on speaking in their first language. Behavioral and psychological challenges were related to the learners' unwillingness to speak, demotivate, naughty learners, latecomers and inappropriate use of cellphone and apps. To survive these challenges, EFL teachers suggested different strategies including warning, eye contact, teacher-leaner conference, etc. The implications, limitations and suggestion for future studies were discussed in more details in the paper.

Keywords: EFL teachers, classroom, management, challenges, private
language institutes.

INTRODUCTION

Classroom management is a cardinal element defining a flourishing teaching career. Generally, classroom management encircles a wide range of steps and activities to establish a welcoming atmosphere of learning, ensure smooth running of lessons, and minimize the misbehaviors and disruptions (Raizen, 2010; Oliver, Wehby & Reschly, 2011). According to Martin and Sass's (2010) theoretical framework, teachers' preventive strategies to control misbehaviors pertain to behavior management and selecting materials, setting daily rules and regulations refer to instructional management (Martin & Sass, 2010).

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Martin and Yin (1997) asserted that managing classroom varies depending on the number of factors including subject matter, place of teaching and level of education. As such, managing language learning classrooms is expected to be dissimilar from managing math, history and geography classes. English as foreign language (EFL) classroom management demands certain skills and capabilities the most important of which is using English to manage classroom (Ababneh, 2012). In a more comprehensive definition, Richards, Platt, Platt and Heidi (1992) portrayed language classroom management as:

"The ways in which student behavior, movement, interaction, etc., during a class is organized and controlled by the teacher to enable teaching to take place most effectively. Classroom management includes procedures for grouping students for different types of classroom activities, use of lesson plans, handling of equipment, aids, etc., and the direction and management of student behavior and activity".(p.52).

In another classification, Brown (2001) proposed that EFL classroom management encompasses handling physical setting including light, seating, and facilities in the classroom. In addition to all these aspects, Richards and Rodgers (2001) asserted that EFL classroom management requires teachers' control over students' behavior and teachers-students interactions. Given the significance of successful classroom management in teaching professions, teachers might resort to different tricks and techniques to generate a well-managed classroom. Organizing classrooms and building a stress–free environment where very little disruptive behaviors happen and learning is a pleasant experience, may be a serious concern for both experienced and novice teachers (Merc, 2004). This situation could be more complex when it comes to learning a foreign language (Fowler & Sarapli, 2010). EFL classroom management entails its own challenges for most of the EFL teachers regardless of their level of teaching experience (Harmer, 2007). In support of this claim, Alam Khan (2011) referring to classroom management as a painstaking challenge for most EFL teachers in Saudi Arabia stressed that in EFL classrooms teachers are not just concerned with language teaching and offering correct guidelines for handling e-Learning makes EFL teachers' management process more demanding.

Although classroom management strategies and disciplines have been the focus of many lines of inquiry in general teacher education, the challenges of EFL classroom management needs more focal attention. Regarding the contribution of effective classroom management in maximizing the efficacy of teaching, it is necessary to understand the types of classroom management challenges that EFL teachers face and find solutions to remove them. Cognizant of this, the focus of this line of investigation is

describing the main EFL classroom management challenges and the most practical remedies to solve these challenges at private language institutes.

Review of the Key Studies

Classroom management issues have been acknowledged as indispensable aspect of the classroom discourse studies (Doyle, 1986). In his review of literature into classroom management, Walter Doyle (1986) maintained that "Classroom teaching has two major task structures organized around the problems of (a) learning and (b) order" (p. 394). Inspired by this definition, classroom management and classroom discipline have been used interchangeably in some studies (Cited in Martin &Sass, 2010). Classroom discipline refers to a collection of preventive activities to minimize misbehaviors and deviations and bears an authoritarian regime in class (Robertson, 1996), whereas classroom management is a broader term describing teachers' plans and decisions for learning materials, interactions with students, and other aspects related to time and space of the classroom (Evertson & Weistein, 2006). Given that, classroom management involves teachers' efforts to create democracy in classroom and a positive atmosphere where students' right to share ideas and opinions are celebrated and effective learning is facilitated (Tuncay, 2010). Creating a well-managed learning environment could be an undeniably demanding task. The review of related studies showed that teachers face many diverse behavioral, instructional, and other marginal problems in their classroom management that slow down their teaching and cause dissatisfaction. Earlier studies showed that a noisy and chaotic environment has destructive effects on learners and classroom management challenges are evident in this type of settings (Kayıkçı, 2009).

In a taxonomy developed by Gower and Walters (1988), size of classroom, starting and finishing lessons and group works caused main classroom management challenges. Later on, in a more comprehensive study, McPhillimy (1996) added students' behavioral problems to the possible sources of classroom management challenges. He asserted that naughty students' rule breaking behaviors, asking permission to get out of the class, making noise, creating disruption and mess in the seating arrangement posed big classroom management challenges for most teachers.

In a qualitative study, Mau (1997) found that survival concerns, motivating students, and fulfilling students' needs were also classroom management challenges for student teachers in Singapore. Other similar studies gave credence to these findings about the types of the challenges of classroom management experienced by teachers (LaMaster, 2001; Valdez, Young & Hicks, 2000).

Classroom management profiles and type of challenges attached to this issue differ across contexts and cultures (Martin & Yin, 1997). Given that, types of classroom

management challenges in an EFL context are assumed to be different from other classes. Using a foreign language in an EFL classroom has been voiced as a problem for most of beginning teachers and this challenge led into difficulties in controlling classroom (Melnick & Meister, 2008). In a like manner, Prada and Zuleta (2005) asserted that switching the codes in EFL classroom might generate stress and discomfort in learners. To reduce this challenge they proposed that teachers use their first language to hinder confusion and minimize the anxiety.

Korukcu (1996) indicated that teaching methods, lesson planning and students' motivation were major sources of classroom management challenges for EFL teachers. Additionally, Brown (2001) explicated that size of the classroom, inconsistency of the proficiency level of the learners, and complying with the rules of schools and institutions were among the most recurrently faced challenges of EFL classroom management. Aydın and Bahçe (2001) conducted a study in Turkey and their findings illustrated that the most serious problems of managing EFL classroom were motivation of students and dealing with noise and time. In another study in Turkey, Merç (2004) classified these problems in a more comprehensive list: students' based problems, teacher-students problems, and contextual and supervisor problems. In a qualitative study, Merc and Subasi (2015) studied classroom management problems and coping strategies of Turkish student EFL teachers. They asked 12 students EFL teachers to keep diaries over 12 weeks describing their main classroom management challenges and then they conducted semi-structured interviews. Findings of that study showed that students' misbehaviors and selecting material of teaching were main challenges of classroom management. To remove the classroom management challenges, Turkish EFL mainly teachers used warning, silence and ignorance.

The other challenge of classroom management in EFL contexts has been the change of curriculum in most of Asian countries, which necessitated learner-centered approaches to teaching. This new orientation has exacerbated the job of teaching and managing classroom for some teachers holding a negative belief about learner-centered classes. Keiko Sakui (2007) investigated classroom management in Japanese EFL classrooms and findings of that study demonstrated that running communicative language teaching activities (CLT) in Japan generates problems in managing the classroom and EFL programs should take account of culture specific teacher training plans to alleviate these challenges. In congruence with this study, Carless (2009) asserted that in eastern contexts, directing pair and group works, which are common practices in EFL classrooms, were perceived as challenging posers in classroom management and implementing traditional teaching tasks and directing a teacher-fronted classroom were more favored. However, Kadir and Qadir (2012) maintained that reconsiderations in the curriculum and the tendency toward a learner-centered language teaching permitted

some degree of latitude for the EFL teachers in considering learners' ideas and needs in selecting materials and handling class and classroom management challenges were much less than when teachers were the primary authority in the classroom. Overall, In EFL classes where learning to communicate is presumed to be of primary importance, sustaining a balance between traditional beliefs and learner-centeredness might impose some difficulties for EFL teachers (Kang, 2013).

