DIGITALLY LITERATE PRE-SERVICE EFL TEACHERS

Ümit CEBECİ

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FOREWORD

This book, by focusing on the use of digital tools and their benefits, aims to investigate pre-service English as foreign language (EFL) teachers' digital literacy skills and the integration of these skills into teaching context. This book employs phenomenological research design and purposive sampling methods. Participants of the study in the book consist of 30 pre-service EFL teachers from different universities around Turkey. Qualitative data was obtained by conducting interviews and examining reflective journals of the participants. Data was analyzed under themes and codes by textual descriptions of participants' ad verbatim statements. The findings showed that pre-service EFL teachers lacked some basic elements of digital literacy in their definitions. Also, the book showed that participants in the study needed to improve their technological content knowledge and technological pedagogical knowledge. Lastly, the analysis of the participants' statements revealed that participants' expectations from the digital literacy training, which aimed at raising participants' awareness in the use of digital tools and technologies as well as their integration into teaching within appropriate pedagogy, were met.

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LIST OF ABBREVIATIONS

MONE   : Ministry of National Education

ELT   : English Language Teaching

ELLs   : English Language Learners

TPACK   : Technological Pedagogical Content Knowledge

ESL   : English as a Second Language

EFL   : English as a Foreign Language

INTRODUCTION

Today, the world is in rapid change resulting from emerging technologies in every walk of life, and education is one of the areas that has been affected and shaped perpetually by technology itself. After it becomes clear that language learning and teaching required a good deal of technology knowledge, digital literacy and technology have made a huge contribution in teaching, countries have started to invest in educational technologies and teacher training programs in order to empower teaching and enhance learning in the world (Aslan and Zhu, 2018; Hockly, 2012). As mentioned in Education Vision 2023 (Milli Eğitim Bakanlığı [MEB], 2018), there has been a great deal of investment into educational technology, and the use of online tools and teacher training programs in order to combine teachers' digital literacy skills and pedagogical knowledge to meet the needs of 21st- century learners and keep up with the pace of the changing teaching and learning situations in Turkey too.

Within the scope of this study, it seems that prospective English teachers need to be aware of the fact that digital literacy is as crucial as pedagogical knowledge and content knowledge. Also, they might acknowledge the fact that that technology has its own pace, it is very flexible in nature, and today's students come to class with some knowledge and experience related to technology. Then, there will still be some obstacles for teachers such as deciding, selecting and using the relevant, useful and effective technology or digital tool in order to achieve teaching and learning efficiently though today's technology is user friendly and there is almost no technology accessibility problem (Keser et al., 2015: 1193).

Therefore, it might be said that prospective English language teachers need to be conscious of current digital tools, technologies, and required skills to use digital tools and technologies in an educational setting in order to keep up with the pace of the change that affects foreign language teaching and learning in turn. However, the frequent or random use of technology without appropriate pedagogical knowledge may result in failure of teachers' aims to reach and meet the needs of the learners (Bose, 2010).

Furthermore, integrating technology or digital tools into teaching context is not solely about using tablets, computers, projectors, Apps, Web 2.0, etc. rather; it is about how and to what exteext these tools are used. Therefore, it can be suggested that teachers' digital literacy skills should enable them to use the appropriate technology/tool to assist their teaching with the help of their pedagogical knowledge to achieve learning which comes out of teacher quality and teacher's

previous experiences. Yet, integration of digital tools into teaching and the appropriate use of technology to accommodate learning take time and effort, and as Hubbard (2008) puts forward integration and use of digital tools and technology is closely related to teacher training.

Then, pre-service English teachers as this study's participants can be trained on the integration of digital tools and technologies into English language teaching so that they can take part in the hands-on events where they are expected to learn new tools and technologies appertaining to English language teaching. Also, pre-service English teachers can experience digital tools related to their needs in such trainings, and they can plan their use of technology for their prospective teaching situations (Bose 2010).

Hence, the exact motivation behind this study is to develop pre-service English teachers' digital literacy skills and increase their capacity for choosing and using useful digital tools and technologies within their teaching contexts in addition to its utmost aim to investigate their current digital literacy skills and needs by focusing on the integration of these skills and tools into English language teachingEventually, this study attempts to raise awareness in the use of digital tools and technologies of pre-service English language teachers by offering various digital tools and technologies via digital literacy training provided within this study as well as investigating their experiences related to digital literacy and integration of technology in teaching. As a result, pre-service English teachers might become fluent enough in the use of digital tools and technologies to cope with ever-changing teaching situations and contexts in addition to meet the needs of 21st-century learners.

<center>**CHAPTER ONE**</center>

1. STUDYFRAMEWORK

1.1. The Background of the Study

Before I walked into the class, I thought that I just needed to be knowledgeable and trained enough to teach the content, manage the classroom and evaluate the learning in order to merit the appraisal of my students, parents and colleagues. On my first day of teaching, August 2, 2010, as a well-prepared teacher for the scenario, I thought so, I became aware of the fact that my taught pre-service pedagogical knowledge and content related practice would not be enough alone because I saw the computer connected to the internet, over-head projector, and interactive board in the classroom which was different from my previous knowledge and experience.

The very next days of my first classical teaching experience, I overheard my students' talks on some *online games*, *Youtube*, *blogs* (mostly on games and toys), *web pages*, *Apps*, *Ipads*, and so on. Soon after hearing those talks with an arisen interest, I started to search for ways to learn more about these technologies, tools and pedagogical methods to integrate them into my own English language teaching. I checked some web pages and asked colleagues for any useful books about integrating technology into teaching, teaching with videos, blogs and online games in order to talk the same language of my learners and ease my teaching practice by creating more engaging lessons for them. In the middle of the first year of my teaching, I was offered a paid online course, *Teaching English with Technology* by *British Council,* and I took the course which was my first training on digital literacy and integration of technology into English language teaching.

After similar trainings and becoming aware of the fact that I needed some knowledge and improve my skill to manage my class online, I enrolled in another online course offered by *Edmodo,* classroom management and collaboration tool, and became *Edmodo Certified Trainer*. By practicing what I thought would be fruitful in my class and sharing them with my peers in school; I continued to take different courses and trainings, and I was offered a scholarship by the U.S. Department of State to attend a summer professional development course at *University of Maryland Baltimore County* in Washington D.C. There, I learnt a lot about digital literacy skills, teaching with technology, use of digital tools such as *Youtube*, *Google*, *Blogs* and different web pages and *Apps* besides practical tools such as *Ipods*, *Ipads*, *mobileApps,* and *etc.* in class. My interest in the topic

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and lack of technological pedagogical content knowledge triggered me take different courses, professional development trainings and various certificate programs over my teaching years.

Furthermore, in our formal meetings, in-service trainings, and even during coffee breaks in my school, I started to share my developing theoretical knowledge and practical experience with my colleagues who were all graduated from different prestigious universities around Turkey and who also had very limited knowledge and experience related to digital literacy, integrating technology into teaching, the use of digital tools in teaching, computer assisted teaching, mobile assisted teaching, information and computer technologies and etc. I am aware of the fact that although there are many similar anecdotes but there are fewer academic studies presented within the body of literature that provides empirical data on the topic.

Thus, with my previous teaching experience, enthusiasm and being conscious of the fact that pre-service English language teachers still need to improve their digital literacy skills and they should be equipped with tools and technologies before that they walk into their classes, I decided to carry out my MA study on the investigation of pre-service teachers' digital literacy skills and the integration of these skills into teaching context with a special focus to use of digital tools and their benefits. Therefore, I try to explore pre-service English teachers' digital literacy skills and their current knowledge on digital literacy and integration of technology in English language teaching as well as various fruitful technologies and digital tools to be used in their teaching contexts by referring to the related concepts and frameworks. Although information regarding the concept and framework of the study is presented in the literature review part of this study, basic information is provided here.

First, this study aims at investigating pre-service English teachers' digital literacy skills. These skills are accepted as competences, abilities and confidence in using digital technologies. Therefore, it is necessary to provide information on the concept of *digital literacy* whichis defined as "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers [and other digital tools]" (Glister, 2007:1). Thus, the concept of digital literacy in this study is introduced with Glister's definition which is referred as one's ability to access and evaluate information and it is further defined with the elements, definitions and competencies presented in California State's ICT Digital Literacy Policy Framework (2008:8).

Second, this study also focuses on integration of technology and digital tools into English language teaching. There are many studies and research on integrating technology in teaching available on the literature. However, in this study, technology integration refers to the use of technological and digital tools in order to promote teaching English language within appropriate pedagogy (Ertmer, et.al. 2012). Thus, pre-service English teachers' digital literacy skills and their integration of technology into teaching is closely related to their knowledge of digital tools and technologies (technological knowledge), their ability to integrate technology into the content with relevant pedagogy (pedagogical knowledge – content knowledge). This model of integrating technology is known as *Technological Pedagogical Content Knowledge (TPACK)* framework in the literature (Mishra & Koehler, 2006). According to TPACK framework, teachers' overall knowledge of technology, pedagogy and content compromise basis for language teaching with the use digital tools and technologies as teaching is seen as a complex activity. For this reason, this study is based on TPACK framework which is the accepted as a foundation for effective teaching with the use of technologies and digital tools in addition to knowledge of pedagogy to teach the content (Mishra & Koehler, 2006).

Last, this study presents various technological and digital tools to the pre-service English teachers in order to be used in their English language teaching contexts. These tools and technologies range from web pages to content-specific Apps, common applications to online platforms and so forth. These digital tools and technologies are presented to the participants of the study in *Digital Literacy Training for Pre-service English Language Teachers* which is funded by The Scientific and Technological Research Council of Turkey (henceforth TÜBİTAK).

The training consisted of different theoretical and practical sessions related to digital literacy skills, the use of technology and ethics of using digital tools and technologies in teaching, and hands-on activities. In this trainining, pre-service English teachers would practice their theoretical information pertaining to digital literacy and the integration of technology which all aimed to create awareness in pre-service English teachers towards and help them to use digital tools and technologies in English language teaching within appropriate pedagogy. The information related to the content of the training is provided in detail in the literature review part of the study.

After all, it is expected that the findings and discussions in this study might attract attention of both pre-service and in-service English language teachers as well as

taking attentions of decision-makers, practitioners, and stakeholders into the emerging role of technology and digital tools in education and the necessity of integrating technology and digital tools into teaching to cope with both ever-changing teaching and learning situations.

1.2. The Statement of the Problem

The problem for an academic study is considered as a gap between the existing reality and what is required to be seen by the researcher. In order to state the research problem in this academic prose and fill in the gap between the reality and what is aimed to be reached through this study, Cresswell's (2008) following process of the research problem statement is adopted:

Table 1: The Process of Justifying a Research Problem

Topic	Research Problem	Justification for theResearch Problem	Deficiencies in theEvidence	Relating the Discussionto Audiences
Subject Area	*A concern orissue, a "problem"*	*Evidence from the literature or practicalexperience*	*Evidence thatis missing*	*Audiences that will profit fromthe study*
An example;				
Ethical issues in colleges	Ethical violations among football recruiters	•Gap in the literature •Reports of violations	Description identifying and characterizing violations	•Assessing violations •Helps recruiters develop better ethical standards •Helps athletes understand ethical issues

Source: Cresswell, 2008: 71.

Based upon Cresswell's (2008) approach to the problem statement in a research, it is necessary to justify the problem and present the possible remedy(ies) in order to fill in the gap in the literature through the agency of this study whose main focus is on pre-service English teachers' digital literacy skills and integration of this skills into their teaching within appropriate framework as shown in Table 2;

Table 2: The Statement of the Problem

Topic	Research Problem	Justification for theResearch Problem	Deficiencies in the Evidence	Relating the Discussion to Audiences
Digital literacy	*Investigating and developing digital literacy skills of pre-service English language teachers*	*Literature review and researcher's experience*	*Lacking theoretical studies and practical trainings towards pre-service English language teachers' digital literacy*	*Raising pre-service English teachers' awareness,* *Providing practical digital literacy training.* *Serving as a base for future studies*

As a result, although there are several digital literacy related studies around the world (Canals&Rawashdeh, 2018; Dashtestani, 2012; Raman &Halim Mohamed, 2013; Egbert, Paulus&Nakamichi, 2002), there is a gap in the literature regarding digital literacy skills of pre-service English teachers in Turkish context which provide practical solutions to the development pre-service English teachers' digital literacy skills and their integration into English language teaching.

Eventualy, digital literacy skills and integration of digital tools and technology into English language teaching has become indispensable part of teacher skills and education (Hubbard, 2008 &Kessler, 2006). Therefore, this study examines current literature, investigates digital literacy skills of pre-service English teachers, proposes critical questions in attempt to find answers to the development of pre-service English teachers' digital literacy skills by presenting a training in order to develop and accommodate digital literacy skills of pre-service English teachers in addition to the integration of technology in English language teaching within the light of suitable pedagogy.

1.3. The Purpose of the Study

The purpose of this study is to investigate pre-service English language teachers' digital literacy skills as well as to help them integrate these skills into their future

teaching with the help of technologies and tools presented in the digital literacy training. This study aims at providing in-depth descriptions of pre-service English teachers' digital literacy skills: therefore, the main focus of the study is on pre-service English teachers'experiences, practices and developments related to their knowledge and understanding of digital literacy, and use of digital tools and technologies in teaching English.

1.4. Research Questions

This study is phenomenological in nature, and it draws mainly from both qualitative research methods and tools which will be further explained in the methodology part of this study. Participants of the study are pre-service English teachers who were chosen to take part the digital literacy training according to their success level at their universities, their interest in the digital literacy training.

Research questions, serving for qualitative aims of the study, are raised in order to find out participants' willingness and needs behind their attendance to the study as well as exploring their overall digital fluency level. Also, this study will attempt to reveal pre-service English teachers' understanding of digital literacy and integration of digital tools and technology in teaching English *before*, *during,* and *after* the training sessions (information about the training will also be explained in the methodology part of this study). Moreover, training sessions' prospective contribution to pre-service English teachers' digital literacy skills is also explored by this study's research questions.

Therefore, the following research questions are considered to address the purpose of the study:

1.   How do participants consider their own digital literacy and the use of digital tools and technologies in teaching English before, during and after the training? (Interviews)

2.   How do the participants view digital literacy training in terms of integrating digital tools and technologies into teaching? (Interviews)

3.   What are the views of the participants over the digital tools and technologies presented in digital literacy training to be used in their future teaching? (Reflective journals)

1.5. The Significance of the Study

Although there are various studies on technology, digital literacy, andthe integration of technology in teaching in different types of academic prosessuch as research papers, conference papers, and academic essays, it seems that there are few studies on pre-service English teachers' digital literacy and their integration of digital tools and technologies. In other words, it might be understood from avaliable literature that little attention has been given to the needs of pre-service English teachers related to their digital literacy skills and integration of these skills into English language teaching contexts with the help of appropriate pedagogy and digital tools.

This study investigates pre-service teachers' digital literacy skills and the integration of these skills into English language teaching contexts with a special focus on to use of digital tools and their benefits. Therefore, this study is significant not only because it derives from various studies of applied linguistics but also it is of an interdisciplinary nature comprised of English language teaching, computer sciences, teacher training, digital literacy, and technology in general.

Furthermore, this study attempts to establish an overview of pre-service English teachers' digital literacy through a considerable number of examples of digital tools and by elaborating on their specific uses in English language teaching. Also, this study mighthelp prospectiveresearcherswho are willing to research on technology, digital literacy and English language teaching-related studies with its findings, results and suggestions.

