An Investigation on the Technological Competency Self- Evaluation Levels of English Language Teachers

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Abstract
This study was conducted to determine the technology competency self-evaluation levels of English Language Teachers and their opinions on the subject. The mixed method, in which qualitative and quantitative research designs were used together, was used in the study. The data of the research was collected using data collection tools including scale and open-ended questions. The research covers English Language Teachers working in Aksaray province in the 2020-2021 academic year. The sample of the study consists of 303 English Language Teachers working in primary, secondary and high schools in Aksaray. Teachers' technology self-efficacy assessment capacities were determined by taking their opinions with the help of Technology Competence Self-Evaluation scale. It was tried to determine teachers' technology use capacities, the problems they face and solution offers by means of open-ended questions prepared by the researcher. The data gathered was analysed through t-tests and one-way Anova via SPSS programme and the opinions obtained from open-ended questions were analyzed through content analysis. As a result of research, it was found that Technological Competency Self-evaluation Levels of English Language Teachers is high and their self-efficacy does not make a significant difference in terms of professional seniority, teachers' levels of academic work, going to technology course and using platforms like eTwinning, web 2.0. It was determined that teachers used technology as Education and Training environment, they used it on the purpose of assessment and evaluation at the lowest level, the teachers who have higher professional seniority have much more difficulties. It was also determined that they face the problems such as infrastructure, internet access problems and illiteracy. It was confirmed that teachers should take in-service training courses as a solution.

Introduction

Developing technology affects every segment of society differently. Technology has its importance felt in the field of education as well as in all areas of life. It is obvious that educational environments that are not in harmony with technology and actors in education cannot train students who are suitable for the needs of the age. With the introduction of technology into our educational institutions in our country, a new era has emerged in the education process. Teachers are expected to master the new educational processes integrated with technology rather than the classical education approach. Regardless of education level and branch, technological developments have affected our educators. Changes and developments in the field of technology have also affected the field of education. At the same time, this process has shown that new knowledge and skills are necessary for the actors in education.

All the changes that have occurred have caused the learning habits of the students to change as well. Curriculum in schools has also been affected by the changes and has been shaped according to new needs (Seferoğlu, 2015).

Developments in the field of technology have caused students to be more active in learning environments. According to Rogers (1983), in student-centered learning, learners question not only what they will learn, but also how and why they will learn. The active participation of students in the learning process has led to changes in teaching methods and materials. In order to meet the expectations and needs of the students, who are at the center of learning, it has become necessary for the teachers to reach and convey the right information by using technology.

The change that started in the curriculum for the first time in 2005 by the Ministry of National Education was completed in the 2015-2016 academic year (MEB, 2017). With the study emphasizing that the rapid changes and developments in socio-cultural life, science and technology, the needs of the society and the individual differ, a change was made in the curriculum.With this change, the role of teachers in educational ares was re-explained, and it was stated that the skills of teachers to use technology should be at a sufficient level. With the same curriculum, it is aimed that the students should have science and technology competence and digital competence. The Ministry of National Education, which does not want to stay away from the technological changes and developments in the world, takes the necessary measures to allow teachers to adapt to the requirements of the age. With the In-Service Training Regulation of the Ministry of National Education, local and central in-service training courses are organized according to the needs of teachers in order to enable teachers to develop themselves.

The European Commission defines digital competence as one of the nine key competences that its citizens must possess to participate in today's societies (Cantabrana et. al, 2019). In this context, today's teachers are expected to make students use digital technologies as a part of their daily lives. In other words, it is stated that teachers who will encourage students to use digital skills should also have sufficient skills. Changing life conditions have shown that today's classical teacher approach is not sufficient for education. The Covid-19 pandemic, which has affected the whole world since the end of 2019, has once again revealed that teachers should develop themselves digitally.The closure of schools due to the pandemic, the replacement of face-to-face education with distance education allowed teachers to see how comfortable and technologically competent they are with technology. For this reason, it is of great importance for teachers to keep up with the age we live in and to improve themselves about technology, which is one of the most important requirements of the age.

Problem Statement of the Research

What are the Technological Competency Self-evaluation Levels of English Language Teachers and their views about this topic?

Sub-Problems

- What is the technological competency self-evaluation level of English Language Teachers?
- Do English Language Teachers' self-evaluation levels of technological competency differ according to genders?
- What are the Views of English Language Teachers about technological competency self-evaluation?

Literature Review

In the study conducted by Embi (2007), it was stated that the most important factor in the effective use of technology by the new generation is the teacher and that it is also important for the teacher training faculty members to learn the use of technological tools. A study was conducted with 262 faculty members to determine computer applications, usage levels and computer self-efficacy perceptions of faculty members. According to the results of the study, the computer self-efficacy perception levels of the instructors were high, but it was determined that the perception levels decreased as the age of the individuals increased.

A survey study was conducted by Şıktunca (2007) with the participation of 302 teachers and according to the results of the research, it was determined that

94% of the teachers were computer literate, their self-efficacy was high in basic level operations and this situation did not change depending on the gender. In addition, it has been determined that teachers are lacking in high-level competencies such as computer hardware and software.

In the study conducted by Dawson (2008), it was tried to determine the proficiency levels of the use of Information and Communication Technologies in the pre-service trainings of the new generation Science and Technology teachers and the factors that prevent or increase the use of Information Communication Technologies. According to the data of this study conducted with teachers, teachers mostly use Information Communication Technologies for word processing, internet access, e-mail and presentation. It was also determined that the use with students during the lesson was less.

In the study of Çakıroğlu, Güven, and Aktan (2008) entitled "Examination of Mathematics Teachers' Beliefs on the Use of Computers in Mathematics Education", researchers randomly selected 76 primary and secondary school mathematics teachers, (33 female and 43 male), from different seniorities, and focused more on concreteness, visual and intuitiveness. It was determined that primary school mathematics teachers, who gave great importance to concreteness, visual and intuitiveness, had higher beliefs about computer use.

A study was conducted by Çelik (2008) to determine how computers and computer programs that entered our lives depending on the developing technology regarding the use of information technologies and automation systems could be used in the field of education. According to the results of this research, which was also supported by the Ministry of National Education, teachers stated that they could use Information and Communication Technologies at intermediate (tables, presentations, etc.) and high-level (word processor, e-mail, etc.) proficiency depending on the purpose of use. In addition, considering the opinions of teachers about the use of the School Automation System, it was determined that the teachers had the necessary competencies and were open to use.