Classroom management challenges due to the cultural backgrounds in EFL contexts have been the subject of some studies. In 2015, Zhou and Li concentrated on the cultural mismatches between learners and their American teachers. They found that cultural incongruences gave rise to clashes and challenges in classroom management.

In Iran, classroom management and discipline have been the backbones of studies pertinent to EFL. However, the focuses of these studies were the theoretical approaches to classroom management and very few study pinpointed the practical challenges in EFL classroom management. Rahimi and Assadollahi (2012) focused on EFL teachers' approaches to classroom management. They found that Iranian EFL teachers mainly resort to controlling classroom management approaches. In a more recent study, Yazdanmehr and Akbari (2015) indicated that leaners' misbehaviors were the most serious challenges in their classroom management and EFL expert teachers' body language and setting clear expectations reduce the challenges of classroom management and contribute to expert EFL teacher training. In another study, Rahimi and Hoseini Karkami (2015) showed that English teachers mainly encounter the challenge of sustaining balance in being an efficacious and caring teacher and reducing deviations and unacceptable behaviors in classroom. However, very little is known about classroom management challenges and how these challenges are tackled in the context of Iran. To address this inadequacy, this study focused on types of classroom management challenges and how EFL teachers face them. Regarding the attached significance to classroom management issues in a successful teaching career (Baker & Westrup, 2000), delving into this point could enhance the efficacy of teaching and learning. However, comparing to the amount of studies into classroom management challenges in general education, scant attention has been paid to EFL classroom management challenges in the context of Iran. This study was an attempt to address classroom management challenges that EFL teachers experience and the strategies to minimize these challenges. More specifically put, the following research questions were raised:

1. What are the major EFL classroom management challenges?
2. What strategies do EFL teachers employ to confront these challenges?

METHOD

This study is a basic qualitative/interpretive research. According to Ary, Jacobs, Sorensen, and Walkers (2010), "Basic qualitative studies, also called basic interpretative studies by some, provide rich descriptive accounts targeted to understanding a phenomenon, a process, or a particular point of view from the perspective of those involved" (p.453). In this study, the researchers intended to capture the challenges of managing a classroom from the EFL teachers' point of view and see what strategies might be effective in alleviating these challenges.

Participants

The population of this study is EFL teachers working at private language institutes in Shiraz. 30 EFL teachers volunteered to participate in this study. The demographic information about participants of the study is represented in the following table (see table 1).

Table 1

Demographic Variables

Demographic features	Age		Education		Gender		Teaching experience	
	<30	>30	B.A.	M.A.	Female	Male	<5 years	>5 years
Number	12	18	17	13	18	12	11	19

All of the interviewees were from Iran and taught English as a foreign language. They had the experience of teaching at different levels of proficiency.

Instrument

Semi-structure interviews were conducted to collect data. To develop the interview items and questions, review of literature and studies related to classroom management challenges were used. In a pilot study, interview questions were screened and double barreled and vague questions were eliminated from the questions and the focuses of interview questions were more clarified. To ensure the content validity of the interviews, member checking and peer checking were carried out.

Data Collection Analysis

Before the interview sessions, the participants were informed about the purpose of the study and each interview session took about 15 minutes. To establish rapport with the participants, the interviews were conducted in Persian and then the tape-recorded interviews were transcribed. The following items were included in interview sessions:

a) A brief introduction of the participants and general background information

b) Inquiry about the main challenges of classroom management (specific and personal examples of their classroom)

c) Inquiry about how they solve the challenges of classroom management (what they do to minimize the challenges)

The researcher tried to elaborate the questions and asked the participants to explain their answers, however, it was attempted not to lead the responses. For example, it was tried not to ask double-barreled and or yes no questions. The interviews were continued up to data saturation point, which was the 23th interview, and then coding of the data was started. The researcher outlined the recurrent themes and sub-themes, which were expressed differently. The statements were checked for redundancy and clarity by two coders and the process of theme analyses was implemented up to the point that no new theme could be extracted (Charmaz, 2006).

RESULTS AND DISCUSSION

When the EFL teachers were asked about classroom management challenges, three major themes emerged. The researchers named these themes based on the review of literature and Wolfgang 's (2005) classroom management approaches. Therefore, the researchers named the themes as: a) instructional challenges, (b) behavioral and psychological challenges and (c) contextual challenges. Nearly all of the participants mentioned that they try to clarify their expectations with regard to the learners' behavior, instructional activities and other classroom related points to minimize the number of possible challenges. However, the participants asserted that some unexpected classroom management challenges were posed in approximately all EFL classrooms. To survive, EFL teachers might resort to different remedies. A summary of the most helpful and customary tips was displayed in the following tables.

Instructional Challenges

The first table shows five subthemes of the challenges related to instructional aspects. The majority of the participants contended that unfinished homework and take-home assignments were big challenges for them. Talking about this issue, an interviewee said:

"Sometimes my students do not complete their homework assignments and this occasionally breaks my classroom routine. In addition, I believe that doing homework helps learners see if there is any problem with the lesson covered, so when the learners do not their homework, they might not have clear picture of their learning and performance".

Table 2

Instructional Challenges and Remedies

Instructional related challenges	Remedies to address the challenges
a. Unfinished homework and take home-assignment	1. warning and clarifying my expectations 2. informing the director of institute 3. assigning minus score
Lack of consistency in the proficiency level of the learners	1. asking the director to administer a b. placement test again 2. asking the less proficient learners to study more and giving more challenging tasks to the more proficient ones
c. Learners' insistence on speaking in the first language	1. telling the learners about the importance of talking in English to learn the language 2. warning 3. ignoring 4. penalizing: e.g. buy snack or some drinks for the whole class
d. Material selection and dealing with the syllabus	1. sticking to the syllabus of institute 2. suggesting further reading and secondary resources to the interested learners
e. Mismatch between teaching style and learning outcomes	1. using a simple example or language to teach the notions 2. gestures and pantomime changing teaching style and using more

enjoyable tasks

Another participant alluded to unfinished homework as a problem leading to waste of time and slow rate of teaching. The lack of consistency in the level of learners' proficiency in the same classroom was another challenge for most of the teachers. More than half of the participants expressed that this challenge regularly resulted in confusion and dissatisfaction in teaching. The following comment illustrates this challenge:

> *"Unfortunately, I always have the problem of the lack of consistency in the proficiency level of the learners in the same classroom. This makes the teaching and task selection more challenging, as some tasks are easier for the learners at higher level of proficiency and the same tasks are really demanding for the learners at lower proficiency level".*

As for the other challenge related to learners' insistence on talking in the first language instead of English, one of the interviewee explained that:

> *"In most of the language learning programs, the goal is improving speaking ability but some students resist speaking in English. Well! This is really frustrating and makes me feel that I have not been successful enough in my teaching".*

Among other things, some learners expect their teachers to teach more than the contents of the book and present extra vocabulary and grammar structures. This piece of finding is in line with Mariam (2012) pointing to the difficulty of selecting material of teaching which caused challenges in classroom management for Pakistani English teachers. Sometimes, EFL learners have serious problems in adapting themselves with the teaching styles and their learning outcomes are not satisfactory. This challenge might be due to the complexity of language. In this case, EFL teachers said that they rely on simple instructions, body language and pantomime, picture and painting, and even shifting to the first language to help the learners understand the lesson.