Exclusively, this study is a result of a project funded by TÜBİTAK (Project Code: 2237A – Project Number: 1129B371900826 – Project Title: "*Digital Literacy Training for Pre-Service English Teachers*". Within the project, a five-day long (forty hours in total) training is provided to pre-service English teachers.

1.6. Limitations of the Study

Although phenomenological research is criticized for having its own limitations regarding generalization as a qualitative methodology of research (Johnson, 1997), this study provides an in-depth description of the participants' experience which is rather important to gain insights into the topic. Thus, this study is carried out within the limits of phenomenological research.

Phenomenological research includes in-depth interviews, detailed observations, or data-rich perspectives of a small number of participants who lived a specific phenomenon. For this reason, this study is limited to 30 pre-service English teachers studying either their third or fourth grades at different universities around Turkey.

Another limitation is that this study's participants consist of Turkish pre-service English teachers who teach English as a foreign language. Therefore, the study's results might contribute more to the literature and the practice of teaching English as a foreign language.

Additionally, the schedule of the training program is limited to 40 hours during which pre-service English teachers are offered different tools, technologies, apps, and theoretical and practical information relevant to digital literacy skills and integration of them into English language teaching. Information related to the training is provided in the methodology part and training program's schedule is given in Figure 7.

Lastly, although the training offered in this study includes both theoretical information and practical sessions for participants, it is limited to boundaries of a formal training program which is, of course, different from micro-teaching activities or real in-class practice due to time limit and the number of the participants.

1.7. The Definitions of Operational Terms

Pre-service English Teacher: Pre-service English teachers are those 3rd and 4th grade student-teachers who are educated to become English language teachers.

Digital Literacy: Digital literacy can be defined as being literate in digital tools and technology that are deeply embedded in English language teaching activities and practices (Meyers et al., 2013).

Digital Literacy Skill: Digital literacy skill is one's ability to access and evaluate information and use of the information presented in various media presented through different digital tools.

Technology: Technology is an umbrella term covering all devices and digital tools that are used for teaching and learning purposes.

Digital Tool: It refers to software, apps and other online platforms where both teachers and learners work with technological devices such as computer and mobile phones to create, edit, and share texts, videos, audios and visuals.

Technological Pedagogical Content Knowldege (TPACK): It is a framework developed by Mishra and Koehler (2006) that incorporate technology, pedagogy and content in order for teachers to integrate technology and digital tools into teaching.

1.8. Outline of the Study

Chapter 1, Study Framework, introduces the topic with research questions, and it explains the purpose and the significance of the study. It provides the rationale for choosing the topic of the current study, and it also presents limitations of the study.

Chapter 2, Literature Review, is a review of literature which presents information related to current topic. This chapter includes an overview of literature based on digital literacy, digital literacy skills, and TPACK as a model for the integration of technology in teaching English.

Chapter 3, Methodology, provides information about the methodology of the study including information regarding participants of the study, setting, data collection instruments, and data analysis proceduresfollowed in order to conduct this study.

Chapters 4, Findings and Discussion, reports the analysis of data collected through the research instruments, and it also presents discussion on the findings.

Conclusion and Suggestions, summarize the main findings of the studyas well as providing suggestions for the researchers and prospective studies.

<center>**CHAPTER TWO**</center>

2. LITERATURE REVIEW

2.1. Digital Literacy and Digital Literacy Skills: Defined

Traditional literacy and digital literacy are equally important in the 21st century and today's teachers need to consider requirements of the era in which learners interact digitally, they become more autonomous learners, and they learn new things and ideas very quickly with help of technology and digital tools. In every cycle of education, either in primary or higher education contexts, teachers may need some knowledge of technology and command of digital tools at least to communicate with their 21st century students or to practice educational tasks by means of technology and digital tools in or out of the class. Thus, the increase in the use of technology and digital tools in educational environment necessitates literacy in the world of technology and digital tools becausethere is a consensus that digital literacy is accepted as a "survival skill in the digital era" (Eshet-Alkalai, 2004: 102).

On the other hand, *literacy* is an umbrella term which is also used together with other literacies such as "*21st-century literacies*, *Internet literacies*, *multiliteracies*, *information literacy*, *information communication technology (ICT) literacies*, *computer literacy*", and it has its reference to the definition and understanding of digital literacy (Osterman, 2012: 135). Therefore, it is essentialin this study to provide related literature on the digital literacy to come up with an understanding of the term to improve theoretical knowledge of pre-service English language teachers on the topic. For this reason, following part of the study is dedicated to studies of researchers who attempted to explain and define the term digital literacy.

First, Glister (1997:1) defined digital literacy as "the ability to access networked computer resources". This definition of Glister gives information on literacy which is based on the tools to be used. Also, this statement proves that digital literacy is different from traditional literacy in that digital literacy involves tools, devices and technology to access the information needed for a specific purpose.

Later in his work, Glister (1997:1) focused on the skills required for digital literacy by stating that "[digital literacy is] the ability to understand and use information in multiple formats". With connection to today's developing technology and the internet, information is random and it is presented in a

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complicated way, and; therefore, ability to manage digital sources or information becomes prominent.

In addition to the definition which refers to tools and skills required, Glister (1997:2) further defines digital literacy as one's ability "to make informed judgments about what you find on-line" by pointing out critical thinking skills required for digital literacy. Similar to the ability to access and manage information, one's competence in the evaluation of information and other digital sources is regarded as a core skill in digital literacy.

In a similar vein, Eshet-Alkalai (2004) proposes different systems of skills required for both understanding and definition of the term digital literacy. Eshet-Alkalai's (2004) proposal for the definition of the term digital literacyis tested by the researcher in an empirical study which includes 10 participants for each group consisting of university and high school students as well as adults aged over 30 who performed tasks and find solutions to problems that necessitate different digital literacy knowledge. As for the definition and after the research on the topic, Eshet-Alkalai (2004: 94) states that the knowledge of digital literacy is closely interconnected with "*photo-visual literacy*, *reproduction literacy*, *information literacy*, *branching literacy* and *socio-emotional literacy*".

In this interconnection, photo-visual literacy is regarded as a type of digital literacy which sometimes requires one to work with graphics or visuals provided by the technology and digital tools and understand the instructions or the functions which are presented by means of these visuals. Therefore, decoding the message of digital visuals or graphics presented in digital medium or digitally is a part of digital literacy and it is known as photo-visual literacy (Eshet-Alkalai, 2004).

Also, digital reproduction literacy is accepted as a skill that requires an effort to work with different but meaningful parts together to create a new product out of already existing information with the use of technology or digital tools (Eshet-Alkalai, 2004).

Similarly, according to the branching literacy, the data or information is presented in various styles and found in different manners in the digital era. Therefore, one's ability to branch what is presented and found digitally while navigating through vast amount of data or information is another literacy supplement to cope with "unordered nonlinear large quantities of independent pieces of information" (Eshet-Alkalai, 2004: 99).

In addition, the skill to evaluate the importance and necessity of information has an utmost importance in the digital era as the information presented in digital medium via technology can be produced, reproduced easily and manipulated without prior professional quality control mechanisms in most cases. Therefore, information literacy is one of the most important complements of digital literacy that "works as a filter: it identifies erroneous, irrelevant, or biased information" (Eshet-Alkalai, 2004:101).

After all, socio-emotional literacy is among the most important considerations regarding digital literacy as this literacy requires the knowledge of "sociological and emotional aspects of work in cyberspace" because the users of technology or digital tools, especially the users of the internet, face different threats posed there. Thus, socio-emotional literacy enables users to determine between "true and false, honest and deceptive, based on good will and evil [and] users must be very critical, analytical, and mature, and must have ahigh degree of information literacy and branching literacy" (Eshet-Alkalai, 2004: 102).

On the other hand, as this study examines digital literacy skills of pre-service English teachers, it is vital to focus more on the skills and competencies required for the practice of digital literacy apart from literacies and concepts required for the definition of digital literacy. Although the list of skills pertaining to the practice of digital literacy is very long, Bawden (2008:20) identifies the skills required for the practice of digital literacy as follows.

"knowledge assembly, building a reliable information hoard from diverse sources, retrieval skills, plus critical thinking to making informed judgements about retrieved information, with wariness about the validity and completeness of internet sources, reading and understanding non-sequential and dynamic material, awareness of the value of traditional tools in conjunction with networked media, awareness of people networks as sources of advice and help, using filters and agents to manage incoming information, being comfortable with publishing and communicating information, as well as accessing it".

In its basic form apart from above stated complex definitions and explanations, digital literacy is regarded as one's effort and ability to survive in the digital era while interacting and working with technology and digital tools, which is like the definition of traditional literacy; one's ability to read and write. Although, the term is defined here in the pursuit of a basic understanding, "digital literacy has globally accepted elements" as stated in California ICT Digital Literacy Policy Framework (2008: 5) as shown in Table 3.

Table 3: Basic Elements of Digital Literacy

Elements	Definitions	Competencies
Access	Knowing about and knowing how to collect and/or retrieve information	Search, find, and retrieve information in digital environments.
Manage	Applying an existing organizational or classification scheme.	Conduct a rudimentary and preliminary organization of accessed information for retrieval and future application.
Integrate	Interpreting and representing information - summarizing, comparing, and contrasting.	Interpret and represent information by using ICT tools to synthesize, summarize, compare, and contrast information from multiple sources.
Evaluate	Making judgments about the quality, relevance, usefulness, or efficiency of information.	Judge the currency, appropriateness, and adequacy of information and information sources for a specific purpose (including determining authority, bias, and timelines of materials).
Create	Generating information by adapting, applying, designing, inventing, or authoring information	Adapt, apply, design, or invent information in ICT environments (to describe an event, express an opinion, or support a basic argument, viewpoint or position).
Communicate	Communicating information persuasively to meet needs of various audiences through use of appropriate medium.	Communicate, adapt, and present information properly in its context (audience, media) in ICT environments and for a peer audience.

Source: California ICT (2008: 5).

These elements together with their definitions and competencies were put forward by Californian policy makers, educators and employers in order to create a map for respective people and institutions because of more competitive workplaces in the 21st century and accurate application of digital literacy by workers including K-20 educators. For this comprehensive road map, a group of

researchers found out and analyzed the World Summit on Information Society's statements, the European Union's policy and more than 80 countries' digital literacy studies and initiatives (for more information see: California ICT Digital Literacy Policy Framework, 2008).

Similarly, to survive in the digital era as Eshet-Alkalai (2004) points out that teachers are expected to have these skills and competencies as defined in Figure 3 such as finding out related information which comes in different forms, organizing it for instant and prospective use, judging its appropriateness regarding its use, adapting it for the purpose and using it with the help of effective integration.

When taken into consideration with the studies of pioneers in literature such as Glister (1997), Bawden (2002), Eshet-Alkalai (2004) and other scholars cited in this study, it is understood that there are similar points shared in each study in order to define digital literacy and required skills for the practice of digital literacy. Therefore, this study's framework for the investigation of pre-service English teachers' digital literacyand digital literacy skills is closely linked to the elements, definitions, and competencies as stated in Figure 3. In other words, for the understanding of digital literacy and its elements as well as skills required for the application, the study focuses on California ICT Digital Literacy Framework shown in Figure 3.

Moreover, there are several studies on how teachers acquire their knowledge and abilities on the digital literacy in addition to the studies which aims to explain and define the term digital literacy.

Correspondingly, various studies (Cervetti, Damico and Pearson, 2006; Dudeney et al., 2013; Erstadetal., 2015; Garcia-Martin and Garcia-Sanchez, 2017; Hafner et al., 2013; Johnson, Adams Becker,Estradaand Freeman, 2015; Kennistnet, 2011; Leu et al., 2004; Liaw and English, 2013; Tan and McWilliam, 2009; Tondeur, Braak, Sang, Voogt, Fisser, and Ottenbreit-Leftwich, 2012) emphasize the necessity of teacher training on the digital literacy and some of these studies claim the importance of teacher collaboration for the effective use of digital tools and technologies in teaching as a result of appropriate knowledge of digital literacy (as cited in Weerakanto, 2019: 52).

Cote and Brett (2018) also examine digital literacies of 42 English language teachers in a state Japanese University and found out that language teachers have high proficiency level in terms of digital literacy and teachers know knowledge

of digital literacy and practice of digital literacy in class can contribute to their teaching. In addition, Stockwell (2009), in his study in a private Japanese University, claims that informal learning and learning without professional guidance to understand digital literacy and to improve their skills is difficult. Therefore, he further states that teachers should have professional training regarding digital literacy and computer assisted teaching and they can be introduced to the digital tools, technology and skills with the help of which they will be able to teach English in an effective way.Lastly, Durdu and Dag (2017) recommend that pre-service teachers should improve their digital literacy and they should be trained on the integration of technology since they have very limited knowledge and practice regarding both teaching and using technology and digital tools in class.

This study investigates pre-service English language teachers' digital literacy by means of a training that includes both theoretical information on digital literacy and practical sessions on the integration technology and digital tools into English language teaching. Pre-service English teachers' understandings of digital literacy are examined based on the definition of competencies and elements in California ICT Digital Literacy Policy Framework (2008).

2.2. TPACK as a Framework for the Integration of Technology and Digital Tools into Teaching

Technology, digital tools and the internet have been developing over the years and interaction of them with education has been ever boosting. As a result, today's teachers encounter the fruits of technology and the internet such as computers, laptops, tablets, smart phones, interactive boards, websites, applications and other web tools which are all nested in education. Therefore, teachers are expected to have appropriate knowledge and skills to integrate them into their teaching considering their potential as there is a fact that "these new technologies have changed the nature of the classroom orhave the potential to do so" (Mishra & Koehler 2006: 1023).

In addition to the expectation and necessity to integrate technology and digital tools in teaching, countries have started to run projects and invest in educational technologies. In Turkish context, the best example of this is FATİH project (Increasing Opportunities and Improving Technology Movement) run by MEB which aims to create opportunities in the use of technology and improve current situation in schools all around Turkey. Within the scope of FATİH project, schools have been equipped with hardware and software such as interactive

boards, high speed and secure internet (VPN), EBA etc. The project has outputs for all parties in education as shown in Table 4.

Table 4: Fatih Project Goals

For Every School	For Every Classroom	For Every Teacher	For Every Student
VPN- Broadband Internet Access	Interactive Board	EBA Applications	EBA Market
Infrastructure	Wired/Wireless Internet Access	Eba Market	Eba Market
High Speed Access		Cloud Account	Cloud Account
		Sharing Course Notes	Digital Identity
			Sharing Homework
			Individual Learning Materials

Source: Adapted from MEB (2019).

Also, a case study on the FATİH project reveals that although the project has not been completed yet, there are some technological obstacles and pedagogical problems teachers face for example; tablets do not work due to browsers and update issues, teachers cannot control students' use of PC's and tablets in class, and teachers use the tools and technology in class for passive teaching or in other words students are not actively involved in the learning process (Yavuzalp et al, 2015). Moreover, another study reveals that almost half of the teachers think that this project will not work as they do not have adequate knowledge on the integration of technology in teaching (Çiftçi et al, 2013).

It is a fact that teachers are the key in the integration of technology and digital tools in teaching. As for the pedagogical needs of teachers, there are some

suggestions such as pre-service teacher education institutions should improve their curriculums according to the 21st century including activities and courses regarding the use of technology and digital tools in teaching and in-service teachers should be trained on the integration of technology as well as some suggestions to improve technological infrastructure (Ataberk, 2019 & Johnson et al, 2016).

At this point, Koehler and Mishra (2009) point out that teaching is a complicated process, and there is not a unique approach to incorporate technology, digital tools and teaching. Considering the complexity of teaching and the effective integration of technology into teaching, Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge framework (henceforth; TPACK) can be referred as an effective theoretical basis in pre-service English teachers' integration of technology.