In the study titled "A Study on Determining the Levels of Use of Educational Technologies of Teachers Working in Commercial Vocational High Schools" prepared by Hacısalihoğlu (2008), it was investigated how much the teachers working in Commercial Vocational High Schools used educational technologies, the factors that prevented their use of educational technology and their attitudes towards the use of educational technology. As a result of the research, no significant difference was found in the use of Information and Communication Technologies, except that the gender variable was in favor of men among the participating teachers.

In the study titled "Primary Education Teachers' Use of Information Technologies in Classes and Opinions on the In-Service Training They Received Regarding Information Technologies (Sakarya Province Case)" conducted by Kiper in 2008, 62.22% of the participating teachers used Information and Communication Technologies in their lessons and stated that the lessons were more efficient and students' attention was kept more in the lesson. Teachers who did not prefer to use Information and Communication Technologies in their classes indicated the absence of Information and Communication Technologies in their schools, deficiencies and not feeling the need as the reasons for not using it. In addition, it was stated that frequent malfunctions in Information and Communication Technologies adversely affected the use.

Koçoğlu (2009) investigated the effect of computer assisted language teaching course on the development of Technological Pedagogical Content Knowledge of English teacher candidates. It was determined that novice teachers improved in teaching English using technology, developing a teaching strategy, realizing student learning, and having the necessary technology integration-based materials for language teaching.

Uğurlu (2009) investigated the development of pre-service teachers' formative assessment and evaluation knowledge and skills in a process related to a training program used within the scope of Technological Pedagogical Content Knowledge. He determined that there were developments in the field of assessment and evaluation in all candidate teachers, and that formative assessment and evaluation in particular improved even more.

In the study conducted by Nathan (2009), the relationship between pre-service teachers' self-efficacy levels of adaptation to technology and Technological Pedagogical Content Knowledge levels were examined and it was determined that there was a moderate positive relationship. Jang (2010) investigated the effect of "interactive whiteboard integration and peer coaching on the development of science teachers' Technological Pedagogical Content Knowledge", and it was found that the model integrated with smart board and peer coaching, in which science teachers could provide subject area information more easily by using smart boards, had a technological impact on science teachers. It was concluded that pedagogical content knowledge had a positive effect on the development.

In the study conducted by Arpa (2010), "the effect of teaching technologies used by teachers working in vocational high schools on the choice and use of teaching strategies, methods and techniques" was investigated in terms of different variables. In the study, in which the opinions of 372 teachers were consulted, it was concluded that the intensity of use of technology tools played an active role in the use of technology-assisted teaching strategies and in the selection of methods and techniques. It was determined that teachers mostly preferred instructional technologies in the use of techniques such as cooperative learning and problem solving.

Li (2012) stated that there were 4 important factors that affected teachers using technology, in his study called Understanding Foreign Language Teachers' Educational Technologies and Applications. These factors were socio-cultural contexts, teachers' beliefs, access to resources, and technology sufficient – trust, respectively.

Rienties, Brouwer, and Lygo-Baker (2013) investigated the effects of Technological Pedagogical Content Knowledge levels, beliefs and intentions of faculty members with the online teacher training program. As a result of the study, it was observed that the Technological Pedagogical Content Knowledge levels of the faculty members increased, but as time progressed, their level of persuasion about the benefits of information transmission decreased.

Hsu, Liang, and Su (2015) conducted a different study and investigated the effects of technology and pedagogy-oriented course designs on the acceptance levels of preschool teachers' Technological Pedagogical Content Knowledge. The level of game knowledge, game pedagogical content knowledge and game-based learning acceptance levels of preschool teachers in the technology-based lesson group were higher than those in the pedagogy-based lesson group.

Yenen and Dursun (2019) conducted a study on English Language Teachers' Self-Efficacy in the Teaching Process and its Reflections on the Classroom Environment, and it was determined that there were differences between the self-efficacy levels of English teachers for the teaching process and their classroom practices.

Çelebi and Kuşuçuran (2019) found that English Language teachers had enough information and were competent about alternative assessments in their research titled "Examination of EFL Teachers' Competence in Using Alternative Evaluation Methods". However, in the same study, it was observed that the frequency of teachers' preference for these methods differed.

Mofareh (2019) in her study titled "The Use of Technology in English Language Teaching" stated that outdated teaching methods could be replaced by current technology such as computers, smart devices, audio-visual materials and electronic approaches.

In the literature review, it was seen that the focus was on teachers' views on technology use. In the researches, the technology competency of the teachers was discussed in general. In other words, there has not been any research involving English Language Teachers regarding the technology competency of teachers on a branch basis. This study directly targets English Language Teachers and focuses on English Language Teachers' Technological Competency Self-Evaluation. The current situation analysis was made by taking the opinions of English Language Teachers about technology competency self-evaluation and suggestions were given on how English Teachers could use technology more effectively in their lessons.

Materials and Method

This research was prepared in the mixed method model in order to determine the Technological

Competency Self-Evaluation Levels of English Language Teachers working in Aksaray and to get their opinions on this topic.

Creswell (2014) defines mixed methods research as an approach in which the researcher collects both quantitative and qualitative data and integrates two data sets with each other. In the research, quantitative data was collected with a scale, and qualitative data was collected with open-ended questions. According to Johnson et al. (2007), mixed methods research is a method in which qualitative and quantitative research methods are used together in order to allow the researcher or research team to examine the study in depth. The researcher can decide for himself in which order he will use the quantitative or qualitative data when using the mixed method. In order to ensure that the research is carried out in accordance with its purpose, the researcher can collect qualitative and quantitative data at the same time or can collect them sequentially.

In this study, the convergent parallel design, which is the pattern in which qualitative and quantitative data are collected together, was used. The scale was used to collect the quantitative data of the research and open-ended questions were used for the qualitative data.

Universe and Sample

The universe of the research consists of English Language Teachers working in Aksaray. According to the information received from the Strategy Development Department of Aksaray Provincial Directorate of National Education, a total of 425 English Language Teachers are working throughout the province of Aksaray in the 2020-2021 academic year. The data collection tool which was used within the scope of the research was sent electronically to all English Language Teachers throughout the province.

The distribution of the teachers participating in the research and forming the sample according to their demographic data is given in the tables below.

When the data in the table is examined, it can be seen that 221 (72.9%) of the participants are female and 82 (27.1%) are male.