Instructional activities and choosing appropriate styles of teaching constitute a considerably important part of a successful classroom management profile. EFL teachers in this study agreed upon the idea of using variety in teaching methods to upgrade the quality of classroom management. These results confirmed Demir (2009) who emphasized the importance of rich teaching activities in surmounting the challenges of classroom management. Additionally, Merç and Subaşı (2015), Kaya and Donmez (2009) suggested variation in teaching activities to optimize management outcomes.

Behavioral and Psychological Challenges

In comparison to instructional challenges, behavioral challenges were more context specific and individual. To address these challenges, EFL teachers devise their own

strategy (see table 2).However the majority of EFL teachers complained that lack of punctuality and attendance were the most typically observed challenges. The following is one of EFL teacher' comment on this challenge:

> *"In most of the classes, there are always some latecomers. When they come, they make their usual excuses: I was stuck in the traffic jam, I could not take a taxi, I was very busy, etc. I try to be lenient at first and show my objection with facial expression and eye contact. But if this behavior is repeated I consider more serious reactions like sending the latecomers out to the principal's room".*

Apart from this challenge, participants of this study described unwillingness to communicate as another annoying issue that causes some difficulties including the inefficacy of learning and creating a monotonous class. Maximizing leaners' willingness to communicate (WTC) is considered as one the strengths of EFL teachers' job. To this end, words of encouragement, explicit elaboration of speaking activities in language learning and versatility in speaking activities were suggested. Let us review some of the comments in this regard:

> *"In English learning classroom, the tendency of learners to communicate and initiate speaking means a lot and I do my best to motivate my learners to start talking. Sometimes I give them extra points to encourage them. Sometimes I say if you want to learn speaking you must speak and forget about being silent".*

> *"I believe that error correction could have a great effect on learners' WTC. To ease the flow of speaking, I only interrupt my learners when they make global and remarkable mistakes. I think giving time to the learners for speaking help them increase self-confidence and WTC".*

Table 3

Behavioral and Psychological Challenges and Remedies

Behavioral and psychological challenges	Remedies to address the challenges
a. latecomers	b. warning c. asking the learners to go to the office and bring me a note justifying their delay d. not letting them in if the learner comes late every session
b. unwilling to speak and participate learners	1. encouraging the learners to talk 2 elaborating on the significance of learning English in the education and life 3. deigning more enjoyable speaking tasks and talking about interesting

		topics
		4. letting them talk and show less sever reaction to their mistakes
c.	demotivated and stressed learners	1. creating a stress-free environment: 2. and treating learners in a friendly manner
d.	noisy and naughty learners	1. talking to learner after class 2. changing their seat 3. ignoring them 4. warning 5. calling their names and ask them question to catch their attention 6. asking the learners to raise their hand when they want to say something 7. eye contact 8. remaining silent
e.	learners' use of cellphone and apps	1. giving directions about appropriate use of these facilities 2. warning 3. penalizing

The problem of noisy and naughty learners was another challenge. Although learners' enthusiasm for talking and class activity are considered as advantages of a successful language learning classroom, sometimes the class becomes much noisy and the learners might interrupt each other to talk or move around the class without permission. To solve this challenge, the participants of the study commented:

> *"To control noisy learners I use eye contact. When they are very talkative, I first look at them and I guess they understand me at that moment, if not I would call them and tell them I am really sorry to interrupt you".*

This sarcastic utterance is a strategy to teach the learners acceptable behavior in a classroom (Colvin, Kame'enui & Sugai, 1993).

Another interesting comment was: "When I see my learners talking and making noise, instead of shouting to I stop teaching and remain silent for a few minutes. This surprises them and attracts their notice. Sometimes, I keep silent and write "silence" on the board. In this way the learners come to understand and the get my message".

The emergence of new software and programs has revolutionized language education and created noticeable learning resource (Richards, 2014); however, inappropriate use of technology and apps could cause distractions in the classroom. Playing games, chatting online, checking websites and social networks, sending texts, and even checking dictionary were among the cases that result in deficit attention and disturbing thoughts. Here is an example of the comments in this regard:

> *"These days most of the learners have smartphone and they can easily install many different software and apps on these phones. Some learners use e-books, listen to audio programs and use their cellphone to learn the language. However, some learners waste their time surfing through these apps and get busy with their cellphone during the class. These learners often do not concentrate on the lesson ".*

To solve this challenge, most of the EFL teachers believed that they should raise the learners' consciousness about the opportunities provided by smartphones, apps and social networks to learn the language. However, sometimes, the learners ignore these chances and even miss the learning opportunities within the classroom. In that case, EFL teachers give the learners words of warning and in worse situations penalize the learners' inopportune cell phone and apps uses.

Contextual Challenges

The participants of this study asserted that sometimes a large number of the learners are cramped into a small room and this cause some troubles in terms of the physical distance and or the lack of enough space and seat for the learners. To withstand this challenge, the participants suggested that the supervisor of the institute divide the learners into two groups and or consider a bigger classroom for the leaners.

Table 4

Contextual Challenge and Remedies

Contextual challenges	Remedies to address the challenges
a. busy classroom	1. dividing the learners in two classrooms
b. time management	1. skipping some marginal activities
	2. asking the learners to do some activities at home

Mismanagement of the time was another serious challenge for the EFL teachers. The participants of the current study stated that sometimes they might fall behind their schedule ad not be able to move in accordance with their lesson plan and syllabus:

> *"I am teaching Topnotch series and the standard time to teach this book is about 60 hours. But I am supposed to finish it in 40 hours. So I have to focus on the main themes and skip some activities".*

A much better recommendation to save the time and catch up with the syllabus would be observing the colleagues and asking for their tips. On a similar note, Chien (2014) considered observing experienced teachers as an effective way of developing teaching skills and time management.

CONCLUSION

Results of the study revealed that EFL teachers mostly faced teaching related challenges, learners' off-task behaviors and some other problems with time and place of the classroom. To resolve these challenges, EFL teachers suggested different reactive strategies that vary depending on the contexts and the level of learners. Although the current study was based on a small sample of participants, it might carry some practical implications for language education as a whole. Studying about the types of challenges related to classroom management could raise the EFL teachers' awareness about this issue, contribute to self-reflection in teaching and finally enhance teaching (Kizildag, 2007). As pointed earlier, classroom management challenges are context bounded and approaches to minimize and or resolve these challenges also vary across individuals and educational systems. However, a picture of the common challenges experienced by EFL teachers at one specific institute could provide rich insights for novice teachers. Being more concerned with the instructional dimension, novice and pre-service EFL teachers might find coping with the unexpected challenges overwhelming. Thus, findings of this study could help them have a more realistic understanding of the classroom dynamics. Another implication of this study is that teacher trainer and teacher educators could refer to the tips and hints provided by the EFL teachers in terms of solving classroom management challenges in their teacher training programs. As Tal (2010) argued classroom management abilities are part of teaching qualities. EFL teachers need to know about the practical aspects of classroom management rather than the theoretical background to be able to handle their classroom and achieve their desired goal.

Limitations of the Study

This study is subject to some limitations. The researchers only focused on the private language institutes in which small number of participants was selected and interview was the only instrument used to collect the data. If we were to conduct this study again, we would use observation as another data collection instrument to back up the evidence obtained through the interviews and maximize the validity of the study. Seeking the views of learners, the principals of the language institutes and even parents could result in more illuminating aspects of a well-managed classroom and strategies to be implemented to alleviate the challenges. Further research should be undertaken in other language learning contexts (e.g. high school and university) to study whether the challenges are the same and what resorts are taken to figure out classroom management challenges. Studies into the impact of the learners' cultural background and demographic features on EFL classroom management challenges could yield interesting findings.