TPACK as a framework does not appear in the literature abruptly; rather, Mishra and Koehler (2006:1017) state that TPACK takes its basis from "Schulman's formulation of 'pedagogical content knowledge and extend it to the phenomenon of teachers integrating technology into their pedagogy". Shulman's formulation is a blending of the subject matter and knowledge of pedagogy. Thus, Shulman (1986) proposes the idea that any effective teaching consists of knowledge of content and pedagogy and use of both concurrently as understood from Figure 1 below.

Figure 1: Shulman's Formulation of Pedagogical Content Knowledge
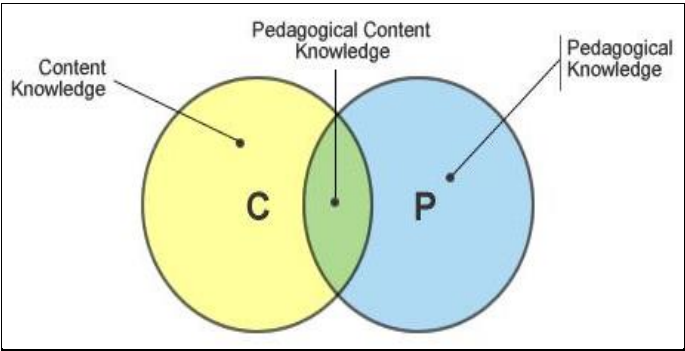
Source: Adopted from Mishra & Koehler (2006).

However, relentless changes in the educational materials necessitate the use of technology and digital tools in teaching and it brings together the problem of integrating technology in teaching (Koehler & Mishra, 2008). With the

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advancements in technology and digital tools in education, "knowledge of technologybecomes an important aspect of overall teacher knowledge" even though Shulman's formulation of teachers' pedagogical content knowledge is still valid today (Koehler & Mishra, 2008: 1024).

In addition, Koehler and Mishra (2008: 1025) emphasize that "knowledge of technology cannot be treated as context-free and that good teaching requires an understanding of howtechnology relates to the pedagogy and content". Also, Koehler and Mishra (2008) state that one of the lacking or failing components of these knowledge components might result in problems in the integration of technology.

Yet, TPACK framework provides enough space for teachers in its domains and components to think of possible problems that might result from the integration of technology in teaching. Knowledge of content, pedagogy and technology as well as interactions of them that constitute TPACK framework is shown in Figure 2 below.

Figure 2: TPACK Framework and its Components
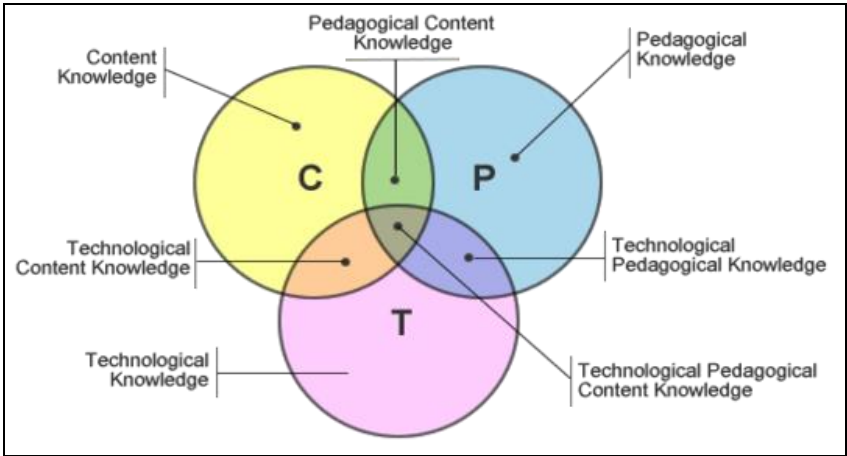
Source: Mishra and Koehler (2006); Koehler and Mishra (2008).

This study attemps to help pre-service English teachers in theirintegration of digital tools and technologies into their teaching. For that reason, TPACK is introduced as a framework in this study that enables teachers to understand "knowledge of content, pedagogy, and technology, as well as understanding the complex interactions between these knowledge components"and integrate technology into teaching (Koehler & Mishra, 2008: 2). In the integration of

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technology into teaching English, TPACK framework is accepted as the theoretical basis in this study.

2.2.1. Components of TPACK

In TPACK framework, there are three domains and four components. These three domains are *Content Knowledge (CK)*, *Pedagogical Knowledge (PK)* and *Technological Knowledge (TK)* in the framework. The interactions between and among these three knowledge domains constitute four more components and they are called *Pedagogical Content Knowledge (PCK)*, *Technological Content Knowledge (TCK)*, *Technological Pedagogical Knowledge (TPK)*, and *Technological Pedagogical Content Knowledge (TPACK)*.

According to the framework, knowledge of content, pedagogy and technology seem to be central to effective teaching at first glance, but it put great stress to "the connections, interactions, affordances, and constraints between and among" these three knowledge domains (Mishra & Koehler, 2006: 1025). Thus, all components of TPACK are equally important.

2.2.1.1. Content Knowledge (CK)

In its basic definition, content is regarded as the subject to be acquired or taught. Therefore, content knowledge is an ascribed quality for teachers who should know what to teach, content-related theories and frameworks as well as its boundaries (Shulman, 1986). Also, content knowledge requires teachers to "understand the nature of the knowledge, facts, concepts, theories etc. related to the subject they teach (Mishra & Koehler, 2006: 1026). In other words, teachers are expected to specialize in their content area in order for effective teaching.

2.2.1.2. Pedagogical Knowledge (PK)

In order to teach content to reach the aims of teaching, what teachers need is the correct and suitable approaches and techniques. The practice of teaching requires pedagogical knowledge which is the knowledge required for teachers to "understand about the processes and practices or methods of teaching and learning and how it encompasses, among other things, overall educational purposes, values, and aims" according to Mishra and Koehler (2006: 1026). Thus, among the teachers' pedagogical knowledge are the dynamics of teaching such as organizing, facilitating and assessing learning besides managing classroom.

2.2.1.3. Technological Knowledge (TK)

In TPACK framework, technology knowledge is related to the ability to use current technologies and digital tools as well as having an understanding and practice of related softwarein this ever-developing process (Mishra & Koehler, 2006: 1027). This type of knowledge has a dynamic nature because it requires the ability to adapt teachers' previous knowledge of technology to new technology and digital tools as they emerge.

In today's classroom, it can be said that teachers are expected to have technological knowledge and skills to initiate the use of technology for the sake of teaching which is seen as a complex process in TPACK framework. Thus, teachers should have basic skills in using technology and digital tools such as downloading and uploading classware (software programs of books), assessing learning and sharing them online, managing classroom via using different tools available and so on.

2.2.1.4. Pedagogical Content Knowledge (PCK)

As stated earlier, pedagocial content knowledge in TPACK framework is based on Shulman's formulation as Shulman (1986: 8) asserts "content and pedagogy were part of one indistinguishable body of understanding" for teaching. This knowledge refers to knowledge of concepts related to subject matter as well as pedagogical approaches and techniques. Furthermore, pedagogical content knowledge is linked to what makes teaching effective and how they are suited into teaching.

2.2.1.5. Technological Content Knowledge (TCK)

In technological content knowledge, content and technology complement each other. In other words, teachers should have both content knowledge and technology knowledge in order to teach specific content in different and effective ways with help of technology and digital tools that they integrate into their teaching. According to the rationale behind TPACK framework, technology can be integrated into teaching with the help of teacher's knowledge of the subject area and practice of teaching with either content related technology or any technology or digital tools which are appropriate and useful in teaching process.

Therefore, teachers are expected to have awareness and knowledge of current technologies and digital tools available to them and they should present the content or help students to learn the content via technology and digital tools. In

other words, teachers should present the content with the help of technology and digital tools which have become indispensible part of class as teaching materials in the 21st century.

2.2.1.6. Technological Pedagogical Knowledge (TPK)

In TPACK framework, technological pedagogical knowledge is closely related to teachers' knowledge of technologies and digital tools and their uses in teaching. This knowledge involves teachers' awareness of technology and digital tools to be used in teaching for pedagogical aims or within the limits of pedagogy.

According to Mishra and Koehler (2006: 1028), "this mightinclude an understanding that a range of tools exists for a particular taskthe ability to choose a tool based on its fitness, strategies for using the tool's affordances". Thus, teachers' knowledge of technology and how this technology shapes learning within the appropriate pedagogy constitutes technological pedagogical knowledge in TPACK. For example, *Google Forms* can be used with a purpose to evaluate learning, or it can be used as a survey tool in class to learn students' ideas on a specific topic

2.2.1.7. Technological Pedagogical Content Knowledge (TPACK)

TPACK framework involves technological knowledge domain in addition to the domains of content and pedagogical knowledge that constitutes Shulman's (1986) pedagogical content knowledge. Thus, interactions and connections of these domains constitute technological pedagogical content knowledge (Koehler & Mishra, 2009).

All in all, technology knowledge is the knowledge of different technologies and digital tools and it is closely related to teachers' awareness and knowledge regarding technology and digital tools. Content knowledge is related to the knowledge of the subject that teachers' expertise in. Pedagogical knowledge is closely associated with approaches, techniques, activities, and practices in the process of teaching. Pedagogical content knowledge focuses on how to teach a specific subject with appropriate pedagogy. Technological content knowledge deals with how a subject area can be represented with help of technology. Technological pedagogical knowledge is linked to teachers' use of technology and digital tools considering pedagogy. Lastly, technological pedagogical content knowledge emerges from the interactions and connections of these tree domains, and it serves as a guide for teachers to integrate technology into teaching.

2.3. Digital Tools and Technologiesfor Pre-Service English Language Teachers

In this digital era, there are different digital tools and technologies that can be integrated into English language teaching considering that teachers have sufficient knowledge in digital literacy and ability to use these digital tools and technologies in English language teaching within appropriate pedagogy. Furthermore, these tools and technologies enhance both teaching and learning with their engaging, involving and dynamic nature (Al-Kamel, 2018).

"As technologies dramatically increase their penetration into our society, teachers need to demonstrate the skills and behaviors of digital-age professionals. Competence with technology skills is the foundation. To be part of the transformation to 21st-century teaching and learning, however, teachers need to lead by modeling effective ICT skills and lifelong learning strategies. Students need to see their teachers apply the basics in authentic, integrated ways that manifest in student experience solving problems, collaborating on projects, and creatively extending their abilities" (International SocietyforTechnology in Education, 2008).

Today, these integrated tools and technologies mainly consist of software, online platforms and apps which can be used with the help of computers and other mobile devices like tablets and smart phones in addition to the traditional technologies of the classroom such as overhead projectors, TVs, audio players or even interactive boards. Other tools may include audio, visual and video editing programs, online collaboration platforms, and various web pages that enable teachers to assign homework and evaluate learning outcomes in addition to storytelling devices, professional development web pages, classroom management tools etc.

Although some of the tools are not designed for teaching purposes or teaching English, it is the teacher who can integrate them into their teaching or use them for teaching purposes by considering the content and pedagogy. In addition, these tools can be used to meet the needs of 21st century learners and ease teaching. In English language teaching, digital tools and technologies are also used to enhance students' developments in four skills; reading, writing, speaking and listening in addition to their use as teaching aids to assess learning or manage classroom.

The list of digital tools and technologies that can be used for teaching English will be very long provided that all tools and devices are included here as either

web-based ones or non-web-based ones. However, in this study, following digital toolsand technologies, as shown in Table5, in addition to theoretical information pertaining to their use in English language teaching is provided to pre-service English language teachers.

Table 5: Digital Literacy Training for Pre-service English Language Teachers

1st Day	2nd Day	3rd Day	4th Day	5th Day
Corpus AntConc Sketch Engine COCA BNC Skell	Edmodo Google Classroom Google Drive Power Point Udemy Plickers Testmoz Edpuzzle	Google Forms Google Slides Prezi Translation Tools Grammarly Kotobee E-book Interactive E-book	Pixlr Canva Storyboard Pixton Kunduz Boowa & Kwala Hp Reveal Quivervision Yök Tez Merkezi LearningApp.com	Quizizz Eğitim Çantası GradeCam Ethics of Using Internet and Digital Tools Safe Internet and Cyberbullying

The abundance of Web 2.0 tools enables teachers to integrate digital tools and technologies into English language teaching in a smooth way as they have user-friendly nature and they are comparatively easier to integrate into English language teaching that other professional digital tools and technologies (Lim Pei& Norah Md, 2019). Thus, most of the digital tools above consist of Web 2.0 tools and information pertaining to their use in English language teaching is provided here to set examples of digital tools for pre-service English language teachers in this study in specific and other teachers in general.

2.3.1. Corpus, AntConc, Sketch Engine, COCA, BNC, and Skell

To start with, in the first day of the digital literacy training, pre-service English language teachers are introduced to the corpus and corpora tools such as *AntConc*,

Sketch Engine, (Corpus of *Contemporary American English* (COCA),*British National Corpus* (BNC) and *Skell* as it is known that corpus and corpus tools such as AntConc, Sketch Engine and Skell provides opportunities for language teachers to teach lexical and phraseological structures by means of authentic materials in addition to their uses in the development of curriculum, vocabulary selection and vocabulary testing (Özbay, 2015).

A corpus, plural from is corpora, consists of collection of texts and linguistic data which provides reliable information regarding language and its structure such as frequency of words, word combinations, lexical properties and grammatical structures (Özbay, 2015; Biber and Reppen, 2002; McEnery and Wilson, 1997). In this study, two corpora are introduced to pre-service English language teachers to be integrated into English language teaching, and they are COCA and BNC.

First, COCA is the most used corpus of English, and it has 600 million words including five genres such as spoken, fiction, popular magazines, newspapers, and academic texts. Therefore, its exploitation for teaching English is necessary as it helps teachers to see the language and its structures through different types of analysis. In language teaching, COCA can be used in several ways as mentioned in the following paragraph:

The Corpus of Contemporary American English (COCA) (Davies) has been used in the EFL classroom to help learners better understand how language works at different levels of analysis (Wang, Davies and Liu) – for example, through collocation tables, KWIC lists, word frequency lists, etc. (Bennett; Boulton; Callies; Dutra and Silero; Jones; Liu 2010, 2011; Orenha-Ottaiano; Umesaki; Viana). It has also been used to enhance their text production and develop their writing skills (Chang 2010, 2011 and 2013; Karaata, Cepik and Cetin; Kim; Nurmukhamedov and Olinger; Wagner), by helping them to fine-tune grammatical points and by putting them in contact with different genres and styles. However, it can also offer the opportunity to explore culture-related content by shedding light on a huge variety of social, ideological, cultural and historical issues, and on the ways in which these issues intersect with language (Rebechi 336). Culture-related approaches based on corpus analysis can increase our awareness of the discursive practices within institutions, groups and society at large" (as cited in Lopez, 2017: 74).

Also, BNC is another corpus containing over 100 million words of text from different genres such as spoken, fiction, magazines, newspapers, and academics. Similar to COCA, BNC provides sources for teachers to teach vocabulary and

grammar and as such, it gives reliable data related to collocations, keywords and frequency of words.

Thus, corpora enable teachers to reach naturally occurring linguistic data such as lexical frequency, occurrences of lexical items in different texts and language patterns by means of concordance tools.