Table 1 Frequency Analysis of Participants' Gender

		N	%	Valid %	Cumulative %
Gender	Female	221	72,9	72,9	72,9
	Male	82	27,1	27,1	100,0
	Total	303	100,0	100,0	

Table 2 Distribution of Participants' Educational Status

	N	%	Valid %	Cumulative %
Bachelor	260	85,8	85,8	85,8
Master	43	14,2	14,2	100,0
Total	303	100,0	100,0	

260 (85.8%) of the participants have bachelor's degree and 43 (14.2%) of the participants have master degrees.

Table 3 Distribution of Participants According to the Schools they Work

	N	%	Valid %	Cumulative %
Primary	54	17,8	17,8	17,8
Secondary	140	46,2	46,2	64,0
High School	109	36,0	36,0	100,0
Total	303	100,0	100,0	

54 participants (17.8%) work in primary school, 140 participants (46.2%) work in secondary school and 109 participants (36.0%) work in high school.

Data Collection Tools and Data Collection

Since the mixed method was preferred in the study, quantitative and qualitative data were collected together. The data collection tool used within the scope of the research consists of 3 parts. In the first part, there is personal information form to learn the demographic information of the participants. In the second part, the Technological Competency Self-Evaluation Scale for 21st Century learning was used, which was developed by Christensen and Knezek in the USA in 2017 and adapted to the conditions of Turkey by Fidan et al. in 2020. In the last part of the

data collection tool, there are open-ended questions developed by the researcher.

Reliability Analysis

In researches, before the analysis is performed, it is tested whether the data is at the level of reliability suitable for the analysis. Reliability is a concept that reveals the consistency and internal harmony of all variables in a scale. (Kurtuluş, 2010, p.184) "Reliability can be defined as the consistency between the answers given by the individuals to the test items. Reliability is about how accurately the test measures what it wants to measure. Calculated as the reliability coefficient of the test (r), it is used to interpret to what extent individual differences in test scores are true and how much depends on the error factor. If the answers to the test items have three or more options, the cronbach (α) coefficient is used." (Büyüköztürk, 2007, pp. 169-170)

"Alpha value calculated from a 15-item scale is called standard alpha, and if its value is above 0.75, it is considered to have high reliability, values between 0.50 and 0.75 are considered to have medium reliability, and below 0.50 reliability is considered low. The alpha coefficient calculated from a scale with more than 15 items is 0.90 and above with excellent reliability, between 0.70 and 0.90 with high reliability, between 0.50 and 0.70 with medium reliability, and below 0.50 with low reliability (Hinton et al., 2004, p. 364).

The values of the reliability of the technological competency self-evaluation scale and its sub-dimensions, translated into Turkish by Fidan et al. (2020), and the Cronbach's alpha coefficient obtained with the data in the study are given in the table below.

Table 4 Reliability Analysis of the Technological Competency Self-Evaluation Scale and its Sub-Dimensions Obtained by Using the Data in the Study

	Cronbach Alfa	Number of Items
Technological Competency Self-Evaluation Scale	,927	24
E-mail	,910	5
World Wide Web	,866	5
Integrated Application	,820	4
Teaching via Technology	,894	10

When the cronbach's alpha coefficient in the reliability analysis of the technological competency self-evaluation scale and its sub-dimensions in the table were examined, it was understood that the values were between ,820 and ,927, which mean the scales were reliable.

Collection of Quantitative Data

The Technological Competency Self-Evaluation Scale was used to collect quantitative data within the scope of the research. Adapted to the conditions of Turkey by Fidan et al. (2020), the scale was reduced from 34 items to 24 items and gathered under 4 dimensions. The personal information form was used to reach the demographic information of the English Language Teachers in the study.

Collection of Qualitative Data

In order to collect qualitative data in the research, the 'Open-Ended Questions Form', which was prepared by the researcher and given the final form by taking expert opinion by experts in the field was used. In order to collect qualitative data, the 'Open-Ended Questions Form' prepared by the researcher was created by obtaining expert opinion.

Data Analysis

The analysis of the qualitative and quantitative data of the research was carried out separately. SPSS Program was used while analyzing the quantitative data. Content analysis method was used while analyzing the qualitative data of the research. In order to analyze the data, the questionnaires were first transferred to Excel and then to the IBM SPSS 25.0 program by making appropriate coding. In the analyzes, factor analysis and reliability analysis of the technological competency self-evaluation scale for 21st century learning and frequency analyzes of the demographic data of the participants were performed. In addition, descriptive statistics of the technological competency self-evaluation scale were determined. The differentiation status of the technological competency self-evaluation levels according to the demographic data of the participants was analyzed.

Analysis of Quantitative Data

Independent sample t-test, one-way analysis of variance (one-way anova) and tukey post-hoc test was used to analyze the quantitative data obtained with the help of the scales used in the research. In the analyzes, descriptive statistics were expressed as frequency (n), percentage (%), mean, standard deviation, minimum and maximum and statistical significance value was accepted as $p < .05$.

Analysis of Qualitative Data

Content analysis technique, one of the descriptive analysis techniques, was used in the analysis of qualitative data. Frequencies, percentages, tables and graphics were used. The data collected through an open-ended questionnaire regarding the third sub-problems of the study were analyzed using the content analysis technique which is one of the analysis techniques in qualitative research methods. The data obtained from the open-ended questionnaire were determined as frequency and percentage.

While analyzing the data, first of all, open-ended questions and the answers given were examined. From this point of view, categories were created by coding the themes and possible answers with certain code expressions. Finally, the frequencies of the answers that came together under each category were determined. By applying this method on open-ended questions, the question items were transformed into theme expressions, considering that each question item had a theme in terms of quality. Categories were created by writing possible answers under each theme in codes. The answers given by the participants to the questions were classified according to these codes and their frequencies and percentages were determined.

Results and Discussion

In this section, the findings are given in sub-headings according to the research questions.

Technological Competency Self-Evaluation Levels of English Language Teachers (Findings for the First Sub-Problem of the Study)

The first sub-problem statement of the research is "What is the technological competency self-evaluation level of English Language Teachers?" in the form. Descriptive statistics according to the answers given by the participants regarding the technological competency self-evaluation scale and its sub-dimensions are given in tables below.