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EXTENDED ABSTRACT

Classroom management is a cardinal element defining a flourishing teaching career. Generally, classroom management encircles a wide range of steps and activities to establish a welcoming atmosphere of learning, ensure smooth running of lessons, and minimize the misbehaviors and disruptions (Raizen, 2010; Oliver, Wehby & Reschly, 2011). According to Martin and Sass's (2010) theoretical framework, teachers' preventive strategies to control misbehaviors pertain to behavior management and selecting materials, setting daily rules and regulations refer to instructional management (Martin & Sass, 2010). Martin and Yin (1997) asserted that managing classroom varies depending on the number of factors including subject matter, place of teaching and level of education. As such, managing language learning classrooms is expected to be dissimilar from managing math, history and geography classes. English as foreign language (EFL) classroom management demands certain skills and capabilities the most important of which is using English to manage classroom (Ababneh, 2012). In a more comprehensive definition, Richards, Platt, Platt and Heidi (1992) portrayed language classroom management as:

"The ways in which student behavior, movement, interaction, etc., during a class is organized and controlled by the teacher to enable teaching to take place most

effectively. Classroom management includes procedures for grouping students for different types of classroom activities, use of LESSON PLANS, handling of equipment, aids, etc., and the direction and management of student behavior and activity".(p.52). Although classroom management strategies and disciplines have been the focus of many lines of inquiry in general teacher education, the challenges of EFL classroom management needs more focal attention. Regarding the contribution of effective classroom management in maximizing the efficacy of teaching, it is necessary to understand the types of classroom management challenges that EFL teachers face and find solutions to remove them. Cognizant of this, the focus of this line of investigation is describing the main EFL classroom management challenges and the most practical remedies to solve these challenges at private language institutes. This study is a basic qualitative/interpretive research. According to Ary, Jacobs, Sorensen, and Walkers (2010), "Basic qualitative studies, also called basic interpretative studies by some, provide rich descriptive accounts targeted to understanding a phenomenon, a process, or a particular point of view from the perspective of those involved" (p.453). In this study, the researchers intended to capture the challenges of managing a classroom from the EFL teachers' point of view and see what strategies might be effective in alleviating these challenges. The population of this study is EFL teachers working at private language institutes in Shiraz. Purposive sampling method was used to select 30 participants. All of the interviewees were from Iran and taught English as a foreign language. They had the experience of teaching at different levels of proficiency. The analyses focused on the participants' major challenges in classroom management and available remedies to remove the challenges. The researchers compared the participants' answers to the questions and extracted the major themes and subthemes of the interviews. Depending on the age group of the learners, the type of offered textbooks, the atmosphere of the classroom and the institute, the expectations of learners about language learning the quality of learning program, the classroom management challenges vary for most of the EFL teachers. To survive, EFL teachers might resort to different remedies. A summary of the most helpful and customary tips was displayed in the following tables. The major themes of classroom management challenges were (a) instructional challenges, (b) behavioral and psychological challenges and (c) contextual challenges. The majority of the participants contended that unfinished homework and take-home assignments were big challenges for them. Instructional activities and choosing appropriate styles of teaching constitute a considerably important part of a successful classroom management profile. EFL teachers in this study agreed upon the idea of using variety in teaching methods to upgrade the quality of classroom management. In comparison to instructional challenges, behavioral challenges were more context specific and individual. To address these challenges, EFL teachers devise their own strategy (see table 2).However the majority of EFL teachers complained that

lack of punctuality and attendance were the most typically observed challenges. The participants of this study asserted that sometimes a large number of the learners are cramped into a small room and this cause some troubles in terms of the physical distance and or the lack of enough space and seat for the learners. To withstand this challenge, the participants suggested that the supervisor of the institute divide the learners into two groups and or consider a bigger classroom for the leaners. This study is subject to some limitations. The researchers only focused on the private language institutes in which small number of participants was selected and interview was the only instrument used to collect the data. If we were to conduct this study again, we would use observation as another data collection instrument to back up the evidence obtained through the interviews and maximize the validity of the study. Seeking the views of learners, the principals of the language institutes and even parents could result in more illuminating aspects of a well-managed classroom and strategies to be implemented to alleviate the challenges. Further research should be undertaken in other language learning contexts (e.g. high school and university) to study whether the challenges are the same and what resorts are taken to figure out classroom management challenges. Studies into the impact of the learners' cultural background and demographic features on EFL classroom management challenges could yield interesting findings.

Elt Preservice Teachers' Perceptions and Opinions on How to Integrate ICT in Language Classes

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This study examined ELT students' perceptions and opinions on how to integrate ICT in language classes. The participants' compromised of 97 students attending to the department of English Language Teaching in Turkey. The data of this descriptive study was collected through a questionnaire developed by the researchers. As analyzed through descriptive statistics, the findings indicated that the participants had positive perceptions towards the use of ICT and they were aware of the effectiveness of ICT tools for language teaching. Majority of the participants reported that the use of ICT would contribute not only their teaching competencies but also teaching each language skill effectively. Most of the participants agreed that the use of ICT in language classes will make language teaching fun and it will enhance the language learners' motivation so as to make learning permanent through the use of visual, audial and animated tools. It was also observed that the participants could suggest the use of different ICT tools for each language skill considering the dynamics of skills and tools.

Keywords: Technology Integration, ICT, Language Teaching, Web 2.0

İngilizce Öğretmenliği Bölümü Öğrencilerinin Dil Derslerinde Bit Entegrasyonuna İlişkin Algıları Ve Görüşleri

Bu araştırmada İngilizce Öğretmenliği bölümünde öğrenim gören öğrencilerin dil derslerinde Bilgi ve İletişim Teknolojilerinin (BİT) entegrasyonuna ilişkin algıları ile görüşleri belirlenmeye çalışılmıştır. Çalışma grubunu 2014-2015 öğretim yılı bahar döneminde Türkiye'de bir üniversitenin İngilizce Öğretmenliği bölümünde öğrenim gören 97 öğretmen adayı oluşturmuştur. Betimsel olarak tasarlanan araştırmanın verileri araştırmacılar tarafından geliştirilen anket aracılığıyla toplanmıştır. Verilerin analizinde frekans, yüzde ve ortalama kullanılmıştır. Araştırma sonucunda öğretmen adaylarının BİT uygulamalarıyla ilgili oldukça olumlu duygu ve görüşlere sahip oldukları ve BİT araçlarının dil öğretimi için ne kadar etkili olabileceğinin farkında oldukları belirlenmiştir. Öğretmen adaylarının çoğu öğretme-öğrenme sürecinde BİT kullanımının dil eğitiminde gerek genel olarak öğretmenlik becerilerinin gelişmesinde gerekse her bir dil becerisinin etkili öğretiminde katkı sağlayacağı yönünde görüş bildirmişlerdir. Katılımcılar BİT uygulamalarının eğlenceli ve öğrencinin aktif olmasına olanak vermesiyle öğrencilerin motivasyonlarının ve öğrenmelerinin artacağı, görsel-işitsel araçlarla dil öğreniminin kalıcı hale geleceği konusunda hemfikirdirler. Ayrıca, katılımcılar araçların özelliklerini dikkate alarak her dil becerisi için farklı BİT araçlarını önermektedirler.