"Corpora are, therefore, suitable for vocabulary study and they can be fruitful if we design motivating activities which are relevant to the learners' interests. The contribution of corpora to the study of vocabulary is remarkable; the advantages of using these language databases are several. Corpora bring real English into the classroom and together with it, the importance of learning autonomously. Apart from that, "corpora allow access to detailed and quantifiable syntactic, semantic and pragmatic information about the behavior of lexical items" (Carter 1998:233), they allow students to analyze the meaning, context and situational contexts in which certain words typically occur. This gives students a more realistic picture of how a language and its vocabulary work. With the use of a corpus-based approach for the study of vocabulary, students become aware of the importance of context in communication; they also learn to develop an analytic and critical approach to data (they must disregard examples which are irrelevant and take those which are useful). In addition, students can feel that they are in contact with language use in real contexts, they can hear real people speaking in some corpora. Students also practice their deductive skills and notice that corpora may also provide typical and atypical collocations that can be relevant for an accurate use of the target language" (Varela and Luisa, 2012: 297).

Concordance tools are integrated parts of software programs which are used to find out information regarding a word or phrase in its context. These concordance tools are useful and efficient in that teachers can prepare vocabulary and grammar teaching activities as these tools provide authentic materials which enable teachers to enhance their teaching activities with real life language or linguistic data. Furthermore, these tools provide information regarding occurrences of words in a faster, easier and more reliable way when compared to the use of traditional dictionaries. For concordancing and text analysis, pre-service teachers are trained in these tools: Antconc, Sketch Engine, and Skell.

AntConc is a concordancer program which is used either as a downloaded program or an online one to search for occurrences of words in a specific context uploaded in addition to the analysis of frequency, the use of words in different forms, and phrases (Anthony, 2019). Sketch Engine is another tool which is used

to understand language and its structure in addition to its uses for text analysis. Sketch Engine contains various corpora consisting of over 30 million words. Moreover, Skell is another tool in Sketch English which allows students to check how a word or a phrase is used by native speakers of English.

Figure 3: Skell and its Functions
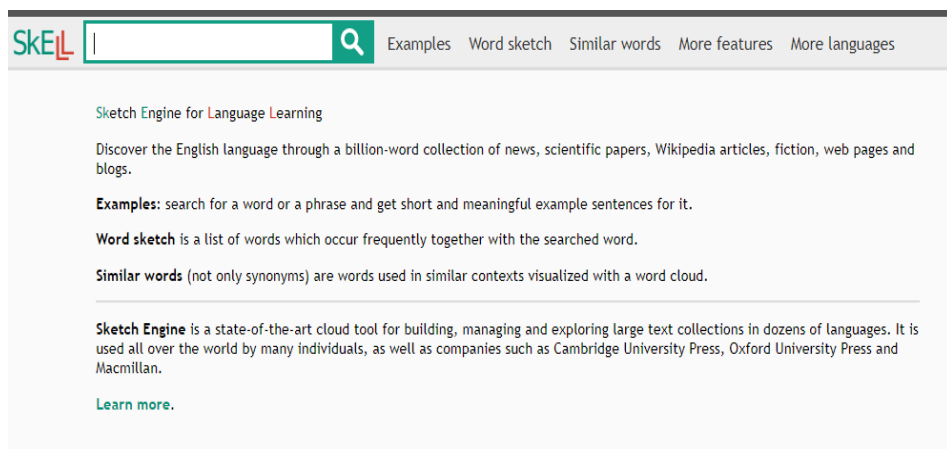
Source: skell.sketchengine.co.uk

Therefore, these tools are shown to pre-service English language teachers to be used in language teaching to make students understand how a word or phrase is used, check whether a specific use of a word or phrase is rare or frequent and learn the structure of language.

2.3.2. Edmodo, Google Classroom, Power Point, Plickers, Testmoz and Edpuzzle

The second day of the training consists of practical information regarding the use of different online classroom management, collaboration and assessment tools and their use in English language teaching. The tools like Edmodo and Google Classroom, have user-friendly interface and mobile Apps both for the use of teachers and learners. Plickers, Testmoz and Edpuzzle are web 2.0 tools which can be integrated into English language teaching for different teaching purposes.

The first two online tools that can be integrated into English language teaching are Edmodo and Google Classroom both of which can be used to share course content and material, communicate with students and track students' progress in assignments which are given via these tools.

Figure 4: Edmodo Interface
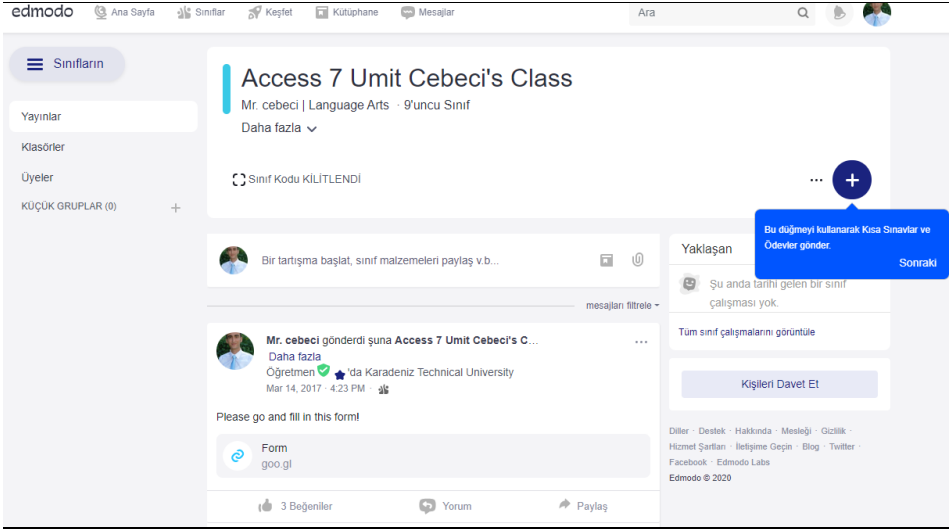
Both tools are very similar to Facebook, but they are virtual classroom and their privacy and safety is organized only by the teacher (Kongchan, 2013). After teachers set up virtual classrooms in both tools, they can invite students to the virtual classes by a generated code and only invited students can attend these classes.

In Google Classroom and Edmodo, teachers can open discussion, send links, files, and videos to classroom or send these online materials to each student as private message. Moreover, both tools can be used especially for writing activities and assignments with due date and grading scale. Edmodo and Google classroom can be accessed anywhere and anytime by computers or other mobile devices as long as they are connected to the Internet.

Another tool that is introduced in the second day of the training is Plickers. Different from learning management systems, Plickers is an interactive assessment tool which enables teachers to create their quizzes and surveys to check students' instant learning in other words, this tool is helpful for teachers in formative assessment which has an important in role in teaching to shape student's learning process and teaching (Kılıçkaya, 2017). Although it is difficult to assess instant learning in large classes, this tool helps teachers to get answers from up-to 63 studens to the teacher-created question and it requires the internet

connection. Plickers can be used for reading comprehension and grammar activities as well as pop-up quizzes.

Figure 5: Plickers Interface
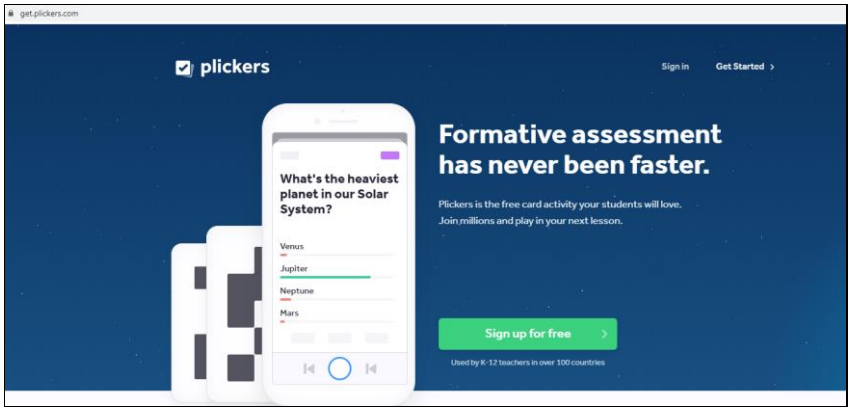
Source: get.plickers.com/

Another assessment tool which was introduced in the training is Testmoz which works on computers and mobile devices. Testmoz enables teachers to create questions to check overall understanding or instant understanding of the subject taught. This online tool provides opportunities for teachers to add images, videos and other files to their test that makes the test different from the paper and pencil based one.

Figure 6: Testmoz Interface
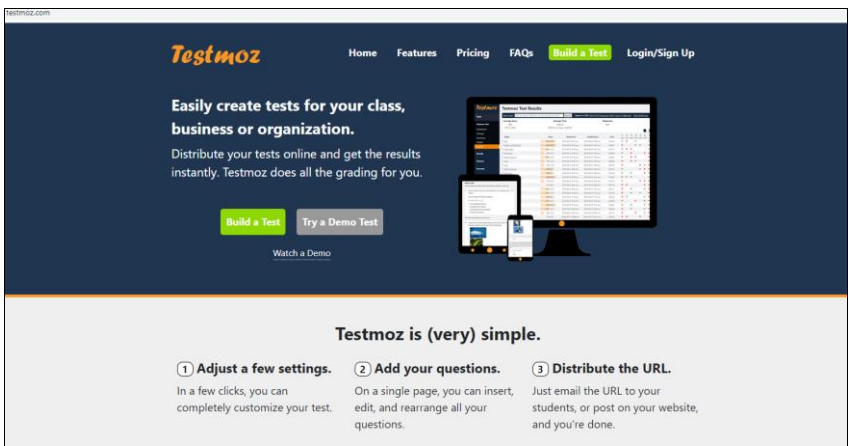
Source: testmoz.com/

Also, Testmoz provides detailed scores to the tests taken by the students who are invited to take the tests with a passport created by the teacher. Furthermore, distributing the test to students is easier because Testmoz provides a unique link to each test which can be shared with the students who are expected to take the test. What is more, students feel comfortable while taking the test because they can take the test anywhere and anytime which is different from traditional exams and tests.

Moreover, pre-service English teachers are provided information on digital tool called as Edpuzzle which is a kind of video editing to combine text, video and voice over to support students in their understanding of a subject with the help of interactive video contents. With the help of Edpuzzle, teachers can crop, customize and remix online videos which already appear in other web tools such as Youtube, Khan Academy and TEDx. This web 2.0 tool assists teachers in that teachers can check if their video content is watched.

Figure 7: Edpuzzle Interface
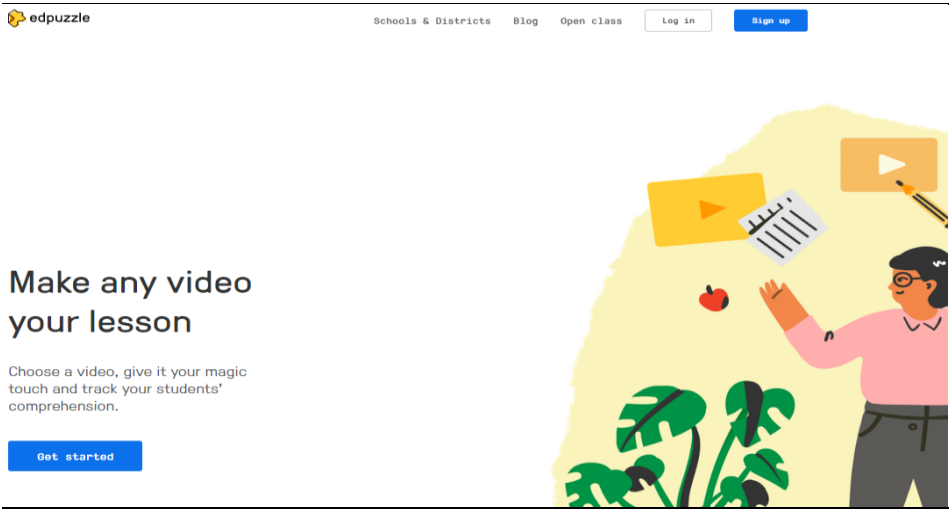
Source: edpuzzle.com

Also, teachers can create videos which require students to answer some questions at some point while watching the video, click on the link that teacher added into the video or require them to record their voices while they are watching the content in the video. This web 2.0 tool, similar to many others, requires users to view the content and contribute to the content.

The problem that many teachers face with the use of video in their classes is that videos may not be suitable for their learners or for their teaching context (Allison 2015:1). Thus, teachers can edit any video content available online according to their students' needs or their teaching context via Edpuzzle which is a free, online and user-friendly web 2.0 tool.

2.3.3. Google Forms, Google Slides, Google Docs, Google Drive, Prezi, Grammarly, and Kotobee

Google provides different tools for teachers to be integrated into their teaching such as Google Forms, Google Slides, Google Docs and Google Drive. These tools help teachers to create a collaborative space for the classroom where both teacher and students can organize and store their material, put together their documents, prepare presentations and create spreadsheets. Google Drive is a cloud-based system where users store their online data ranging from photos to worksheets. Google drive can be synchronized with many other digital tools such as Edmodo and Google Classroom so teachers can keep their classroom materials there and share them with students if needed. Moreover, Google offers teachers to create online forms, documents and spreadsheets which can be edited by students, too.

First, teachers can create online editable forms to be shared by students. These forms can be used to check students understanding of the lesson, it can be used a tool where students give answers to open-ended, multiple choice or fill in the gap questions for reading activities or even it can be used as a tool for a basic pool to get students ideas on a specific issue in class (Cahill, 2011:37).

Second, similar to Google Forms, teachers can create online collaborative word processing documents which are known as Google Docs. This collaborative tool is very different from pen and paper-based writing as it may involve a group of students who write on a document at the same time from different places and devices if they are invited to edit that document by a teacher. In addition, while students type their digital paper collaboratively, they can also discuss the topic or the activity in chat option provided within Google Docs. This collaborative typing is stored in Google Drive in real time. Also, each user may add videos, links and visuals to this online document editing tool.

Lastly, pre-service teachers are shown how to use Google Slides. Google Slides allows teachers to create online create online collaborative presentations, and they are also stored in Google Drive in real time. Thus, teachers can use it without

time and place limitations if they have connection to the internet. Furthermore, teachers can use it either as presentation tool or it can be used as a tool where students can make up their own stories with visuals, videos and writing. Teachers can publish these presentations, share them with their students or they can be embedded in other classroom management tools.

The tools that Google provide have similar functions to Microsoft Word, PowerPoint, and Excel. On the other hand, Google tools are online and collaborative, and they can be stored in the cloud system of Google in real time while users create or edit documents, spreadsheets or slides via Google tools. What is more, Google tools allow teachers to share their teaching material with anyone with the help of shareable links of the documents. Thus, the use of these tools in teaching supports collaborative learning since these tools provide a space for the users to work with each other in real time.

Similar to Google Slides, there is another online presentation tool which is also saved in its own cloud system real time while users prepare presentations or visuals. This presentation tool allows up to 8 people to work on Prezi or edit presentations. This tool is presented to pre-service teachers to show them online presentation tools which can be shared with class and stored in online format so that they can be reached anytime and anywhere. Also, Prezi has non-linear and zooming optings which takes students' attention on the subject taught.