Table 5 Descriptive Statistics of the Technological Competency Self-Evaluation Scale and its Sub-Dimensions

	Minimum	Maximum	Mean	Standard Deviation
Technological Competency Self-Evaluation Scale	3,54	5,00	4,50	,37
E-mail	4,84	5,00	4,96	,07
World Wide Web (WWW)	4,87	5,00	4,96	,06
Integrated applications	1,50	5,00	3,80	,89
Teaching via Technology	2,60	5,00	4,28	,60

According to the data in the table, the technological competency self-evaluation level of 303 participants was 4.50.Their e-mail level was 4.96, their world wide web (WWW) level was 4.96, integrated applications level was 3.80and their level of teaching with technology was 4.28.

Technology Proficiency Self-Evaluation Levels of English Teachers According to Genders (Findings Related to the Second Sub-Problem of the Study)

The second sub-problem of the research is "Do English Language Teachers' Self-Evaluation Levels of Technological Competency differ according to their genders?". Findings related to this sub-problem are given below.

Table 6 Analysis of Participants' Gender and Scales-Independent Sample t-Tests:

	Gender	N	Mean	Standard Deviation	t	df	p
Technological Competency Self-Evaluation Scale	Female	221	4,5183	,35123	1,191	301	,235

Technological Competency Self-Evaluation Scale	Male	82	4,4617	,40810	1,191	301	,235
E-mail	Female	221	4,9645	,06662	2,575	127,267	,011
	Male	82	4,9395	,07806			
World Wide Web (WWW)	Female	221	4,9676	,05633	1,920	131,912	,057
	Male	82	4,9524	,06300			
Integrated Applications	Female	221	3,8248	,87682	,675	301	,500
	Male	82	3,7473	,91835			
Teaching via Technology	Female	221	4,3027	,59035	1,167	301	,244
	Male	82	4,2116	,63907			

When the independent sample t tests in the table are examined, the technology proficiency self-evaluation levels of the participants (t(301) = 1.191; p >.05), the world wide web levels (t(131,912) = 1.920; p >.05), the levels of integrated applications (t) (301) = .675; p >.05) and levels of teaching with technology (t(301) = 1.167; p >.05) do not differ significantly by gender. On the other hand, the e-mail usage levels of the participants (t(127,267) =2.575; p <.05) differ significantly according to their gender. In other words, e-mail usage levels of female participants are significantly higher than male participants. When a general evaluation is made in terms of gender, the fact that the participants are female or male does not significantly affect their level of technology competency, their level of self-evaluation, their level of the world wide web, their level of integrated applications and their level of teaching via technology, while it does affect their level of e-mail use.

Views of English Language Teachers about Technological Competency Self-evaluation (Findings Related to the Third Sub-Problem of the Study)

The third sub-problem of the study is "What are the Views of English Language Teachers about technological competency self-evaluation?" expressed as. The results of the analysis of the qualitative data regarding the third sub-problem of the study, the answers given by the participants to the open-ended semi-structured questions, are given below by the content analysis.

301 of the participants answered the question "How do you use technological tools in your lessons as an English teacher?" while giving an answer to the question, two participants did not. After the content analysis of the answers given, four different categories were determined: "Instructional tool (presentation, slide, application), "Educational teaching environment (Smart board, distance education)", "Assessment and evaluation" and "Teaching activity (reinforcement, application)"were found.

It was determined that teachers used technology mostly (59.80%) as an educational environment, and at least (3.99%) for measurement and evaluation purposes. It was understood that the number of teachers who used technology for the purpose of reinforcing learning or for an application with the thought that it would have a positive effect on learning, communication skills or student motivation is 24.92%. When evaluated only in terms of data transfer or access to information, the rate of teachers who stated that they used it as a tool in teaching was 11.30%. When all these data are evaluated together, it can be thought that the idea that technology provides extra opportunities in educational environments and increases effectiveness in teaching is accepted. Despite the alternative opportunities offered by technology, it is a remarkable finding that teachers have not yet widely used technology for measurement and evaluation. It can be thought that this situation is caused by teachers' low trust in remote control or supervision while using technological tools in the measurement and evaluation process, or the insufficient discovery of alternative ways to classical measurement and evaluation methods.

Teachers' Purposes of Using Technology According to the Education Level They Work: 139 of the participants work in secondary school, 109 in high school and 53 in primary school. Although

the rates differ, it was determined that the purpose of using technology in all three levels was education and training environment and teaching activities. The majority of the participants, who stated that they used it as a tool in teaching, work at the secondary school level compared to other levels. The use for measurement and evaluation purposes is almost non-existent at every level (f=2-7).

Purposes of Using Technology According to Teachers' Professional Seniority: Most of the participants (n=107) have a professional seniority of 1-5 years. The other results are as follows; 16 years and above (n=94), 11-15 years (n=66) and 6-10 years (n=34). Except for those who have 1-5 years of professional seniority, the purposes of using technology are similar, and they are generally intended for educational environment and teaching activities. The rate of use as a tool in measurement, evaluation and teaching is very low (2.94-8.82%). The rate of using technology in teaching activities of the participants with a professional seniority of 1-5 years is higher with a difference of approximately 5% (28.04%) compared to those with other seniority. In addition, the rate of use of technology as a tool in teaching by those with this professional seniority is very highwith differences ranging between 10-16%.

Problems Teachers Experience While Using Technology in Education

301 of the participants answered, "What are the problems you have in using technology as an English Language Teacher?" while giving one answer to the question, two participants did not. After the content analysis of the answers given, "No problem", "Teacher connection", "Inadequate technical infrastructure at school", "School's internet access", "Student indifference", "Student infrastructure deficiency", "Teacher infrastructure deficiency", "Teacher ignorance", "Material problem" and "General problems" were found to differ under ten categories.

According to the results, although the rate of teachers who stated that they did not have any problems is at the level of 21.26%, it is understood that the remaining 78.74% have a problem for different reasons. The differentiation of these problems under 9 different categories according to the answers given indicates the diversity of the problems. Although the sources of the problem are different, the teachers stated that they drew attention to the lack of six structures, mostly due to the teacher, school or student. It was also determined that there were teachers who thought that students had apathy (2.33%) and material problems (3.32%), although not in large numbers. Despite these evaluations, the rate of teachers who think that they do not have enough knowledge about using technology is 12.62%, which is another finding that needs to be considered. It can be assumed that teachers, who are helpless in solving some problems in the use of technology due to ignorance, will explain the situation by directing them to different sources such as "access problem" or "infrastructure problem". For this reason, it would be appropriate to evaluate the rate of teachers who stated that they were "ignorant" as a "high rate" since they may have caused other problems.