Anahtar Kelimeler: Bilgi ve İletişim Teknolojileri (BİT), Teknoloji Entegrasyonu, Yabancı Dil Eğitimi, Web 2.0

INTRODUCTION

Information has been the invaluable treasure of the societies. The ones who attain more and more qualified information and who can use it effectively and accurately get ahead others and reached prosperity. Particularly since the mid of 20th century, technological developments have facilitated to attain, store, proceed and share information. Such developments started the information age (Kalkınma Bakanlığı, 2015).

Information and Communication Technologies (ICT) are defined as significant tools both to produce information and to share it effectively. Moreover, ICT is accepted as an important indicator of development level of the countries. The countries emphasize the use of ICT and the investments for this in their future development plans. In parallel with these trends in the world, the investments to transform to the information society in Turkey also increase more and more. Ministry of Education is one of the pioneering institutions that will make most of the investments on ICT (45%) in 2016 (Kalkınma

Bakanlığı, 2016). FATIH project, abbreviated for "Movement of Enhancing Opportunities and Improving Technology Project", is the most known investment.

Educational institutions have the most responsibility to achieve these investments on ICT and to train the qualified individuals necessary for information society. The students are expected to have competencies of attaining, using, configuring, sharing information, and problem-solving as well as cooperation (ISTE [International Society for Technology in Education], 2016; MEB, 2016). Thus, many researchers agree that integrating ICT into education will enable to achieve these learning goals and contribute to active learning (Aktaruzzaman, Shahim, & Clement, 2011; Ertmer & Ottenbreit-Leftwich, 2010; Roblyer, 2006; Wang & Woo, 2007).

The integration of ICT are expected at many educational institutions to gain students the information and skills necessary at 21st century (Buabeng-Andoh, 2012). In the same vein, the strategic reports and documents related with the ICT politics in Turkey support and emphasize the integration of ICT (MEB, 2016; TUBITAK, 2013). The ICT integration is mainly defined as an essential tool to achieve learning outcomes and to increase students' success (Hew & Brush, 2007; Usluel, Mumcu, & Demiraslan, 2007). Additionally, it is underlined that the integration of ICT is not only to acquire the update technologies but also to take into consideration the different administrative, instructional and institutional factors (Kabakçı & Yurdakul, 2011). There are different perspectives on how to use and integrate ICT in education. While some of these perspectives emphasize the role of ICT tools to enrich learning, the others focus on the students' use of ICT effectively and integrating ICT into teaching programs (Mazman & Usluel, 2011).

Although remarkable improvements on developing the infrastructure of ICT at schools in Turkey have recently occurred the integration of ICT into education is not so easy (Ilgaz & Usluel, 2011). Some of the most common problems encountered at schools can be listed as financial and technical problems, teachers' limited competencies, and their attitudes and beliefs (Hew & Brush, 2007). On the other hand, Ertmer et al. (2012) stated that the financial problems have been solved mostly. Thus, the foregrounded research topics should be teachers' beliefs on ICT and how to integrate ICT in classes (Altun, Kalaycı, & Avcı, 2011; Ertmer & Ottenbreit-Leftwich, 2010; Ertmer et al., 2012, Roblyer, 2006; Wang & Woo, 2007; Tondeur, Van Braak & Valcke, 2007).

The studies conducted on the ICT integration at schools indicated that the teachers want to use technology but they do not know how to integrate it into teaching-learning process so they do not use ICT (Adıgüzel & Yüksel, 2012; Adıgüzel, Gürbulak, & Sarıçayır, 2011; Balkı & Saban, 2009; Bozkurt & Cı lavdaroğlu, 2011; Çakır & Yıldırım

2009; Göktaş, Yıldırım, & Yıldırım, 2008; Hew& Brush, 2007; Kurt et al., 2013; Usluel et al., 2007). It was also determined that technology is mostly used to transmit information rather than to support students' high order thinking skills (Seferoğlu, Akbıyık, & Bulut, 2008; Ertmer, 2005; Göktaş et al., 2008; Hakverdi & Dana, 2012; Usluel et al., 2007; Yıldırım, 2007). For effective integration, teachers should choose efficient and appropriate tools and methods considering students' needs, besides they have to develop new teaching strategies (Demiraslan & Usluel, 2008). Thus, teachers need guidance on how to integrate ICT in order to facilitate meaningful learning for real-life situations and interrelated information sharing (Ertmer & Ottenbreit-Leftwich, 2010). For ICT integration to facilitate student-centered learning, teachers should have these competencies (Cennamo, Ross, and Ertmer, 2010):

- Identify which technologies are needed to support specific curricular goals
- Specify how the tools will be used to help students meet and demonstrate those goals
- Enable students to use appropriate technologies in all phases of the learning
- Process including exploration, analysis, and production
- Select and use appropriate technologies to address needs, solve problems, and resolve issues related to their own professional practice and growth.

The web 2.0 tools that are nowadays of significant component of ICT provide access to powerful communication and collaboration tools almost a "non-issue" for any teacher who has Internet access in his/her classroom. A key characteristic of Web 2.0 is the role played by users in creating, using, and sharing resources (Ertmer at al., 2012). The Web 2.0 tools that can be effectively used in education can be listed as Social bookmarking (Delicious, Diigo, etc.), Wikis (Wikispaces, etc.), Shared document creation (Google Docs, etc.), Blogs (Blogger, Wordpress, etc.), Microblogging (Twitter, etc.), Presentation tools (Prezi, Slideshare, etc.), Image creation and editing (Pixlr, Gliffy, etc.), Podcasting and the use of audio (Audacity, Voicethread, etc.), Screen recording (Camstudio, Jing, etc.), Mindmapping (Mindmeister, etc.), Digital storytelling (Toondoo, GoAnimate, Powtoon) can be categorized (Bower, Hedberg, & Kuswara, 2010).

For language teaching, the integration of ICT is also supported and the use of ICT for language skills namely reading, writing, speaking and listening has become widespread as an effective tool that facilitate effective real-life learning (Taşkıran, Koral, & Bozkurt, 2015). Several ICT tools provide opportunities to both teachers and students such as progress in students' pace, autonomy and alternative activities for teachers (Sarıçoban & Bakla, 2012). For the effectiveness of these tools, Leask (2001)

underlined that technology should be integrated seamlessly into the overall activity in the class and and it should be also used as a cross-curricular tool that supports language learning. As mentioned so far, teacher has a key role in the integration of ICT in learning and teaching process, especially language learning. Thus, during language teacher training, the integration of ICT should be emphasized to ensure that preservice teachers have necessary competencies for ICT integration for their future profession. The first step for such professional growth is to determine their perceptions and opinions and develop appropriate teacher training strategies to teach them how to integrate ICT.

METHOD

Design & Aim of the Study

This study was designed through survey model and descriptive method was adapted in order to determine ELT preservice teachers' perceptions and opinions on how to integrate ICT in language classes. On this purpose, the following research questions were addressed:

- What are the ELT pre-service teachers' perceptions on the use of ICT?
- What are the ELT pre-service teachers' opinions on why and how to integrate ICTin language classes?

Participants

The participants of the study compromised of 97 students attending to the department of English Language Teaching (ELT). The participants were selected through purposeful sampling method. In this method, the samples that are the most appropriate to the aim of the study are selected (Balcı, 2006). Out of the participants, 74 were female, 24 of them were male. In terms of year, 76 of the participants attended to 1st year while 21 were 2nd year students.