Figure 8: Prezzi Interface
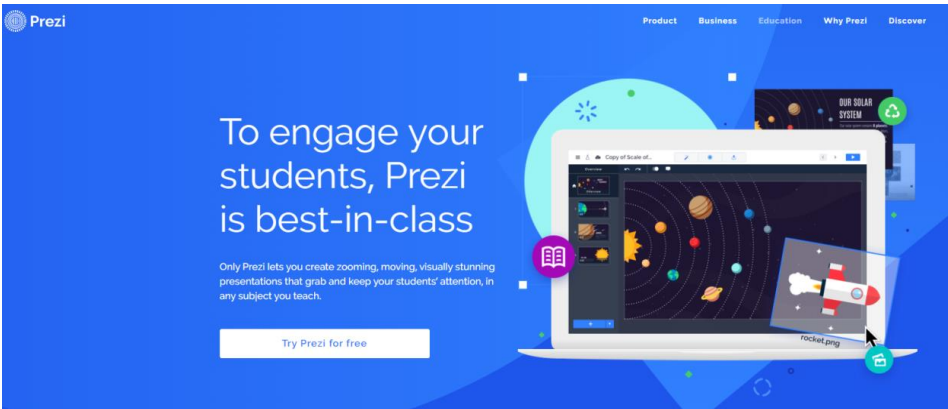
Source: prezzi.com

Grammarly is an online tool that helps users to type things grammatically correct. It checks grammar points as user type in some online pages and tools such as Google Docs, Slides, Gmail etc. It can be added to web browsers and apps by both teachers and students who want to improve their grammar and writing in academic or professional writing.

Figure 9: Grammarly Interface
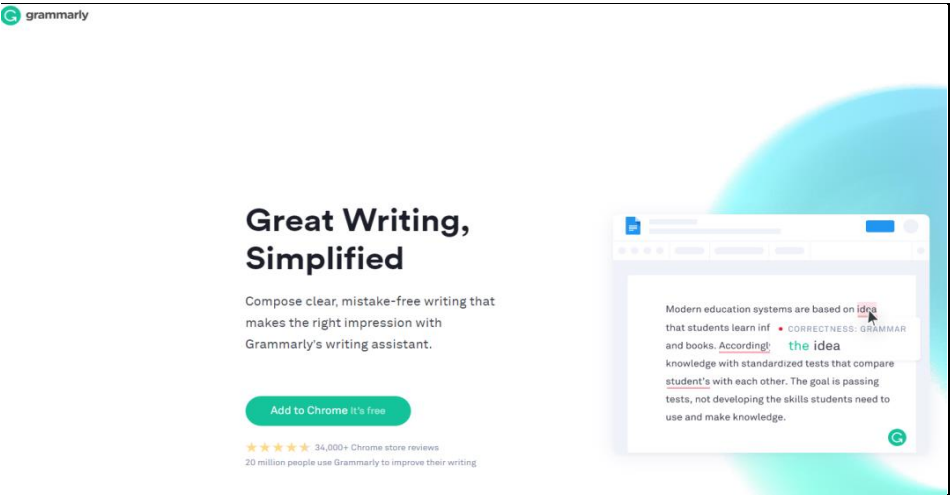
Source: grammarly.com

Kotobee is an interactive website that allows users to create interactive e-books. This online tool has both paid and free services. However, free services that Kotobee provides for teachers are very useful in creating digital books which are supported with videos, images and other hyperlinks that engages students while reading. The books created by teachers or students can be displayed on web, computer or mobile devices.

Figure 10: Kotobee Interface
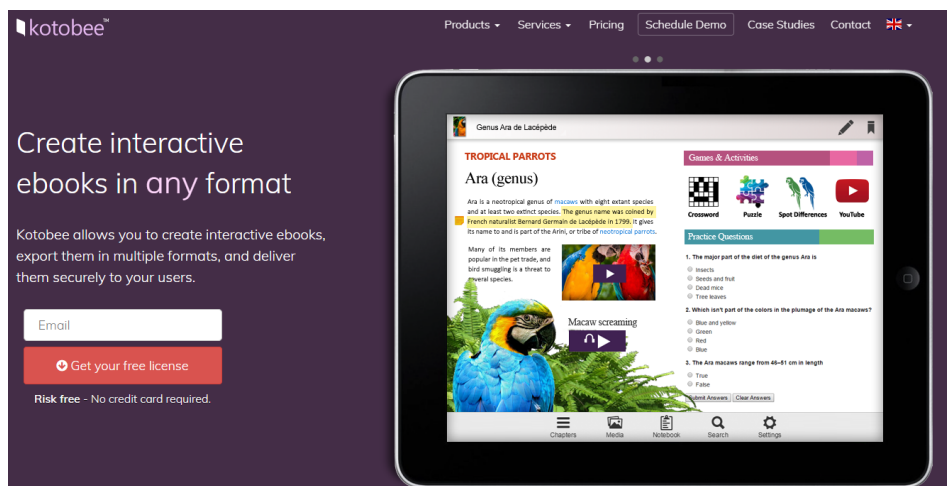
This tool can be used for reading activities as it allows teachers to add interactive content including assessment questions. Students answer to these questions are saved in Kotobee's learning management system, thus, teachers can reach any information regarding students' progress in a specific reading activity.

2.3.4. Pixlr, Canva, Storyboard, Pixton, Boowa& Kwala, Hp Reveal, and Quiervision

On the fourth day of digital literacy training, pre-service teachers are provided with different digital tools to be integrated into their teaching. The fourth day of the digital literacy training for pre-service English language teachers consists of these tools; Pixlr, Canva, Storyboard, Pixton, Boowa & Kwala, Hp Reveal, and Quiervision.

Initially, pre-service English language teachers are trained on photo and visiual editing programs like Pixlr and Canva. Both programs are web based and have free versions. Pixlr is photo editing tool which allows teachers to work with any photo available online or downloaded. Pixlr allows teachers to edit any photo so that they can crop, resize, add notes, links or other images to them. Pixlr is very user-friendly and easier to use when compared with other photo editing tools which are time taking and requires professional approach. Moreover, edited photos are automatically saved in the system.

Figure 11: Canva Interface
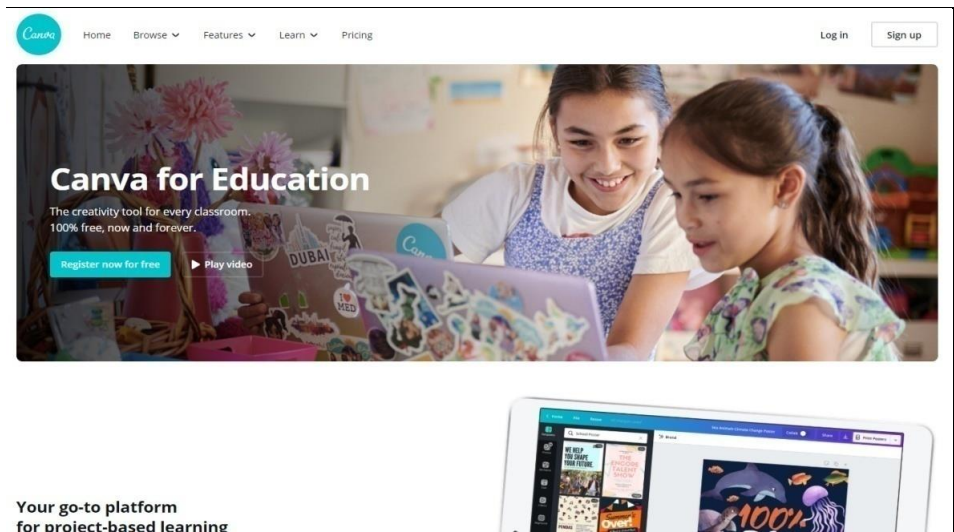
Source: canva.com

Different from Pixlr, Canva provides opportunities such as creating infographics, brochures, slides and even animations which can be used for various teaching aims in English language class. Canva allows you to work with already available visuals and images or users can add their own images to their visual. Furthermore, teachers can create worksheets, posters, and flyers with Canva with their students.

Storyboard, Pixtonand Boowa & Kwala are web 2.0 tools which can be used for creating digital animated stories, comics, songs and cartoons for the purpose of teaching English. In Storyboard, for example, users can create their own stories by choosing scenes, characters, shapes and other options provided. Also, teachers can create worksheets by using this digital tool.

Figure 12: Storyboard Interface
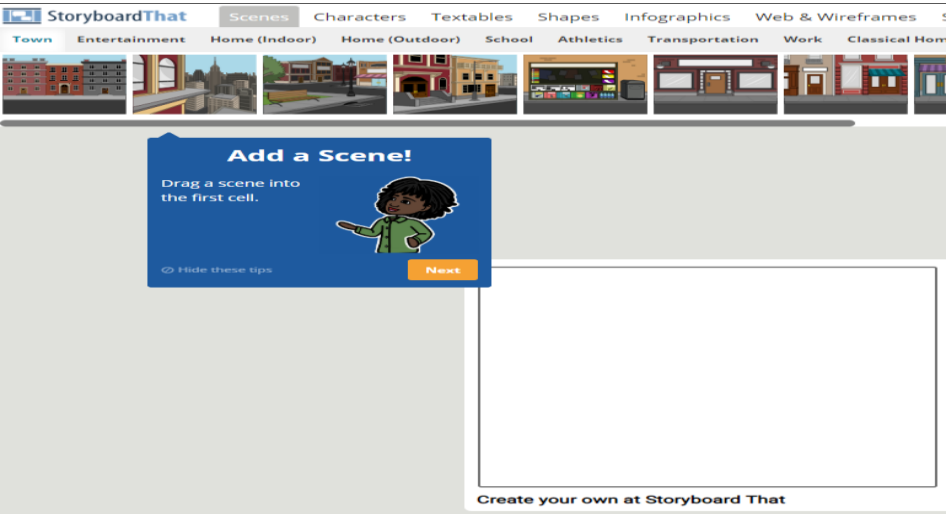
Pixton is very similar tool to Storyboard, and it is also used in English language teaching. With the help of these tools, teachers can create stories together with their students or allow students to create their cartoons.

Figure 13: Pixton Interface
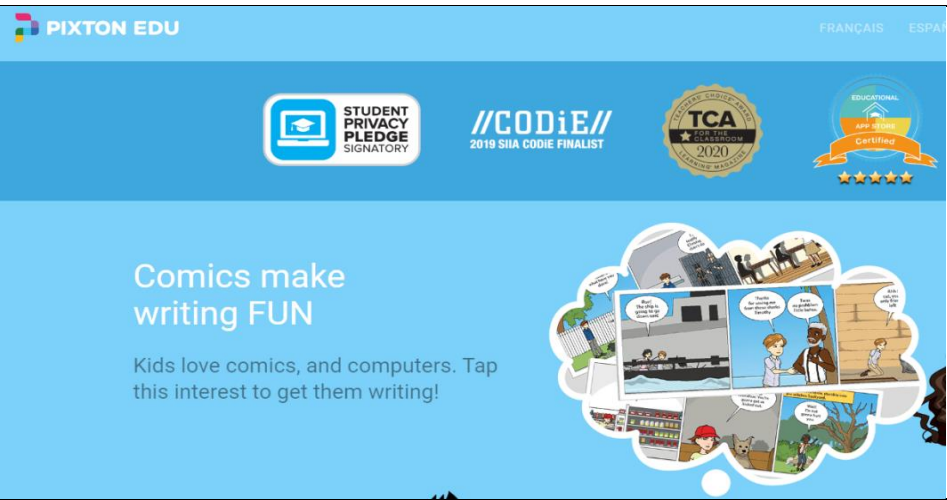
On the other hand, Boowa & Kwala cartoons are supported with songs and activities. The content of Boowa & Kwala is more suitable for young learners when compared to Storyboard and Pixton. However, Hp reveal and Quivervision are augmented reality tools which take students online coloring and editing one step further. Teachers and students can use them to create their stories and augment them by using both tools online and mobile.

2.3.5. Quizizz, Eğitim Çantası, GradeCam, Ethics of Using Internet and Digital Tools, Safe Internet and Cyberbullying

The last day of the training includes both online assessment tools and theoretical information regarding the safe use ofInternet and cyberbulling. The online assessment tools which are presented to Pre-service English teachers are Quizizz, Eğitim Çantası, and GradeCam.

Quizziz is an interactive web tool which allows teachers to pick up any quiz relevant to their subject and topic or teachers can also create their own tests by using the interactive interface that the tool provides. Teacher-created materials in Quizziz can be shared by sending links to students or they can be shared with students in Google Classroom and Edmodo which are virtual classes. The tool is available online and mobile, which also gives information about students' progress, allows teacher to organize different classes or levels.

Figure 14: Quizziz Interface
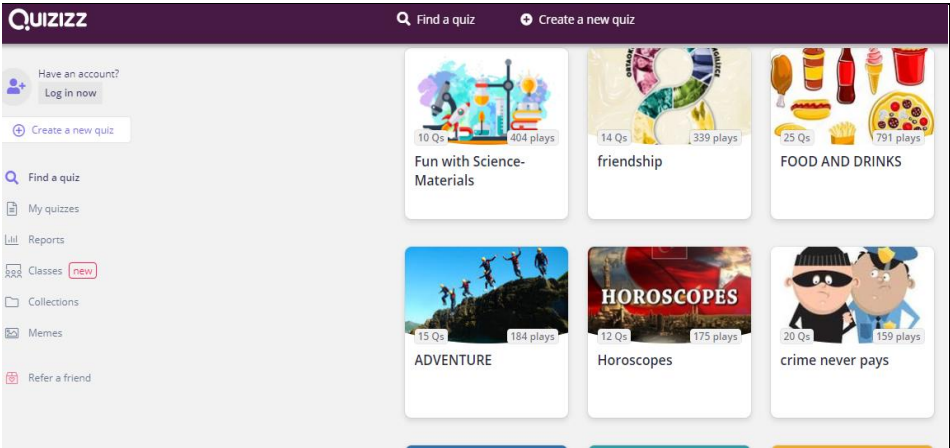
Source: quizziz.com

GradeCam is different from Quizziz in that it scores and streamlines everything teachers already do in the tool such asreating forms, analyzing data and transferring grades. By that token, Kılıçkaya (2017) says that teachers who give quizzes in class regularly find this tool very effective and useful as it provides instant feedback which helps grading and assessing students' progress in English language teaching. The tool is especially efficient in multiple choice tests because teachers can use their mobile phones to scan the forms provided by GradeCam and see the results of the tests taken by learners in less than a minute.

Eğitim Çantası is a web page which includes lots of web tools and Apps that can be used for educational purposes. Eğitim çantası provides short descriptions to the tools and it briefly explains how a specific tool can be used in class or for educational purposes. Moreover, the tool has a search engine where you can search for a specific web tool and app, or users can limit the tools according to the subject taught.

Figure 15: Eğitim Çantası Interface
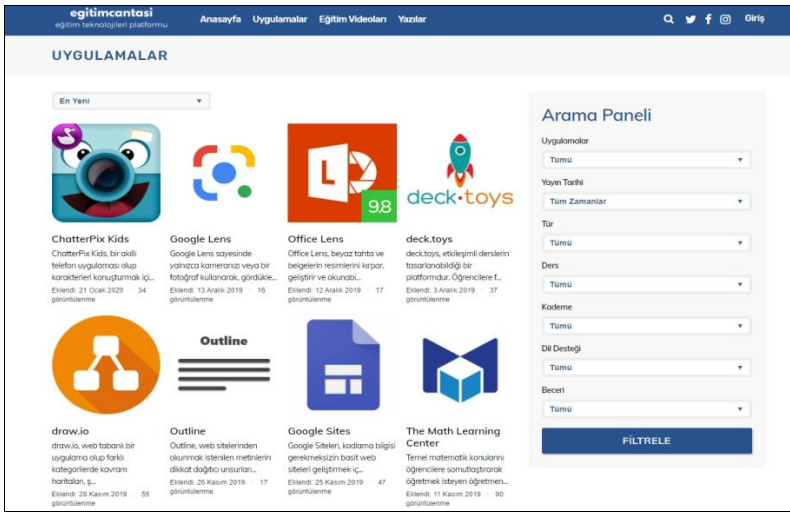
Source: egitimcantasi.com

After all, it is important to keep in mind that the use of digital tools in a safe way and prevent cyberbullying. Users of these tools and the internet should be informed on ethics of using digital sources, copyrighted material as well as plagiarism. Moreover, teachers are also informed on Internet safety such as creating strong passwords for digital tools and websites and privacy setting adjustments of the tools and apps.