Technological Problems Experienced by the Education Level of the Teachers: According to the findings, n=142 participants at the secondary school level, n=107 at the high school level and n=54 at the primary school level answered this question. Despite the fact that they work at different levels, the rates of problems related to general, teacher infrastructure inadequacy, school's internet access, material problems and student indifference are similar and low (6.54-1.41%). On the other hand, while the participants working at the secondary and high school levels stated that they often did not experience problems, the teacher connection at the primary school level was stated as the problem experienced at the highest rate (25.93%). The rates of those who state the ignorance of teachers as a problem are 7.41% at primary school level, 17.41% at secondary school level and 14.02% at high school level. The fact that these findings are in favor of those working at the primary school level can be explained by the fact that there is no need for advanced technological knowledge from teachers at this level. Because this rate has increased in secondary and high schools, which require more information. When the rates of problems related to the technical infrastructure of the schools are compared between the levels, the highest rate is primary school (18.52%), followed by high school (16.82%) and secondary school (9.86%).

Problems Experienced in Technology Competency Self-Evaluation According to Teachers' Professional Seniority: Participants with 16 years or more seniority stated that they had the most problems. After that, those who stated that they experienced the most problems are those with 11-15 years, 1-5 years and 6-10 years of seniority. On the other hand, the rate of participants (29.79%) who stated that they did not have any problems is also the participants who have 16 years or more seniority. Participants with 6-10 years of professional seniority stated that they had problems in the technical infrastructure of the school and teacher ignorance categories at a lower rate compared to those with other seniority (with an average of 6-10%). According to the professional seniority, a gradual distribution is observed in all problem categories in those with 6-10 years, 11-15 years and 16 years and above, while in those with 1-5 years of professional seniority, teacher connection, school's technical infrastructure, teacher ignorance, student. It has been determined that it is concentrated in infrastructure and general categories.

Technological Self-Efficacy Views of Teachers

All of the participants answered the question "How do you evaluate yourself as an English Language Teacher in terms of technology competency?" answered the question. The answers given were differentiated under the categories of "Very sufficient", "Adequate", "Partly sufficient" and "Unsatisfactory".

The majority of English teachers (77.89%) think that they consider themselves technologically competent. It was found that 16.50% of the general participants evaluated themselves as very sufficient. When these two findings are evaluated together, it can be evaluated that 94.39% of English Language teachers consider themselves as self-sufficient and the remaining 5.61% consider themselves inadequate. Although the rate of teachers (5.61%) who see themselves as inadequate in using technology is low, the existence of teachers who still have serious problems in an education process where most of them use technology is important. It can be assumed that this difference varies depending on the age of the teachers or the place where they work.

Technological Self-Efficacy Views of Teachers by Seniority

According to the data, teachers with a seniority of 1-5 years consider themselves to be sufficient and very sufficient, those with a seniority of 6-10 and 11-15 years are mostly sufficient, but those with a seniority of 16 years and more see themselves as sufficient and very sufficient, technological self-efficacy is gained in young teachers. It supports the view that it is a learned competence over time. As can be seen from the results, those who have a professional seniority of 6-10 years see themselves as more inadequate than others. This is an assessment that coincides with the widespread use of technology in teaching in recent years.

Teachers' Suggestions for Increasing Technology Self-Efficacy

All of the participants answered the question "What are your suggestions about increasing the technology competencies of English Language Teachers?" expressed their views on the question. Opinions differed in the codes of "Awareness training", "Developer courses", "experience sharing", "Infrastructure development", "management and organization improvement" and "I have no idea".

Teachers' Suggestions for Solutions to the Problem of Technology Self-Efficacy: According to the findings of the research, half of the participants (54.79%) share their views that the problems related to the problem of technological self-efficacy can be solved by training, seminar, meeting or conference-type activities for technology awareness. Another view (32.01%) adopted the view of organizing skill-building courses in line with new technological developments. Opinions on infrastructure development were supported by 5.94% of the participants. When these two dominant views expressed by the teachers are evaluated together with the problems experienced, it seems that there is a partially contradictory situation. According to the data gained, the majority of the problems are related to the technical infrastructure, and naturally, the solution views were expected to be aimed at improving the infrastructure. The fact that the teachers still express their opinions in favor of organizing educational and didactic training/

seminar/courses can be evaluated as they may be of the opinion that "infrastructure problems can be experienced in any situation, and such problems can be overcome if teachers' knowledge and skills are increased".

Discussion

Analyzes were made by evaluating the findings related to technology self-efficacy through the measurement tools applied to the participants of the study, 221 (72.9%) female and 82 (27.1%) males. As a result of the analysis, 62 (20.5%) of the participants took 1-3 hours, 127 (41.9%) 4-6 hours, 86 (28.4%) 7-9 hours and 28 of the participants have been determined that (9.2%) use a computer for 10 hours or more per day.

According to the findings, 301 (26.8%) of the participants used to prepare for the lesson, 161 (14.3%) to socialize, 56 (5.0%) to play games, 214 (19.0%) to send and receive e-mail, 188 (16.7%) to follow the news, 177 (15.7%) to use computers and internet for online shopping and 27 (2.4%) for other works. It has been determined by this research that teachers use technology for different purposes besides their professional purposes. Dawson (2008) and Çelik (2008) found similar results in their studies that teachers mostly use the Internet for internet access, sending and receiving e-mails, word processing and presentation. The obtained findings are in accordance with the research findings.

The findings show that the majority of the participants (n=138; 45.5%) use instructional technologies at a good level in English teaching. On the other hand, it was understood that the rate of participants using low level was 3.6% (n=11). The rate of those who stated that they use it at a very good level is 19.1% (n=58). It is understood that these findings were determined by Çelik (2008), who conducted a similar study before. Çelik (2008) concluded in his research that teachers working in institutions affiliated to the Ministry of National Education use technology well.

This is also supported by the knowledge of where they acquired the computer skills obtained in the research. Because it was understood that a little more than half of the participants acquired the proficiency in basic computer use by going to a course, while less than half of them acquired it on their own. If the findings are expressed quantitatively, 53.1% (n=161) of the participants stated that they took a course and 46.9% (n= 142) stated that they learned on their own.

The data obtained show that teachers know technology well, some learn it in undergraduate education and some learn by going to a course. Accordingly, teachers' use of technology in teaching has become more widespread with various projects. Therefore, the findings show that nearly half of the participants (n=122, 40.3%) are involved in the eTwinning project, which is an international professional experience exchange platform.