Research instrument

As data collection instrument, the questionnaire developed by the researchers were used. While developing the questionnaire, firstly the related literature was reviewed and possible items were written. After the first draft was presented to the experts necessary corrections and developments were conducted and it was piloted.
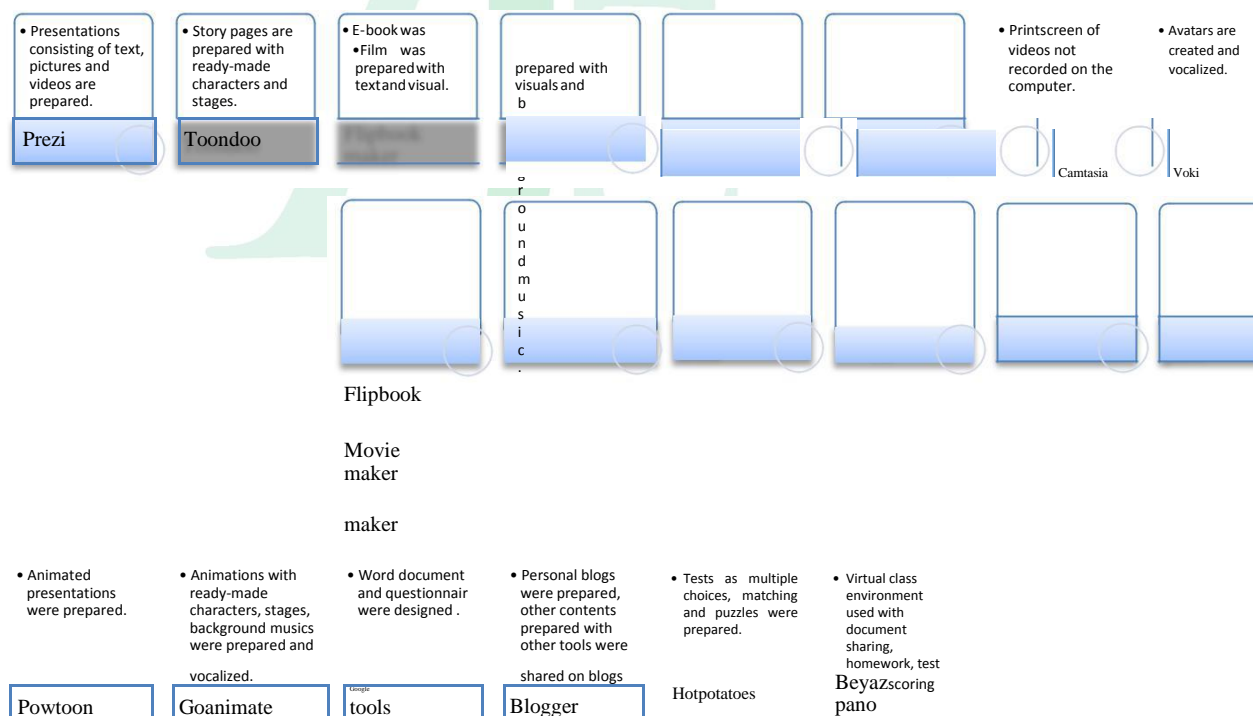
The final version consists of four sections. At the first section, there are 22 items questioning the ELT preservice teachers' perceptions on the integration of ICT on 5-point Likert scale. At the second section, there is a matrix on which ICT tools can be used for which language skill (reading, writing, listening, speaking, grammar,

vocabulary). At the third section, the participants were again asked to range the ICT tools in terms of effectiveness. Lastly, the students were asked which ICT tools they would integrate in their future career.

Research procedures

The preservice teachers participated to the study received training on the use of ICT tools within the scope of Computer II during 14 weeks. During this period pre- service teachers were introduced several tools for content development including: presentation tools, video creation tools, digital story-telling tools, e-book preparation tools, communication and collaboration tools such as Google Documents and Blogs. Many project works were conducted either individually or as a group work at labs and as homework. Their in-class and outside of class assignments were graded regularly and their grades were declared in the class' Learning Management System (LMS), Moodle site. The ICT tools such as presentation, film, animation, mind-mapping and so on that students can easily and practically prepare were chosen (Eren, Yurtseven Avcı & Seçkin Kapucu, 2014). Some of these tools are computer based (voice recording, paint, movie maker, camtasia, hotpotatoes) and the others are web-based. The ICT tools that were studied in the course are illustrated in the following Figure 1.

Figure 1: The ICT tools referred and used in this study

• Presentations consisting of text, pictures and videos are prepared.	• Story pages are prepared with ready-made characters and stages.	• E-book was • Film was prepared with text and visual.	prepared with visuals and b			• Printscreen of videos not recorded on the computer.	• Avatars are created and vocalized.
Prezi	Toondoo					Camtasia	Voki

Flipbook

Movie maker

maker

• Animated presentations were prepared.	• Animations with ready-made characters, stages, background musics were prepared and vocalized.	• Word document and questionnair were designed .	• Personal blogs were prepared, other contents prepared with other tools were shared on blogs	• Tests as multiple choices, matching and puzzles were prepared.	• Virtual class environment used with document sharing, homework, test scoring
Powtoon	Goanimate	Google tools	Blogger	Hotpotatoes	Beyaz pano

The main focus of their implementations and projects was on English language teaching. So, students were guided to design applications on a chosen English language subjects. However, in the scope of the course, the main principles of applications, informatics ethics, social webs (social bookmarking etc), online game-based learning

platform (Kahoot), concept mapping (Gliffy) and the other instructional sources to prepare e-content were also explained and discussed.

In addition to theoretical support and practical motivation for the participants' skills to develop the tools on project works, the integration of ICT tools were fostered when participants were asked to apply the ICT tools that they developed for language teaching in their language teaching methodology classes. These participants were asked to make demo lessons on a language subject at their methodology courses, in their demos they were asked to choose and develop any of the ICT tools that they have studied at Computer II course. In that way, it was ensured that the participants would have an idea how to develop and integrate ICT in their language classes. The data for this study was collected after the 2nd year students' ICT integrated language teaching demos. It was considered as a the best way to learn about their perceptions and opinions of the integration of ICT after they had just integrated.

Data analysis

After the data of the study was collected, descriptive statistics analyses were conducted. Thus, the mean and standard deviation of the responses were calculated. The score ranges were calculated as strongly disagree= 1.00-1.80; disagree= 1.81-2.60; No Idea = 2.61-3.40; Agree = 3.41-4.20 and Strongly Agree = 4.21 -5.00.

FINDINGS

This section reports the findings of the study referring to each research question. Firstly, the findings of the participants' perceptions on the use of ICT in language classes will be presented, then, the participants' opinions on why and how to integrate ICT will be explained through descriptive statistics. The findings related to the integrate ICT for each language skill will be illustrated with tables and graphs. At last, the findings that report the participants' future plans to use ICT in their actual classes will be presented.

ELT Preservice Teachers' Perceptions on the Integration of ICT

The present study firstly questioned the ELT preservice teachers' perceptions on how to integrate ICT technologies in language classes through the first part of the questionnaire. The participants' answers to the five-point likert scale rating from strongly disagree to strongly agree were analysed. The mean values of the participants' answers are presented in Table 1 in the following.

Table 1

Participants' perceptions on the use of ICT in the language class

	$\overline{X}$

While using ICT;	
I belived that they would help me become more effective teacher.	4.42
I agreed that technology should be integrated into teaching.	4.33
I found it beneficial.	4.09
I had fun.	3.53
I loved my profession.	3.35
My self-confidence increased.	3.13
I got anxious.	2.86
I had difficulty.	2.76
I found it unnecessary.	2.07

As Table 1 indicates the majority of the participants believed that ICT tools would help them become more effective teachers (mean =4,42). Additionally, the participants mostly agreed that technology should be integrated into teaching (mean = 4.33). The distribution of the findings in Table X indicates that the participants' negative perceptions on ICT integration have very low means. Few participants found ICT use as unnecessary (mean= 2.07).