3. METHODOLOGY

3.1. Research Design

Technology prevails in education in its own pace and teachers should have digital literacy skills and appropriate technology integration strategies to cope with it in their educational contexts to meet the needs of 21st century learners. On the other hand, there is a gap in the literature which includes studies on pre-service English teachers' understanding and knowledge of digital literacy and how they integrate digital tools and technologies into English language teaching.

Thus, first point of view and lived experiences of the participants are expected to help the researcher to understand the phenomenon under investigation in this study. For this reason, this study employs phenomenological research design which is a convenient and reliable way to investigate pre-service English teachers' digital literacies, tools and technologies and integration of them into teaching.

Pioneered by Edmund Hussler, phenomenology is both accepted as a philosophy and a research method to engage in the interpretation of meaning in order to understand lived experiences of humans with a deeper level of consciousness (Qutoshi, 2018: 215, Ellis, 2016: 128 &Çilesiz, 2010: 494). Thus, as a qualitative research design, phenomenological approach is employed in studies in order to describe and understand how human beings experience a certain phenomenon under investigation in addition to expanding consciousness about that specific phenomenon (Cresswell, 2008: 129).

In other words, researchers who adopt phenomenology intend to investigate a specific phenomenon from the first-hand point of perspective in a study in order to understand the experiences which are common to a group of people who can share their insights and lived experiences with the researcher whose aim is to construct these insights and lived experiences in his/her study (Padilla-Diaz, 2015: 104). Therefore, it can be said that phenomenology enables researchers to uncover realities and have a deeper level of understanding of a specific phenomenon in a systematic way. Thus, Çilesiz (2010: 495) states that "the purposes of a phenomenological study are to understand and describe a given phenomenon in-depth and arrive at the essence of humans' lived experiences of that phenomenon".

The focus of this study is to investigate pre-service English teachers' views, experiences, practices and developments related to the knowledge of digital literacy and the integration of digital tools and technologies into their teaching as stated earlier. Thus, this study aims to provide in-depth descriptions of pre-service English teachers' digital literacy skills and their use of digital tools and technologies in addition to investigating the integration of digital tools and technologies into their future teaching. As a result, this study is descriptive in nature, it employs phenomenological research design and the use of phenomenology in the study provides researcher advantage to reach deeper understanding on the phenomenon from the viewpoints of the participants.

3.2. Participants and Setting

In phenomenological research, it is important to reach and understand the first point of views, explanations or narrations, and it is equally important to choose the participants of the inquiry according to the phenomenon of interest (Ellis, 2016: 128). For that reason, participants of this study are chosen purposively and this method of sampling is called as purposive sampling method which enables researcher to reach at the core of the phenomenon studied with the help of participants who are capable enough to provide their experiences in order to contribute to the phenomenological study (Cresswell, 2008: 206 & Çilesiz, 2010: 498).

The advantage of purposive sampling in this study is that pre-service teachers may also learn from the phenomenon during their participation in the training where participants will have opportunity to increase their knowledge of digital literacy and digital tools to be integrated into their teaching. Therefore, 30 participants for the study were chosen out of 354 applicants whose applications were accepted online via Google Forms according to some sampling criteria based on the research problems and purpose of this study.

The first criterion is applicants' year of the study at their universities and their status as being Pre-service English language teachers (those who do not hold teaching certificates are not taken into consideration as for the applicants). Only 3rd and 4th grade students who were trained to be English teachers were chosen for the study. Out of 30 participants, 17of them are 3rd grade and 13 of them 4th grade pre-service English language teachers from 23 different universities around Turkey. 4 of the participants are from English Language and Literature Departments but these participants also hold teaching certificates. Also, 8 of the participants are male and 22 of the participants are female. Larger size of the

participants is not a necessity for phenomenological research for the generalizability issues; on the contrary, phenomenological studies require homogenous groups of participants (Çilesiz, 2010: 498).

Table 6: List of Participants' Universities

Akdeniz University
Aksaray University
Anadolu University
Bolu Abant İzzet Baysal University
Bolu Abant İzzet Baysal University
Gazi University
Gaziantep University
Hacettepe University
İstanbul Sabahattin Zaim University
İstanbul University
Karabük University
Karadeniz Technical University
Kocaeli University
Mehmet Akif Ersoy University
Middle East Technical University
Nevşehir Haci Bektas Veli Universitesi
Ondokuz Mayıs University
Sakarya University
Süleyman Demirel University
TED University
Trabzon University
Uludağ University

The second criterion is pre-service English teachers' success levels at their universities which will increase the homogeneity of the target participants. Thus, applicants were asked to send their current transcripts of records, and they were evaluated according to their grade point average (GPA). The participant who has the least average has 3.00 GPA and participant who has the highest has 4.00 GPA and the average GPA of the participants is 3.45.

Table 7: List of Participants and their GPA's

Participant	GPA
Participant 1:	3.18
Participant 2:	3.10
Participant 3:	3.33
Participant 4:	3.70
Participant 5:	3.61
Participant 6:	3.42
Participant 7:	3.32
Participant 8:	3.35
Participant 9:	3.62
Participant 10:	3.57
Participant 11:	3.19
Participant 12:	3.12
Participant 13:	3.10
Participant 14:	3.18
Participant 15:	3.65
Participant 16:	3.41
Participant 17:	3.13
Participant 18:	3.72
Participant 19:	3.36
Participant 20:	3.62
Participant 21:	3.47
Participant 22:	4.00
Participant 23:	3.89
Participant 24:	3.82
Participant 25:	3.76
Participant 26:	3.49
Participant 27:	3.71
Participant 28:	3.00
Participant 29:	3.79
Participant 30:	3.15

The third criterion is participants' interest, willingness and experience in the topic of the study for the group homogeneity as well. For that reason, the applicants of the study were asked to write a motivation letter to take part in the 'pre-service English language teachers' digital literacy training'. Three of the sample motivation letters of participants are given here as examples.

For instance, Participant 4 states that he/she knows technology should be used in an effective and active way in teaching and learning. Also, he/she wants to take part in this study to learn more about both theoretical and practical information related to the integration of technology into teaching.

P4:*"As presented in the general scope of training and most today's modern educators and students agree, the active and efficient use of today's technological developments in the course of language learning and teaching in the classroom and in extracurricular activities, I think we should improve ourselves as much as possible. I would like to participate in this training as a student who currently applies the use of computers in lessons at full capacity, acquires information from the technological environment or supports the use of in-class technology to the end. It would be a great experience for me to learn how to use teaching methods in a theoretical and practical manner and in the trainings that will be given by academicians who are experts in their field, and if possible, I would transfer my knowledge to other people who will progress in the other education field around me."* (Eğitimin genel kapsamında sunulduğu ve günümüz modern eğitimcilerinin ve öğrencilerinin çoğunluğunun hemfikir olduğu üzere, dil öğrenimi ve öğretimi sürecinde günümüz teknolojik gelişimlerinin ders içi ve ders dışı faaliyetlerde aktif ve verimli bir biçimde kullanılması ve biz geleceğin eğitimcilerinin bu konuda yetkin olması ve bu konuda mümkün olduğunca ve elimizden geldiğince kendimizi geliştirmemiz gerektiğini düşünüyorum. Hâlihazırda derslerinde bilgisayar kullanımını tam kapasitede uygulayan, bilgiyi teknolojik ortamdan edinen ya da edindiği bilgiyi teknolojik ortamda derleyip kullanan bir öğrenci ve ders içi teknoloji kullanımını sonuna kadar destekleyen biri olarak bu eğitime katılmak istiyorum. Teorik ve pratik bir şekilde öğretim yöntemlerini tarafınızdan ve alanında uzman akademisyenler tarafından verilecek olan eğitimlere tam katılım sağlayıp nasıl kullanabileceğimi öğrenmek ve eğer mümkün olursa bunu şu anda çevremde bulunan diğer eğitim alanında ilerleyecek insanlara aktarmak benim için harika bir deneyim olacaktır)

Another applicant informs that pre-service English teachers should be trained on how to use technology in class. In addition, the participant wants to learn more about digital tools, technology integration and digital literacy skills from his/her peers who also take part in this study.

P16:*"It makes me very excited to prepare such workshops for English Teachers. For this reason, I am aware that such activities will contribute to my field competence in the way of becoming an English Teacher who will guide the new generation. When I look at the activity program, I saw that technology integration practices in the classroom are in an arrangement that supports four basic language skills. Now, keeping up with the requirements of the age we live in, providing the opportunities brought by technology to our classes for the use of young generations, both locally and within the framework of universal standards, will be the factors that will further enhance our education quality and success. Based on my experience and environmental observations, students find*

working with interactive elements more enjoyable and impressive. Even in private language institutions, while smart book applications, animations, and pronunciation elements are available, it will be more advantageous for a language learner to use such technological factors in our own classrooms. I believe that by providing a better control over the programs to be used in this training, I will be able to perform a better-quality job and also provide my students with a higher standard education in my future job. In addition, I believe that I can provide new ideas and practices both within the ELT communities and in my personal and professional development process, by exchanging ideas with my next generation colleagues and individuals who are already working in this field. I hope that I will be accepted into this training program and can make more steady progress towards teaching English. I look forward to taking part in this training."

(İngilizce Öğretmenleri için bu tarz çalıştaylar hazırlaması beni içten bir şekilde heyecanlandırmaktadır. Bu sebepten ötürü, yeni nesle yol gösterecek olan bir İngilizce Öğretmeni olma yolunda, bu şekildeki etkinliklerin alan yetkinliğime üstün katkı ve fayda sağlayacağının bilincindeyim. Etkinlik programına bakıldığı zaman, sınıf içerisinde teknoloji entegrasyonu uygulamalarının dört temel dil becerisini destekleyici bir düzenlemede olduğunu gördüm. Artık, yaşadığımız çağın gerekliliklerine ayak uydurarak, hem yerel bazda, hem de evrensel standartlar çerçevesinde sınıflarımıza teknolojinin getirdiği imkanları genç nesillerin kullanımına sunmak, eğitim kalitemizi ve başarımızı daha da yücelecek etmenler olacaktır. Benim tecrübe ettiğim ve çevresel gözlemlerime dayanarak, öğrenciler interaktif elementlerle çalışmayı daha keyif verici ve etkileyici bulmakta. Özel dil kurumlarında bile akıllı kitap uygulamaları, animasyonlar, sesletim elementleri mevcut iken, bizim kendi sınıflarımızda da bu tarz teknolojik etmenlerin kullanılması bir dil öğrenen için daha avantajlı olacaktır. Bu eğitim içerisindeki kullanılacak programlar üzerinde daha iyi bir hakimiyet sağlayarak, gelecekteki görevimde hem kendim daha kaliteli bir iş gerçekleştirebileceğime, hem de öğrencilerime daha üstün standartlarda bir eğitim sağlamış olacağıma inanıyorum. Ayrıca, bu program içerisinde tanışacağım gelecek nesil meslektaşlarım ve halihazırda bu alan içerisinde çalışmalar yapan bireylerle fikir alış-verişi yaparak, hem ELT toplulukları içerisinde, hem de kendi kişisel ve mesleki gelişim sürecimde yeni fikirler ve uygulamalar sağlayabileceğime inanıyorum. Umarım ki, bu eğitim programına kabul edilirim ve İngilizce öğretimi yolunda daha istikrarlı ilerlemeler kaydedebilirim. Bu eğitimi dört gözle bekliyorum.)

Moreover, another participant in his/her motivation letter states that English language teachers should not teach their students in a traditional way. On the other hand, this applicant implies that they should learn the benefits of using digital tools and technologies in teaching and they should master their digital literacy skills in order to integrate these digital tools and technology into their teaching.

P12:"Rapidly developing digital technologies affect every area of our lives and have a great importance in education. When we think about current learning theorems like

connectionism from factors that increase students' motivation, we see that the importance of educational technologies has become undeniable. For example, when we teach the English lessons we need to connect with the real world to the subject we teach, on the contrary, by traditional methods without addressing the world of digital age children, learning will be difficult and artificial. In this context, we, as English teachers, must master current digital technologies and know how to best use and utilize these technologies in teaching. I, as the future English teacher, have digital literacy skills and I want to make the most of this skill while practicing my profession. Besides, due to my special interest in this field, I would like to take a master's degree in educational technologies to further develop myself. For these reasons, I would like to participate in the digital literacy training program you provided." (Hızla gelişmekte olan dijital teknolojiler hayatımızın her alanını etkilediği gibi eğitimde de büyük bir öneme sahiptir. Bağlantıcılık gibi güncel öğrenme teoremlerinden, öğrencilerin motivasyonunu artıran etkenlere kadar düşündüğümüzde eğitim teknolojilerinin öneminin yadsınamaz bir hale geldiğini görürüz. Mesela, öğrettiğimiz konunun gerçek dünya ile bağlantısını kurmamız gereken İngilizce derslerini, tam tersine geleneksel yöntemlerle dijital çağ çocuklarının dünyasına hitap etmeden işlediğimizde öğrenmenin de gerçekleşmesi zor ve yapay olacaktır. Bu bağlamda baktığımızda bizler İngilizce öğretmenleri olarak güncel dijital teknolojilere hakim olmalı ve öğretimde bu teknolojileri en iyi nasıl kullanıp faydalanabileceğimizi bilmeliyiz. Ben de, geleceğin İngilizce öğretmeni olarak, dijital okur-yazarlık becerisine sahip olup, mesleğimi icra ederken bu beceriden en iyi şekilde faydalanmak istiyorum. Bunun yanında bu alana olan özel ilgim dolayısıyla kendimi daha fazla geliştirmek için eğitim teknolojileri alanında yüksek lisans eğitimi almak istemekteyim. Bu sebeplerden dolayı, vermiş olduğunuz dijital okur-yazarlık eğitim programına katılmak istiyorum.)

Eventually, participants of the study are chosen purposively considering the above-mentioned criteria for sampling procedure. In addition to sampling, the setting of the study is also chosen according to the essence of the study which requires internet connection, computers, and over-head projector for presentations and applications. Thus, Karadeniz Technical University's Distance Education Centre is found suitable for the study.

Figure 16: Setting of the Study

Karadeniz Technical University is situated in the north part of Turkey in Trabzon which is easier for participants to travel around from above mentioned universities by means of all transportation manners such as by plane or bus. The actual place where digital literacy training was delivered to the participants is Karadeniz Technical University's Distance Education Centre which provided all necessary technical equipment and rooms for the delivery of the training.

Moreover, each of the participants were allocated a computer connected to the Internet as they were required to do hands-on activities and try some of the digital tools presented to them by using the technology available to themas shown in Figure 20.

After all, the participants were chosen and they were given consent forms which ensured that they could withdraw from the study anytime they wanted. The procedure for the study was explained, and participants were informed about the study in the preliminary meeting which was held on the day before the firsht day of the training. Besides, the participants of the study were informed that their names, their contact details and other personal information would only be used for the study, and they would be kept confidential.

3.3. Data Collection Tools

In phenomenological studies, there are different data collection tools used to reach the essence of phenomenon and learn about experiences of the participants. The focus in all tools used in phenomenological research is on an in-depth understanding of phenomenon with the help of thoughts and views of participants and these research instruments usually consist of interviews, observations and self-written descriptions (Çilesiz, 2010: 499).