The fact that 72.6% (n=220) of the participants stated that they use web 2.0 tools that provide teachers with important professional skills indicates that technology is frequently used by teachers in education. Embi (2007) reached results in line with these findings in his research on how often teachers use information technologies and how competent they are. Considering the findings of this research, it is understood that although teachers can benefit from information technologies professionally enough, there are teachers who feel unfamiliar with this field. Şıktunca (2007) and Embi (2007) attributed this situation to staying away from age-related technology, and commented that those who see themselves away from information technologies are older teachers.

When evaluated in general terms, the technology competency self-evaluation level of the participants was 4.50, their e-mail level was 4.96, their world wide web (WWW) level was 4.96, integrated applications level was 3.80, and their level of teaching with technology was 4.28. In the studies of Dawson (2008) and Çelik (2008), it was concluded that teachers' general self-efficacy levels are high, and especially according to Dawson (2008)'s research results, teachers are mostly competent in the fields of e-mail, the world wide web and word processors. These studies also show that teachers use information technologies in a professional sense, even if they are in different branches.

It was understood that the gender of the participants did not significantly affect the findings obtained and their technology competency self-evaluation levels. Based on this data, it can be

evaluated that the technology competency levels of female or male teachers are similar. A similar evaluation was made in terms of whether the participants were undergraduate or graduates, their level of education, professional seniority, daily use of technology, and level of use.And it was understood that there was no significant difference in the findings. In the study conducted by Hacısalihoğlu (2008), it was determined that although the technology self-efficacy level was in favor of men, this situation was limited to a narrow use only. Because, in the study of Şıktunca (2007), it was concluded that gender is not an important variable that will affect technology self-efficacy. Based on both studies, it can be concluded that teachers' technology self-efficacy levels do not show a gender-related change. According to the research findings, the e-mail levels of the participants who use technology at a good level in education are significantly lower than the participants who use technology at a moderate level, and the levels of integrated applications are significantly higher than those who use very well. This finding was also supported by Arpa (2010), and it was concluded that the trainings on how to use information technologies more effectively lead to more frequent use in education rather than personal purposes.

Whether or not the participants took a course on basic computer use, whether or not they participated in the eTwinning project, whether or not they used web 2.0 tools in their lessons, the technology competency self-evaluation levels, e-mail levels, world wide web levels, integrated applications levels, and teaching with technology don't affect their teaching levels significantly. This finding was supported by Jang (2010), Li (2012) and Timur (2011). However, Yenen and Dursun (2019) found in their research that there is an increase in the self-efficacy perceptions of teachers who use technology frequently or receive training in this field. This view is supported by the researches of Cengiz (2015), Hsu, Liang, and Su (2015). When these views and research findings are evaluated together, it can be accepted that those who use technology frequently have high technological self-efficacy.

In the study, it was determined that the participants used technology mostly (59.80%) as an educational environment, and the least (3.99%) for measurement and evaluation purposes. The use of technology by the participants for teaching or reinforcement is 24.92%. This rate is considerably lower than expected. The rate of use of technology as a tool for data transfer is 11.30%. Koçoğlu (2009) concluded that, after studies to increase teachers' technology competency, teachers use technology more in education and training rather than their personal goals. When all these data are evaluated together, it can be thought that the idea that technology provides extra opportunities in educational environments and increases effectiveness in teaching is accepted. Despite the alternative opportunities offered by technology, it is a remarkable finding that teachers have not yet widely used technology for measurement and evaluation. It can be thought that this situation is caused by teachers' low trust in remote control or supervision while using technological tools in the measurement and evaluation process, or the insufficient discovery of alternative ways to classical measurement and evaluation methods. Because Uğurlu (2009), Nathan (2009), Jang (2010) and Arpa (2010) state that although teachers frequently use information technologies in teaching, they do not use it enough for measurement purposes. According to the findings of the research, it was understood that although the participants worked at different teaching levels, this difference did not significantly affect the view for what purpose they used technology in teaching. Despite these data, it has been understood that the use of technology for measurement and evaluation in teaching is almost non-existent in all three (primary, secondary and high school) levels (f=2-7).

It has been evaluated whether the purpose of using technology in education has changed in terms of different variables, and it has been understood that those who have a professional seniority of 5 years or more generally use technology for educational environment and teaching activities. On the other hand, teachers who have less professional experience have higher rates of using technology in teaching activities and as a tool compared to other seniority holders. In the studies conducted by Çakıroğlu, Güven, and Aktan (2008) and Rienties, Brouwer and Lygo-Baker (2013), although teachers

with high professional seniority have higher levels of information technology self-efficacy, they use it in less areas compared to those with less professional seniority, and they often use it in teaching. According to these studies, it can be concluded that the self-efficacy of professional seniority in using information technologies in teaching is negatively affected by professional seniority.

As a result of the evaluation made on what kind of problems the participants experienced while using technology, it was stated that 78.74% of the participants had problems, and the problems were teacher connection, lack of technical infrastructure at school, school internet access, student indifference, student infrastructure deficiency, teacher infrastructure deficiency, teacher ignorance, material problem.It has been understood that it differs at varying rates. On the other hand, it was determined that the rate of participants who stated that they did not experience any problems was 21.26%. In the evaluation made about the problems experienced, it was understood that the majority of them was teacher connection, insufficient technical infrastructure of the school, teacher ignorance and insufficient infrastructure of the student. Reaching similar findings in his studies, Kiper (2008) states that the lack of infrastructure related to information technologies in schools negatively affects teachers' efficient teaching. It was understood that these problems did not change according to the education level of the participants. While the majority of the teachers who stated that they did not have any problems were working at the secondary and high school level, it was understood that the participants who stated that they had teacher access problems with the highest rate were English Language Teachers working at the primary school level. It is understood that as the professional seniority of the participants increases, the rate of participants stating that they have problems increases. Technology changes frequently and it has developed more in recent years, and teachers with high seniority have difficulty in keeping up with this development. For this reason, it was understood that those who stated that they had the most problems were those who had 16 years or more of professional seniority.

It was understood that the participants generally considered themselves sufficient (77.89%) despite the technological problems they experienced. On the other hand, it is noteworthy that there are also those who see themselves as partially sufficient (4.62%) or inadequate (0.99). When this qualification is evaluated in terms of its relationship with professional seniority, it is understood that those with the least and maximum professional seniority consider themselves more competent than others. This situation can be interpreted as the fact that young teachers have already learned technology and are appointed to the profession, while senior teachers have gained a certain competence over time. It has been determined that the proficiency opinions differ according to the education level, the highest is in primary school and the lowest is in high school.