ELT Preservice Teachers' Opinions on Why and How to Integrate ICT

After the participants' perceptions on ICT integration in language teaching were determined, their opinions on why and how to integrate ICT were questioned. In that way, it was aimed to reveal the participants' actual beliefs and further practical ideas. The 22 items questioning the participants' opinions were analyzed and the most frequent and least frequent answers are presented in Table 2.

Table 2

Participants' opinions on why to integrate ICT in language classes

|	$\overline{X}$
1. It makes language teaching fun.	4.45
2. It makes language teaching easy.	4.39
3. It makes learning permanent.	4.38
4. Sharing learning materials becomes easier.	4.36

5. It makes language teaching effective.	4.35
6. It increases students' productivity and creativity.	4.34
7. It increases students' motivation.	4.31
8. It requires more effort and time.	4.25
9. It increases the students' participation.	4.24
10. It facilitates collaborative learning.	4.16
11. It promotes critical-thinking.	4.05
12. It increase teacher-student interaction.	4.02
13 It is a waste of time.	2.02

When the participants were asked on why ICT should be integrated in language teaching, the majority of the participants agreed that ICT makes language teaching fun (mean= 4.45) and easy (mean= 4.39). Thus, it can be claimed that most of the participants are aware that ICT integration is a good way to draw language learners' attention and make language activities fun that could facilitate student involvement through animated and interesting content tools. Furthermore, the participants reported that the integration of ICT in language class makes learning permanent (mean= 4.38). Permanent learning is the desired outcome of language teaching, thus preservice teachers agreed that ICT integration is one of the best way to reach this outcome. Only few participants thought that the use of ICT is a waste of time (mean= 2.02), thus they thought there is no reason to integrate ICT.

Language Skill based ICT Integration

Different from many studies in the literature, this study examined ICT integration in terms of language skills from the preservice teachers' views. Such questioning could inform about how these preservice teachers would actually integrate ICT in the language classes because language teaching is multidimensional covering different language skill dynamics. Language teaching would be more effective when teachers design their lessons considering these dynamics and integrate the appropriate materials and ICT tools for each skill. Thus, through the matrix on which ICT tool for which language skill in the questionnaire, it was aimed to reveal whether the preservice teachers have such awareness and whether they could differentiate ICT tool in terms of features of tools and language skill dynamics.

The findings of the matrix are illustrated in the graphs as language skill based in the following. The figures are given as percentages for each ICT tool preferred by the participants for each language skill. Firstly, the participants' answers on which ICT tool is the most effective for reading skill are illustrated in Graph 1.
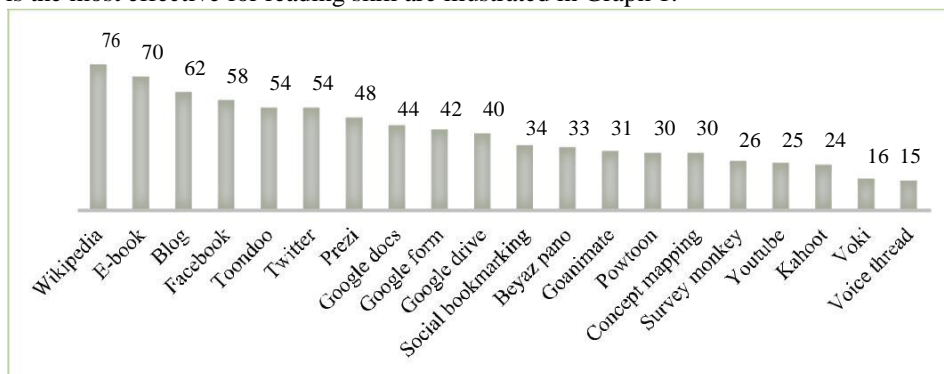
Graph 1. The Distribution of Favorite ICT Tools for Reading Skill

When the percentages illustrated in Graph 1are examined, it can be seen that majority of the participants agreed on the effective use of Wikipedia (76%) and E-book (70%) for reading skill. They were followed by the high percentage of Blog use (62%). Social network tools Facebook (58%) and Twitter (54%) were also suggested as the effective tools to teach and support reading skill.

For writing skill, which is seen as challenging skill for many language learners, preservice teachers suggested the integration of the following ICT tools as in Graph 2.
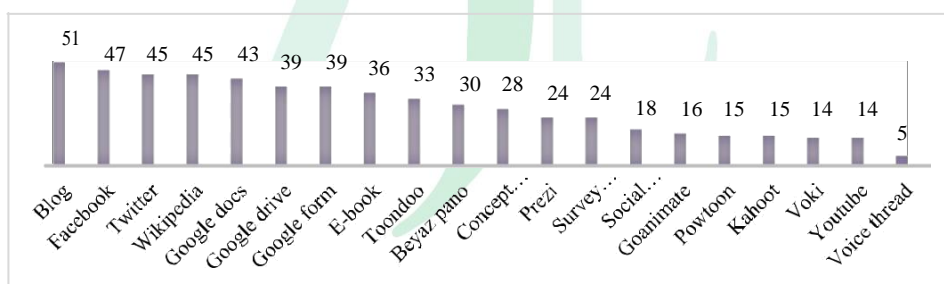
Graph 2. The Distribution of Favorite ICT Tools for Writing Skill

For writing skill, the participants also chose the use of Blogs (51%). The participants preferred social network tools such as Facebook (47%), Twitter (45%) to improve writing skill as well. Wikipedia (45%) was also suggested as an effective tool to improve writing skill.

While for reading and writing skill, the participants preferred similar ICT tools, for vocabulary learning and teaching, they varied their choices. The answers are as follows in Graph 3.
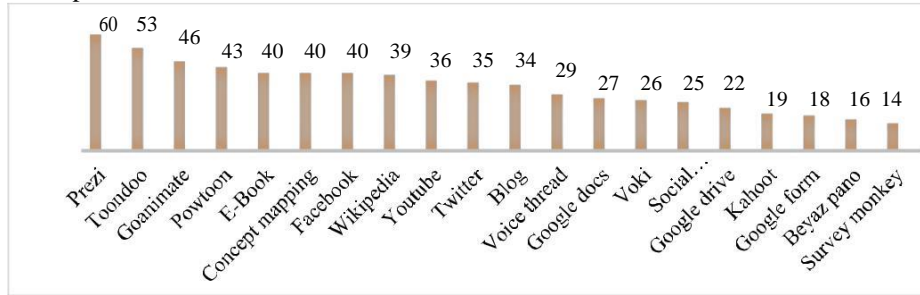
Graph 3. The Distribution of Favorite ICT Tools for Vocabulary

The most frequent answer for vocabulary teaching is Prezi (60%) and it is followed with Toondoo (53%), Goanimate(46%) and Powtoon (43%). Again, E-book (40%) was suggested as an effective tool for vocabulary teaching as for reading skill. The distribution of the answers indicated that the preservice teachers were aware of the fact that for effective vocabulary learning, learners should be exposed to different vocabulary as in E-book and vocabulary should be in good and interesting context as possible in Goanimate, Toondoo, Prezi.