In phenomenological research, various research methods and instruments can be used such as interviews, conversation, observation, focus-group interviews and texts analysis as stated by Qutoshi, (2018: 220), and the following instruments and methods were used in this study in order to gain in-depth data from the participants of the study.

Figure 17: Research Instruments
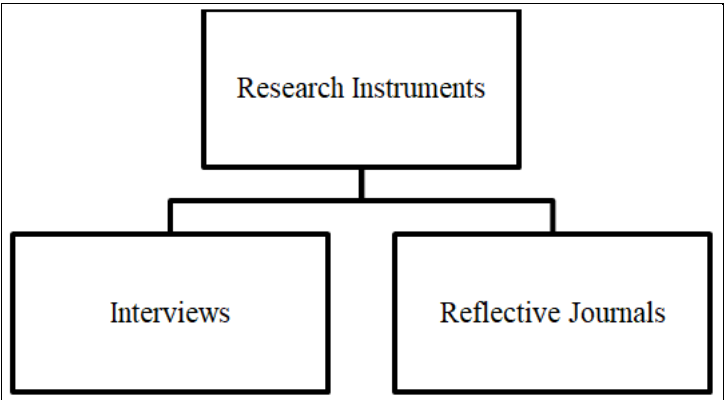
3.3.1. Interviews

In this study, Seidman's (2006) phenomenological interviewing approach was adopted. This kind of interviewing includes three-serial interviews such as "interview one: focused life history, interview two: the details of experience, and interview three: reflection on the meaning" (Seidman, 2006: 17). The first interview enables researchers to understand the context of participants experience, the second interview provides information related to the experience that occurs simultaneously and the third interview enables researchers to elicit participants' reflection on a specific experience (Seidman, 2006: 17).

The three-serial interviews were carried out in online written format by using Google Forms which enabled participants to check their ideas and arrange them,

if necessary, on the contrary to traditional face-to-face interview which requires instant replies or views. In addition, structured interview method was used for online interviews that required participants to describe the phenomenon of this study in detail with the help of pre-determined questions, and all of the participants answered the questions in the same order.

Moreover, Englander (2012) states that preliminary meetings with participants is important because participants and researchers build trust, review study's aims and participants complete and hand-in consent forms if necessary for the study. In the preliminary meeting of the study, which was held before the study, the participants were informed about training, interviews, and reflective journals and they were given information about how to use Google Forms to take part in interviews similar to the view of Englander (2012).

3.3.2. Reflective Journals

In order to gain deeper insights into this phenomenological study, it is important to elicit as much as information from the responses of participants. For this reason, this study employed reflective journals as a research instrument because it is sometimes difficult to co-operate with participants and motivate them to take part in the research actively in the interviews, discussions or group meetings (Wiegerova, 2013: 240).

Thus, pre-service English teachers' reflective journals provided qualitative data regarding their experience of the digital literacy training which consisted of different theoretical and practical sessions related todigital literacy skills, digital tools and technologies and their integration in teaching as well as hands-on activities which all aimed to create an awareness in pre-service English teachers towards the use digital tools and technologies in English language teaching within appropriate pedagogy.

In this study, pre-service English teachers were asked to keep reflective journals regarding the digital tools and technologies they learn and use during the training. They are expected to reflect upon structured questions in their reflective journals which are delivered to them in a file together with consent forms prior to their attendance on the study. Pre-service English teachers were asked to reflect each training days on:

- their previous knowledge on the topic, (what they knew on the topic)
- their current knowledge after training (what they have learnt today)

- how they are planning to integrate today's training into their future teaching (how they will apply today's learning into their future teaching)
- their suggestions and further comments on the topic

 In addition to its contribution to this study as a research tool, reflective journal in this study also increased the validity of the study as reflective journals can also be used for triangulation in qualitative studies (Wiegerova, 2013: 241, Bashan & Holsblat 2017: 7).

3.4. Piloting

A pilot study can be referred to as a small-scale trial of research instruments to ensure that they will work in real practice as proposed and the basic idea behind piloting is to make necessary adjustments if there occurs any change in the instruments to be used for gathering data (Kim, 2010:192). This study adopts three-serial interviews, reflective journals and a scale as research instruments and both interviews and reflective journals are the core of this phenomenological study as in-depth information corresponding to research questions of the study will be reached by means of these research instruments. Therefore, conducting a pilot study for these two tools is required.

Initially, 8 pre-service English teachers were chosen from the department of English Language and Literature department for the pilot study, and they were asked whether interviews questions were understandable for them or there were mistakes or unnecessary items. As a result of the first pilot study, the interview questions were translated into Turkish to have in-depth information from the participants.

In the second piloting study, the same participants were invited, and they were given second draft of the interview questions with extra information related to the study and research question. Participants of the pilot study were asked to check whether interview questions fitted for the study and its research questions. As a result, after discussing the feedback of pilot study participants with the advisor of the researcher number of questions were decreased to eight.

Also, participants were asked about their opinion regarding reflective journals in the second piloting study. After piloting study, it was found that questions were understandable and involving enough for participants. Also, additional information regarding the instructions for the reflective journals was given in the brackets in English and reflective journals were decided to be given to actual participants of the study by hand.

After the last meeting with the advisor on the second week of November, the research questions of the study, interview questions and reflective journal were double checked. The interview questions were uploaded to Google forms and made ready for the first interview with the participants of the study. Also, reflective journals were copied and put in files to be given to the participants on the first preliminary meeting with the participants.

3.5. Data Collection Process

As stated by Englander (2012), there is no prescriptive method for the data collection process that applies to all studies which have different purpose. So, it can be said that data collection varies in each study according to the nature of the study. Similarly, Kvale and Brinkmen (2014: 26) say that phenomenological study's main iprocesseses is on the experiences of the actors and the reality that comes from the experiences of the participants.

As this study required in-depth information and participants' own experiences, it adopted phenomenological ways of data collection which usually consists of interviews. Additionally, reflective journals were used for deeper understanding of participants' experiences required for the phenomenological nature of the study.

Prior to the preliminary meeting with the participants of the study, their e-mail addresses were noted down for the process of online structured interviews which are the core of the study. In the preliminary meeting the participants were informed on the purpose of the study, they were given consent forms; they were introduced to the Google Forms for online interviews. Also, participants were given files that include their reflective journals which they would use for reflection regarding the digital literacy training.

Before the training, the participants were asked to take part in first interview and all of them took part in the interview. Also, participants were informed about the process of data collection during the training week, which enabled all participants to take part in the second interview. After almost two months later, the participants were invited to take part in the last interview to check their views and experiences with both and second interviews. It was seen that there are three missing interviews for the last part of three-serial interview. On the other hand, all the participants handed in their reflective journals at the end of the training.

3.6. Data Analysis Procedure

As stated before, phenomenological studies reveal experiences and realities of the participants, and it is the researcher who attempts to find out the core and essence of these experiences and realities by data analysis. Thus, according to Padilla-Díaz (2015), the data analysis in a phenomenological study has procedures such as, bracketing, epoche, textual and structural analysis.

In addition, Cresswell (2007: 159) presents a practical process for data collection in phenomenological study and these following steps are followed in this study to analyze the qualitative phenomenological data:

1   The phenomenon under study was explained by the researcher by stating personal experiences and thoughts to set aside biases.

2   The list of related statements of the participants was developed for the horizontalization of the data and each non-repetitive statement in the interviews and reflective journals were equally treated.

3   Similar statements of the participants were grouped under larger meaning units, in other words, statements grouped under themes.

4   Participants' experiences and thoughts regarding the phenomenon were reflected in the analysis of the data by using ad verbatim quotations and this was textual description. Also, structural descriptions were also presented (this was related to how experiences and thoughts happen)

5   The findings of the study were shown by combining textual and structural analysis as well as ad verbatim quotations to show the core of the study.

Phenomenological studies are closely related to participants lived experiences. On the other hand, researchers' own experiences may also influence the research process. Thus, bracketing will reduce the risk of bias resulting from researcher's own experience and knowledge (Chan, 2013: 2). Similarly, by applying epoche, researchers stay away from assumptions, relying on their own experiences as well as prejudgments so that they can present bias-free findings for their phenomenological inquiries (Yüksel and Yıldırım, 2015: 1). Both textual and structural analysis of the data in the study focused on the lived experiences of the participants by trying to find answers to questions of what is presented as data and how they happen in their contexts.

Figure 18: Data Analysis Procedure
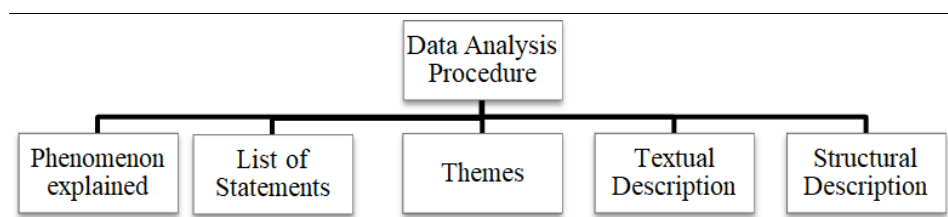
To analyze the data in the study, statements and written descriptions of the phenomenon under the inquiry were listed. Themes and codes were identified to organize the data considering the research questions of the study. After the identification of key themes and codes for the data, direct quotations (ad verbatim statements) were included to support textual descriptions. This part of the study is reported in a robust way considering descriptive phenomenology.

Although this study involved comparatively small size of participants when compared to other research designs, there arized an abundance of data obtained with the help data collection instruments utilized. Therefore, repetitive, overlapping and unclear statements were eliminated to reduce the size of data and increase the relevance. This process of elimination of is considered as phenomenological reduction (Yüksel&Yıldırım, 2015:7). After this process, the raw data was analyzed according to the data collection process adopted from Creswell (2007:59) as stated above and shown in Table 4.

To sum up, analysis of data obtained from interviews and reflective journals enabled researchers to move from broad ideas and statements of participants to common themes. Therefore, size of the data was reduced, and emerging data became more manageable and relevant to the study. Eventually, statements were listed into themes and codes for analysis which is supported with ad verbatim statements of the participants.

3.7. Research Ethics

Ethical considerations in any research are critical and should be considered to preserve participants' rights and keep privacy in the data collected (Orb et al., 2000: 93). Thus, participants in any study can be put in a comfort zone where they are fully aware of their rights as participants and be sure that the research avoids revealing private information. Therefore, the participants of this study

were provided information in the consent form to avoid the inconvenience that might result from data collected from the participants.

In this study, the consent form which was given to the participants prior to their attendance to the study includes information about the purpose of the study, the data collection tools, and participant's rights to withdraw from the study. Also, the participants were informed that any information that might reveal personel identity such as names would be kept confidential.

Moreover, research ethics draw a line between voices and experiences of the participants in research and their privacy (Dilmi, 2012: 67). Thus, participants were informed that any datarevealingpersonal information was kept confidential. The confidentiality of the data was provided with the coding system of the study; for example, the name of the participants was kept confidential and any data that might reveal participants' identities in the data were omitted. Thus, the data was analyzed in a way that no other researchers could understand the source.

CHAPTER FOUR

4. FINDINGS AND DISCUSSIONS

4.1. Pre-service English Teachers' Views of Digital Literacy

This study aims at investigating pre-service English teachers' digital literacy skills. These skills are accepted as competence, abilities, and confidence in using digital technologies and tools. Regarding the definition and elements of digital literacy and digital literacy skills, there are different proposals presented in the literature review part of the study (Osterman, 2012; Glister, 1997; Eshet-Alkalai, 2004; Bawden, 2008; & California ICT, 2008). Although there are different definitions and explanations regarding digital literacy, this study adopts the definition and elements of digital literacy presented in Figure 3 in the literature review part to build a theoretical basis of the term studied. Thus, the study refers to the elements, definitions, and competencies which are defined in California ICT Digital Literacy Policy Framework (2008: 5).

According to the framework, digital literacy refers to several elements such as "access, manage, integrate, evaluate, create, communicate" as well as competencies such as searching and retrieving information, organizing data for future use, evaluating information, adapting information for a specific purpose, and presenting data (California ICT, 2008: 5). Therefore, California ICT Digital Literacy Policy Framework (2008) was taken into consideration while investigating participants' understanding of digital literacy.

On the other hand, how participants of the study perceive the term digital literacy and how they define the term digital literacy is closely related to the nature of this study, a phenomenological approach to gather in-depth information from participants. Therefore, the interview questions aimed to reveal participants' views of digital literacy, digital literacy skills, and their fluency level in digital literacy.

Before the training, pre-service English teacher candidates were sent interview questions, and they were asked to answer the following phenomenological questions in an attempt to gain in-depth data pertaining to their digital literacy, digital literacy skills, and digital fluency level. Interviews included following questions related to their views of digital literacy, their attendance to digital literacy training and their prospective attendance to similar past trainings.

Question 1: What does digital literacy mean to you? (Dijital okur-yazarlık kavramı sizin için ne anlam ifade ediyor?)

Question 2: What is your motivation towards attending digital literacy training? (Dijital okuryazarlık eğitimine katılma sebepleriniz nedir?)

Question 3: Would you like to attend similar traninings? Why? (Size sunulan eğitim sonrasında benzer eğitimlere katılmak istermisiniz? Neden?)

The main research question corresponding to interview questions is: "How do participants consider their own digital literacy and the use of digital tools and technologies in teaching English before, during and after the training?" Based upon the main research question and after careful examination of the statements of the participants, participants' views of digital literacy were analyzed in two parts: participants' *definitions of digital literacy* and *necessity of digital literacy training*.

4.1.1. Defining Digital Literacy

The three consecutive interviews included different questions related to the participants' understanding of digital literacy. Thus, their responses were examined, non-repetitive statements were taken into consideration for the horizontalization of the data, and similar statements of the participants were grouped under the codes of 'reaching information, producing information, sharing information, and using technology'. The emerging codes regarding the definition of digital literacy are associated with reaching, producing and sharing information as well as the ability to use technology and digital tool, as shown in the table below:

Table 8: Participants' Definitions of Digital Literacy

Theme	Code	f	%
Defining Digital Literacy Question 1: What does digital literacy mean to you?	Using Technology	13	43
	Reaching Information	8	27
	Sharing Information	5	17
	Producing Information	4	13

Under the theme of "defining digital literacy", the code "reaching information" is common to 8 of the participants when their statements are analyzed. According to these participants, digital literacy can be defined as finding out necessary information in the digital world with the help of technological tools.

P14: "Digital literacy is the ability to use digital tools effectively in every sense and utilize these tools at the maximum level and to find information". (Dijital araç gereçleri her anlamda etkili bir biçimde kullanıp maksimum düzeyde bu araçlardan yararlanabilmek ve bilgi bulma becerilerini ifade ediyor.)

P4: "To me, digital literacy means having the skills to access information by means of technological devices such as smart phones, tablets, computers including today's mass communication devices". (Bana göre dijital okuryazarlık, günümüz kitlesel iletişim cihazları dahil olmak üzere, akıllı telefonlar, tabletler, bilgisayarlar gibi teknolojik alet aracılığıyla bilgiye ulaşma, bilgiyi anlayıp işleme ve analiz etme becerilerine sahip olmayı ifade eder.)

Other participants also focused on the code of "reaching out information" by stating that the appropriate use of technology enables users to find out releveant information available online, and probable implication deduced from the participants' statements is that it is also possible to share this found information with other users of digital tools and technologies. For instance;

P14: "Digital literacy is using technology in an effective way to reach out information". (İstenilen bilgiye kolayca ulaşabilip teknolojiyi etkili kullanabilmek.)