It has been understood that the suggestions of the participants to overcome the technological problems experienced differ in the form of awareness training, developer courses, experience sharing, infrastructure development, management and organizational improvement. According to participant opinions, it was determined that awareness training came to the fore at the highest rate, followed by developer courses and technical infrastructure development suggestions.. Demir and Bozkurt (2011) found in their research that teachers consider themselves sufficient in information technologies, but that they should be trained with in-service trainings against developing innovations. It is also stated in the research of Kokoç (2012) that the new trainings that teachers will receive in the field of instructional technologies will make the teaching process more effective.

Considering the relationship between the opinions of the participants about the problems experienced and the solution suggestions, it was found meaningful that even the participants in these categories recommended awareness training and developer courses, although a high rate of problems were stated in the categories of teacher connection and school technical infrastructure. When the findings of similar studies are examined, it is also found in the studies of Kurt (2012) that teachers who have this opinion stated that their effectiveness increased with the training they received. Some teachers' opinion that they are ignorant is not only in this study, but

also in the study of Tokmak (2013), in which there are teachers who consider themselves ignorant and even do not need training in the field of instructional technologies. In another study, there are teachers who stated that today's technological developments are an innovation of the age and that they should definitely be used in teaching, and accordingly, there is a need for further technologicalization of teaching (Mofareh, 2019). When these views are evaluated together, it can be evaluated that the opinion of most teachers that they want to develop through continuous training is predominant, even though there are some teachers who are ignorant and do not use instructional technologies enough in the course. It is also known that there is a belief that many problems can be solved with education. It was understood that the solution proposal views of the participants did not differ significantly according to their professional seniority and the education level they worked.

Results

The findings obtained in the research were evaluated in the context of research and literature reading in this field, and the following conclusions were reached regarding the technology self-efficacy perceptions of teachers.

- *English Language Teachers use technology intensively.
- *English LanguageTeachers use technology for lesson preparation, games, sending e-mails, following news and shopping.
- *English Language Teachers mostly use it for preparation for lessons.
- *Most English LanguageTeachers use technology well.
- *Half of English Language Teachers have learned technology by attending a course.
- *Half of the English Language teachers have participated in international sharing platforms such as eTwinning.
- *Majority of English Language teachers use web 2.0 tools.
- *English Language Teachers' technology self-efficacy assessment levels are high.
- *E-mail and world wide web levels of English Language Teachers are high.
- *The level of use of integrated applications by English LanguageTeachers is moderate.
- *The technology self-efficacy levels of English Language Teachers do not change according to gender.
- *The technology self-efficacy levels of English Language Teachers do not change according to the teaching level they work.
- *The technology self-efficacy levels of English Language Teachers do not change according to their educational background.
- *Technology self-efficacy levels of English Language Teachers do not change according to professional seniority.
- *E-mail usage levels of English Language Teachers who use technology effectively in their classes are low.
- *The fact that English Language Teachers participate in an e-Twinning project, use web 2.0 tools in their lessons or take a technology-related course does not cause a difference in technology self-efficacy levels.
- *English Language Teachers mostly use technology as an educational environment.
- *English Language Teachers hardly use technology for assessment and evaluation
- *English Language Teachers use technology at a moderate level for teaching activities.
- *English Language Teachers with high professional seniority prefer technology mostly for educational environment and activity.
- *Teachers with low professional seniority use technology only as a tool in education.
- *The vast majority of English Language Teachers have problems using technology.
- *The vast majority of English Language Teachers have problems with connectivity and school infrastructure.
- *As the professional seniority increases, the problems experienced by English Language Teachers regarding technology also increase.
- *English Language Teachers mostly recommend awareness training and professional development courses in order to overcome the problems they experience with technology.
- *Even though English Language Teachers state that there is a high rate of infrastructure

problems related to technology, they think that developmental trainings will be useful for solving most of the problems experienced.

- *The solutions offered by English Language Teachers to technology-related problems do not change according to their professional seniority and teaching level.

When evaluated in general, as a result of this research, it was understood that English Language Teachers ' technology self-efficacy evaluation levels were high. In general, teachers who stated that they use technology intensively in their lessons, mostly come to the fore for lesson preparation, games, e-mail, news tracking and shopping purposes. It has been understood that the teachers have learned technology both during their education and after being assigned to the profession by going to a course, with high skills in using the world wide web and e-mail, most of them using web 2.0 tools and half of them using international sharing platforms such as eTwinning. Participating English Language Teachers' gender, professional seniority, education level, education level, participation in eTwinning project, using web 2.0 tools in their classes or taking a technology-related course do not make any difference in their technology-related self-efficacy levels. On the other hand, it has been understood that the e-mail usage levels of the teachers who use technology effectively in their lessons are low. It is seen that English Language Teachers use technology mostly for educational environment, the least for measurement and evaluation, and at medium level for teaching activities. It has been revealed that among these teachers, those with high professional seniority mostly use it as an educational environment, while those with low seniority use it more as a tool. The vast majority of teachers are of the opinion that there are many problems when using technology. It has been determined that most of these problems are caused by connection and infrastructure, and it has been determined that problems are experienced more frequently as professional seniority increases. In order to eliminate the problems experienced in the use of technology in education, in-service trainings and skill-building courses for awareness and the use of technology in education come to the fore.

Suggestions

Suggestions to the Educators

- *The technological self-efficacy of English Language Teachers can be increased by improving the technological infrastructure in schools.
- *Technological self-efficacy can be improved by giving educational seminars to English Language Teachers on the use of applications such as web 2.0 for technology awareness and the use of technology in teaching.
- *Educational seminars can be given to teachers in order to solve the infrastructure and access problems related to the use of technology in education.
- *The knowledge and skills of teachers regarding the latest developments in the use of technology in education can be improved through in-service training.

Suggestions to the Researchers

- *The purposes of English teachers' use of technology in education can be investigated comparatively.
- *The extent to which the educational seminars to be given to English teachers affect the problems they experience while using technology should be analyzed in depth.
- *The reason why English teachers' level of use of technology in measuring and evaluating technology is low can be investigated in depth by conducting a mixed method research.
- *The solutions to the problems faced by English teachers while using technology can be analyzed comparatively.
- *"What kind of work has been done to solve the technological infrastructure and internet access problems in schools?" can be analyzed.