For grammar, which is the most studied and referred language skill,similar results were also observed. The distribution is given in Graph 4.
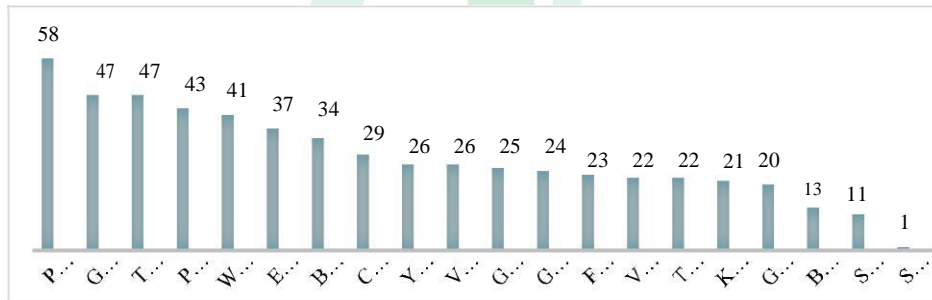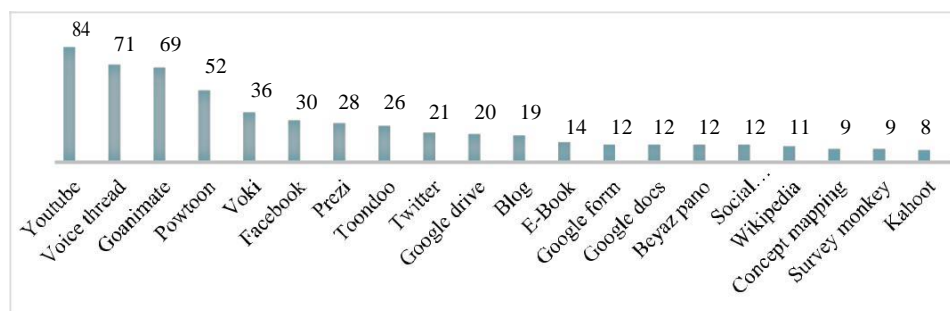

Graph 4. The Distribution of Favorite ICT Tools for Grammar

Again, a presentation tool Prezi (58%) was suggested by 58% of the participants. Almost half the participants agreed to use Goanimate and Toondoo (47%) to teach grammar in language classes. Different from other skills, for both vocabulary and grammar teaching, Concept mapping was moderately suggested by the participants. The

distribution again showed that the preservice teachers preferred graphical and animation tools mostly.

Another challenging skill for language learners is listening since learners have difficulty with following the recorded scripts and authentic texts. The participants preferred to use the following ICT tools in their future listening lessons, as illustrated in Graph 5.

Graph 5. The Distribution of Favorite ICT Tools for Listening Skill

For listening skills, the participants mostly agreed on the use of Youtube (84%). This video sharing tool can provide a variety of real-life video which could be used as a good source for listening activities. The results showed that the preservice teachers are aware of the potential of this tool for this skill. As it can be seen in the following graph, the use of Voicethread (71%) and Goanimate (69%) were other favorite tools.

As the last language skill, the participants' opinions on which ICT tools can be used effectively for teaching speaking were asked. The findings are in Graph 6.
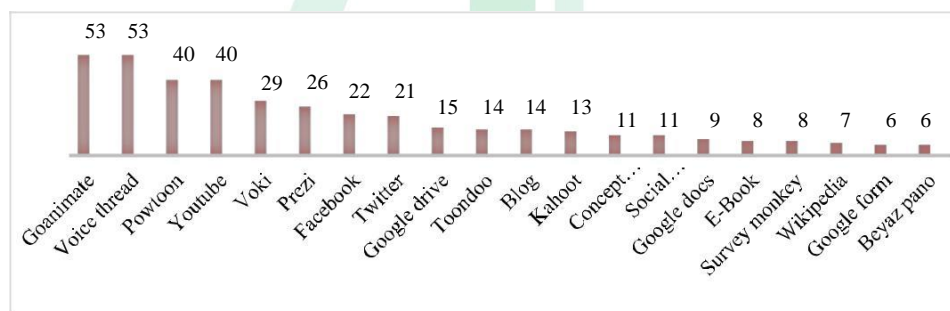
Graph 6. The Distribution of Favorite ICT Tools for Speaking Skill

The distribution of their answers indicated that Goanimate and Voicethread (53% for each) were equally preferred by more than half of the participants. They were followed by Powtoon and Youtube (40%) with the same percentages. The findings showed that

the participants rated many different tools so rather than focusing on one or two tools they varied the tools.

When the overall results on the participants' answers on language skill based ICT tools are reconsidered, it could be concluded that the participants seemed to be aware of the different features of tools that can address to different dynamics of language skills. Thus, they chose the tools for language skills effectively. Rather than one or two tools, they varied their choices. Animated and graphical tools were the most favorite as well as social network tools.

Future Plans on ICT Integration

The preservice teachers in this study were also asked to rate which tool they want to use in their future career most. In that way, it was aimed to determine their tendencies on the integration of ICT tools. The frequencies were given in the following Table 3.

Table 3

ICT tools that participants plan to use in their future career

	f
Goanimate	87
Youtube	76
Prezi	68
Powtoon	58
Wikipedia	57
Blog	54
Toondoo	52
E-book	48

In their future career, most of the students plan to use Goanimate (87%) in their language classes. It is followed by Youtube (76) with a high frequency and Prezi (68%). Additionally, the participants envisioned that they will use Powtoon (58%) and Wikipedia (57%) in their classes.

CONCLUSION & DISCUSSION

The overall findings indicated that ELT preservice teachers participated in this study had positive perceptions on the integration of ICT. This result is consistent with the similar studies conducted in Turkey (Hismanoğlu, 2012; Aslan & Zhu, 2015). Moreover, the results pointed out that the ELT preservice teachers in this study are aware of the effectiveness of ICT use in language classes. They mostly agreed that the integration of ICT tool would contribute their teaching as such integration would make language teaching and learning fun and easy. Erguvan (2014) also underlined the same findings about the positive contribution of ICT integration to students' motivation and teaching process, thus teachers' enthusiasm. The participants of this study also underlined that ICT integration would make learning permanent. As a support for this finding, Leask (2001) claimed that learning becomes more successful when ICT is integrated seamlessly. Thanks to different benefits of ICT integration such as scaffolded learning, immediate feedback, variety of audial and visual materials etc, language learning is fostered.

Different from the similar studies in the literature, the present study addressed to a neglected research area; language skill based ICT integration. It was aimed to examine the participants' awareness of the potential of ICT tools for each language skill. The results also showed that they can discriminate the different function and potential of each ICT tools for different language tools. They could plan to use ICT to improve their teaching qualities and motivating their students for each language skill. In terms of favorite ICT tools, the participants' answers varied according to the characteristics of tool and language skill. While for receptive skills, namely reading and listening, the tools that provide effective and comprehensible language and input such as Wikipedia, E-books, Youtube and Voicethread were suggested by the learners, for more productive skills such as writing and speaking, the tools that motivate and enable learners to use and produce language were preferred by the participants, for instance, Blogs and Goanimate. The wide range of ICT tools suggested by the participants were also referred in BaeSon's article (2011) as effective for language skill teaching.

The participants envisioned to use the similar ICT tools in their future teaching. Again animated and social network tools were preferred by the participants. Considering the highest frequencies on the tools, it could be claimed that the participants are eager to integrate these tools in the future as well.

IMPLICATIONS

Considering the result of this study, some research and pedagogical implications can be suggested. Firstly, it should be emphasized that the questionnaire developed by the

researchers for this study was the first attempt to determine ELT pre-srevice teachers' perceptions and opinions. The content of the questionnaire can be developed and it could be applied to a larger group for the sake of higher reliability and validity. Additionally, to examine how preservice teachers integrate ICT in the actual language classrooms, similar studies could be conducted with 4th year students who have teaching practice courses. For the pedagogical implications, it can be suggested that the use of ICT should be emphasized throughout language teaching methodology courses in teacher education. Integration of ICT into language teaching should be emphasized and exemplified considering specific language skills.

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