References

Arpa, P. (2010). *Öğretim Teknolojilerinin Öğretim Strateji, Yöntem ve Tekniklerinin Seçimine ve Kullanımına Etkisi*. Unpublished Master's Thesis. Marmara University, İstanbul.

Cantabrana, J., Rodriguez, M. ve Cervera, M. (2019). Assessing Teacher Digital Competence: the Construction of an Instrument for Measuring

the Knowledge of Pre-Service Teachers, *Journal of New Approaches in Educational Research, Vol. 8*. No. 1 doi: 10.7821/naer.2019.1.370

Creswell, J.W. (2014). *Research Design* (4th Ed.), Sage Publications.

Çakıroğlu, Ü., Güven, B. & Akkan, Y. (2008). Matematik Öğretmenlerinin Matematik Eğitiminde Bilgisayar Kullanımına Yönelik İnançlarının İncelenmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 35*, 38-52.

Çelebi, M. & Kuşuçuran, B. N. (2019). İngilizce Öğretmenlerinin Alternatif Değerlendirme Yöntemlerini Kullanma Yeterliliklerinin İncelenmesi, *OPUS - Uluslararası Toplum Araştırmaları Dergisi, 13* (19), 983 – 1009.

Çelik, E. (2008). Eğitimciler Açısından Eğitimde Bilişim Teknolojileri ve Otomasyon Sistemlerinin Kullanımına Bakış. Unpublished Master's Thesis, Yeditepe University, İstanbul.

Dawson, V. (2008). Use of Information Communication Technology by Early Career Science Teachers in Western Australia. *International Journal of Science Education, 30*(2), 203-219.

Demir, S. & Bozkurt, A. (2011). İlköğretim Matematik Öğretmenlerinin Teknoloji Entegrasyonundaki Öğretmen Yeterliklerine İlişkin Görüşleri. *İlköğretim Online, 10*(3), 850-860.

Embi, R. (2007). Computer Anxiety and Computer Self-Efficacy Among Accounting Educators at Universiti Teknologi MARA, Malaysia. Doctor of Philosophy in Career And Technical Education. Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Fidan, M., Debbağ, M. & Çukurbaşı, B. (2020). 21. Yüzyılda Profesyonelleşen Öğretmenlerin Teknoloji Yeterliliği Öz-Değerlendirmeleri: *Bir Ölçek Uyarlama Çalışması. Pegem Eğitim ve Öğretim Dergisi, 10*(2), 465 – 492.

Hacısalihoğlu, H. (2008). *Ticaret Meslek Liselerinde Görev Yapan Öğretmenlerin Eğitim Teknolojilerini Kullanım Düzeylerini Belirlemeye Yönelik Bir Araştırma*. Yayınlanmamış yüksek lisans tezi, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

Hsu, C.Y., Liang, J.C., & Su, Y.C. (2015). The Role of the TPACK in Game-Based Teaching: Does İnstructional Sequence Matter? *Asia-Pacific Journal of Teacher Education, 24*(3), 463-470.

Jang, S. J. (2010). Integrating the Interactive Whiteboard And Peer Coaching to Develop the TPACK of Secondary Science Teachers. *Computers & Education, 55*, 1744–1751.

Koçoğlu, Z. (2009). Exploring the Technological Pedagogical Content Knowledge of Pre-Service Teachers in Language Education. *Procedia-Social and Behavioral Sciences, 1*(1), 2734-2737.

Kokoç, M. (2012). *Karma Mesleki Gelişim Programı Sürecinde İlköğretim Sınıf Öğretmenlerinin Teknolojik Pedagojik Alan Bilgisi Deneyimleri Üzerine Bir Çalışma*. Unpublished Master's Thesis, Karadeniz Teknik University, Trabzon.

Kurt, G. (2012). *Developing Technological Pedagogical Content Knowledge of Turkish Pre-Service Teachers of English Through a Design Study*. Unpublished Doctoral thesis, Yeditepe University, İstanbul.

Kurtuluş, K. (2010). *Araştırma Yöntemleri*, İstanbul: Türkmen Kitapevi

Li, L. (2012). Understanding Language Teachers' Practicewith Educational Technology: A Case from China. *Science Direct, 46*, 105 – 119.

MEB. (2017). Müfredatta Yenileme ve Değişiklik Çalışmalarımız Üzerine. Erişim adresi: https://ttkb.meb.gov.tr/meb_iys_dosyalar/2017_07/18160003_basin_aciklamasi-program.pdf

Mofareh, A.A. (2019). The Use of Technology in English Language Teaching, *Frontiers in Education Technology, 2*(3), 168-180

Nathan, E. J. (2009). *An Examination of the Relationship Between Preservice Teachers' Level of Technology İntegration Self-Efficacy (TIS) and Level of Technological Pedagogical Content Knowledge (TPACK)*. Doctoral dissertation, University of Houston.

Rienties, B., Brouwer, N. & Lygo-Baker, S. (2013). The Effects of Online Professional Development on Higher EducationTeachers' Beliefs and Intentions Towards Learning Facilitation and Technology. *Teaching and Teacher Education, 29*, 122-131.

Rogers, C. (1983). As a Teacher, Can I Be Myself? In Freedom to Learn for The 80s. Ohio: *Charles E. Merrill Publishing Company*.

Seferoğlu, S. S. (2015). Okullarda Teknoloji Kullanımı ve Uygulamalar: Gözlemler, Sorunlar ve Çözüm Önerileri. *Artı Eğitim*, 123, 90-91.

Şıktunca, C. A. (2007). *Meslek Liselerinde Görev Yapan Öğretmenlerin Teknoloji Kullanımı İle İlgili Performans Ölçümü*. Yayımlanmamış yüksek lisans tezi. Beykent Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.

Tokmak, H. S. (2013). Changing Preschool Teacher Candidates' Perceptions About Technology Integration in a TPACK-Based Material Design Course. *Education as Change, 17*(1), 115-129.

Uğurlu, R. (2009). *Teknolojik Pedagojik Alan Bilgisi Çerçevesinde Önerilen Eğitim Programı Sürecinde Öğretmen Adaylarının Şekillendirici Ölçme ve Değerlendirme Bilgi ve Becerilerinin Gelişiminin İncelenmesi*. Yayınlanmamış yüksek lisans tezi, Marmara Üniversitesi, İstanbul.

Yenen, E.T. & Dursun, F. (2019). İngilizce Öğretmenlerinin Öğretim Süreci Öz Yeterlikleri ve Sınıf Ortamına Yansımaları, *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 15* (2), 607 – 627.

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