P26: "Digital literacy is reaching out information and sharing this information by using technology". (Dijital okur yazarlık, teknolojiyi kullanarak bilgi ye ulaşmak ve vbu bilgiyi aktarmaktır.)

The code "producing information" while defining digital literacy is referred by 4 of the participants and they stress the importance of knowledge of technology to produce information. Thus, their definition for digital literacy is related to the production of information, and these participants seem to be focusing on the use of digital tools and technologied in order to create media tools to reach certain aims as evidenced in the following statements;

P25: "For me, digital literacy is the use of technology for our needs and aims in an effective and productive way". (Dijital okur-yazarlık benim için günümüz teknoloji araçlarını ihtiyaçlarımız ve hedeflerimiz çerçevesinde yararlı ve üretken biçimde kullanabilme yeteneğidir.)

P23: "Digital literacy is interpreting the data and with this, it is producing text and graphics". (Dijital platformdaki verilerin anlamlandırılması ve bu veriler ışığında gerektiğinde yeni metin, grafik vs oluşturulabilmesi.)

The code "sharing information" is associated with the definition of digital literacy by 5 of the participants out of 30. These participants define the term by referring

to the previous themes, but they also highlight the importance of sharing. For example;

Participant 5: "Digital literacy expresses the ability to use digital tools effectively in a maximum level to find, analyze and share information". (Dijital araç gereçleri her anlamda etkili bir biçimde kullanıp maksimum düzeyde bu araçlardan yararlanabilmek ve bilgi bulma, analiz etme, paylaşma becerilerini ifade ediyor.)

Moreover, almost half of the participants, 13 of 30, define the term digital literacy by expressing that it is the ability to use technology which is examined under the code of "using technology". In other words, they tend to define digital literacy by highligting the ability to use specific technologies to reach a certain aim as seen in the statements below.

Participant 20: "Digital literacy is having knowledge about technology, sites, applications and programs as well as ability to use them besides integrating them to teaching". (Teknolojiyle alakalı site, uygulama ve programlar hakkında bilgi sahibi olup onları kullanabilme ve alana entegre edebilme.)

Participant 19: "For me, digital literacy expresses the ability to use technology for our purposes (Dijital okur-yazarlık benim için teknolojiyi kendi amaçlarımıza uygun şekilde kullanmayı ifade ediyor.)

Participant 10: "Digital literacy is the ability to use computer and various technological devices". (Bilgisayar veya çeşitli teknolojik aletler kullanabilmek.)

So far, the codes under theme of defining digital literacy, "reaching information, producing information, sharing information, and using technology", are associated with the definition of digital literacy when the term is asked to be defined by the participants. When the statements are taken into considerations, most of the participants refer to the code of "using technology" and "reaching information" with the numbers of 13 and 8 respectively. Also, the participants refer to "sharing information" and "producing information" respectively with the numbers of 5 and 4 as well.

4.1.2. Necessity for Digital Literacy Training

To find out the reasons behind participants motivation to take part in the digital literacy, this study proposed the question "why do you want to take part in this training?" and the statements of participants were analyzed, non-repetitive statements were taken into consideration. As a result, some codes emerged based

upon participants' statements corresponding to the interview question. The codes are shown in the following table:

Table 9: Participants' Views of Attending Digital Literacy Training

Theme	Codes	f	%
Reasons Behind Attending Digital Literacy Training Question 2: What is your motivation towards attending digital literacy training?	Professional Development	13	43
	Integrating Technology	11	37
	Teaching in the 21stCentury	6	20

When the Table 6 is examined, it seems that participants want to take part in the digital literacy training for some reasons such as "professional development, teaching 21st-century learners and integrating technology into teaching".

Thus, it is clear from the statements of the participants that most of the participants are willing to take part in the training for "professional development" purposes. The number of participants whose statements are associated with this code is 13 and this is almost equal to the half of the participants. Some of the participants' statements are given here as the examples of the code of "professional development";

P4: "I think that we need to improve ourselves for the active and efficient use of today's technological developments in the course of language learning and teaching in classroom and in extra-curricular activities which are also presented in the general scope of the training and the majority of today's modern educators and students agree. I would like to participate in this training as a student who currently uses of computers in lessons at full capacity, acquires the information from the technological environment or compiles and uses the information."(Eğitimin genel kapsamında sunulduğu ve günümüz modern eğitimcilerinin ve öğrencilerinin çoğunluğunun hemfikir olduğu üzere, dil öğrenimi ve öğretimi sürecinde günümüz teknolojik gelişimlerinin ders içi ve ders dışı faaliyetlerde aktif ve verimli bir biçimde kullanılması ve biz geleceğin eğitimcilerinin bu konuda yetkin olması ve bu konuda mümkün olduğunca ve elimizden geldiğince kendimizi geliştirmemiz gerektiğini düşünüyorum. Hâlihazırda derslerinde bilgisayar kullanımını tam kapasitede uygulayan, bilgiyi teknolojik ortamdan edinen ya da edindiği bilgiyi teknolojik ortamda derleyip kullanan bir öğrenci ve ders içi teknoloji kullanımını sonuna kadar destekleyen biri olarak bu eğitime katılmak istiyorum.)

P6: "I want to take part in this project because I think that the information that I will have in the training will guide me a lot in my future education life as well as in my academic career and my teaching experience in future." (Bu proje yer almak istiyorum çünkü ileriedeki eğitim hayatımda bu bilgilerin gerek akademik kariyerimde gerekse öğretmenlik deneyimim boyunca bana çok fazla yol göstereceğini düşünüyorum.)

P8: "I want to get different experiences by participating in different projects in the field of English language teaching. I would like to complete the deficiencies in education and provide more effective and productive teaching in my prospective teaching by using the information I have gained here and spread them to a wide environment. I want to meet more opportunities and knowledge to develop and research myself." (İngilizce öğretmenliği alanında farklı projelere katılarak, farklı deneyimler elde etmek istiyorum. Edindiğim bilgileri kullanarak eğitimdeki eksiklikleri tamamlamak ve bunları geniş çevreye yayarak ileriki öğretmenlik hayatım süresince daha etkili ve verimli bir eğitim sağlamak istiyorum. Kendimi geliştirmek ve araştırmak için daha fazla imkan ve bilgiyle karşılaşmak istiyorum.)

P25: "Based on the idea that digital media is used frequently today and will be used actively in the future, I think that this training will be beneficial and contribute to my professional life in terms of researching, finding, using and transferring the information that I will use through digital media." (Dijital ortamın günümüzde sıklıkla kullanıldığı ve gelecekte de aktif bir şekilde kullanılacağı düşüncesinden yola çıkarak dijital ortam aracılığı ile kullanacağım bilgiyi doğru bir şekilde araştırma, bulma, kullanma ve aktarma yönlerinden bu eğitimin faydalı olacağını ve meslek hayatıma katkı sağlayacağını düşünüyorum.)

P21: "I want to take part in this training because I always want to develeop myself as a teacher candidate because I am interested in technology required by our age, and what is more and I want to be an efficient teacher for my students." (Öğretmen adayı olarak kendimi daima yetiştirmek istediğimden, teknolojiye ilgi duyup çağımızın gerektirdiği teknolojik bilgiye ve daha fazlasına sahip olup öğrencilerime karşı verimli bir öğretmen olmak istediğim için bu eğitime katilmak istiyorum.)

The second code that emerged from the statements of the participants regarding their views of the necessity of digital literacy training is "teaching in the 21st century". When all of the statements are analyzed, it is seen that the increase in the use of technology and digital tools in educational environment necessitates digital literacy in the world of technology and digital tools.

Therefore, 6 of the participants out of 30 stated that they took part in the training to meet the needs of the 21st century learners, and the necessity of teaching in the 21st century. Thus, the following are examples of statements regarding the theme "teaching in the 21st century".

P7: "One year left, to get my teaching certificate. May be, this training is one of the last chances that I will come across till I graduate. What is important is that this century is time new generation children. As prospective teachers, we must know how to find, interpret and use the information that will be useful for us with the help of technological tools, before getting lost in the digital world to meet the expectations of new generation

student. In this sense, I think that this training will be helpful for us". (Öğretmen sıfatını almama son 1 sene kaldı. Bu proje bu bağlamda karşıma çıkan son fırsatlardan birisi belki de. Ayrıca yeni nesil öğrenciler teknolojinin içine doğmuş çocuklardan oluşuyor. Onların beklentilerini karşılamak için dijital dünyada kaybolmadan biz öğretmen adayları olarak teknolojik araçlar yardımıyla işimize yarayacak bilgiyi bulmayı, onu yorumlamayı ve kullanmayı bilmeliyiz. Bu anlamda bu projenin çok yararlı olacağını düşünüyorum.)

P12: "...learning will be difficult and artificial when we teach English lessons that we need to connect with the real world without addressing the world of digital age children with traditional methods. In this context, we, as English teachers, must master current digital technologies and know how to use these technologies in teaching. In this context, as a prospective English teacher, I want the get use of these digital literacy skills while practicing my profession"(...öğrettiğimiz konunun gerçek dünya ile bağlantısını kurmamız gereken İngilizce derslerini, tam tersine geleneksel yöntemlerle dijital çağ çocuklarının dünyasına hitap etmeden işlediğimizde öğrenmenin de gerçekleşmesi zor ve yapay olacaktır.Bu bağlamda baktığımızda bizler İngilizce öğretmenleri olarak güncel dijital teknolojilere hakim olmalı ve öğretimde bu teknolojileri en iyi nasıl kullanıp faydalanabileceğimizi bilmeliyiz. Ben de, geleceğin İngilizce öğretmeni olarak, dijital okur-yazarlık becerisine sahip olup, mesleğimi icra ederken bu beceriden en iyi şekilde faydalanmak istiyorum).

P24: "Technology takes place in every part of our lives as a routine brought to us by the era. As prospective teachers, we must learn how to integrate technology into lessons and enable students to make the best use of technology in their educational processes. I believe that when technology is used correctly in the classroom, it will have many benefits in teaching process and it will facilitate this process. That is why I want to take part in this training and meet the requirements of 21st century as a teacher." (Çağımızdaki gereklilikleri ve çağın bize kazandırdığı bir rutin olarak teknoloji hayatımızın her segmentinde yer almaktadır. Biz gelecekteki öğretmenler olarak teknolojiyi derslere nasıl entegre etmemiz gerektiğini öğrenmeli ve öğrencilerin eğitim süreçlerinde teknolojiden en iyi şekilde yararlanmalarını sağlamalıyız. Kişisel bir yaklaşım olarak teknolojinin de sınıf içerisinde doğru kullanıldığında öğretim sürecinde birçok yararı olacağını ve bu süreci kolaylaştıracağına inanıyorum. Bu yüzden bu eğitimde yer almak ve 21. yüzyılın gerekliliklerini bir öğretmen olarak karşılamak istiyorum.)

The third code, "integrating technology", is referred by 11 participants out of 30 in the study. When participants' statements are taken into consideration, it is probable that participants want to take part in the training both to learn how to integrate technology and tools as well as they want to learn more about the technology integration process and approaches. Based upon the interviews, following ad verbatim statements can be given as the examples of the code "integrating technology";

P2: "As far as I have experienced and based on my observations, students find working with interactive elements more enjoyable and impressive. Even in private language institutions, while smart book applications, animations, and pronunciation elements are available, it will be more advantageous for a language learner to use such technological factors in our own classrooms. I believe that I will be provided a better control over the programs in this training and I will be able to perform better teaching activities with a higher standard education in my future job." (Benim tecrübe ettiğim kadarıyla ve çevresel gözlemlerime dayanarak, öğrenciler interaktif elementlerle çalışmayı daha keyif verici ve etkileyici bulmakta.Özel dil kurumlarında bile akıllı kitap uygulamaları, animasyonlar, sesletim elementleri mevcut iken, bizim kendi sınıflarımızda da bu tarz teknolojik etmenlerin kullanılması bir dil öğrenen için daha avantajlı olacaktır.Bu eğitim içerisindeki kullanılacak programlar üzerinde daha iyi bir hakimiyet sağlayarak, gelecekteki görevimde hem kendim daha kaliteli bir iş gerçekleştirebileceğime, hem de öğrencilerime daha üstün standartlarda bir eğitim sağlamış olacağıma inanıyorum.)

P13: The main reason for me to attend this training is my interest, research and curiosity about the concept of digital literacy, its usage and how to integrate digital tools and technologies into teaching. Also, I have a blog where I published examples and articles on the use of technology in English language teaching last year. There are also some articles and essays that I read about integration technology into teaching which constitute my basic knowledge but if I have the chance to participate in this training, I will have more opportunity to develop both my knowledge theoretically and practically." (Bu eğitime katılmaktaki başlıca sebebim; teknolojik okuryazarlık kavramı, kullanım alanları ve eğitim üzerinde bu uygulamaları nasıl etkili araçlara dönüştürüleceği konusunda ilgim, araştırmalarım ve merakım olmasıdır. Aynı zamanda, geçen sene İngilizce öğretiminde teknolojinin kullanımına dair örnekler ve yazılar yayınladığım bir blogum bulunmaktadır. Eğitimde teknoloji kullanımından faydalanmak konusunda okuduğum ve temel bilgimi oluşturan birtakım yazı ve makaleler de bulunmakta ancak, eğer bu eğitime katılıp deneyimleme şansım olursa hem teorik hem de pratik açıdan daha çok gelişme fırsatı bulacağım.)

P16: "We can integrate technology into lessons and make it much more enjoyable, and visuals, videos and music effects are just a few of them. As a teacher who works in language courses and has no alternative other than using smart boards, I have personally witnessed how important technology literacy and integration are in my lectures." (Dersleri teknolojiyle bağdaştırıp çok daha zevkli hale getirebiliriz, görseller, videolar ve müzik efektleri sadece bunlardan birkaçı. Şu anda dil kurslarında çalışan ve akıllı tahta kullanmaktan başka alternatifi olmayan bir öğretmen olarak teknoloji okuryazarlığının ve entegrasyonunun ne kadar önemli olduğuna derslerimde bizzat tanık olmuş bulunmaktayım.)

So far, the examples of ad verbatim statements participants' regarding their views of the necessity of digital literacy training are given. The emerging codes consist

of "professional development, teaching 21st-century learners and integrating technology into teaching". It can be understood from the analysis of the statements that 13 of the participants want to attend the training for professional development purposes and 6 of them for teaching 21st learners. Lastly, 11 of the participants take part in the training to integrate technology and digital tools into their teaching activities.

4.1.3. Continuum of Professional Development

In addition to the views of the participants regarding their motivations towards attending digital literacy training, it is important to find out whether participants would like to attend similar trainings afterward. By this token, the last interview of the threeconsecutive interviews were examined to find an answer to the following question: "Would you like to attend similar trainings? Why?" The data collected showed that all of the participants answered "yes" to the question by giving similar reasons.

Table 10: Continuity of Professional Development in Digital Literacy

Theme	Codes	f	%
Attending Similar Trainings Question 3: Would you like to attend similar traninings?	Emerging Tools and Tecnologies to be Integrated into Teaching	14	47
	Continuum of Professional Development	10	33
	Meeting New Specialist in the Area	6	20

The reasons behind participants' willingness to attend similar trainings are "learning news technologies and tools to be integrated into technology to keep up the pace of the technology, to continue their professional developments, to meet new people who are specialist in the area". The frequency numbers and the percentage among the participants show that the code "emerging tools and technologies to be integrated into teaching" seems to be one of the most important reason behind participants willingness to attend similar trainings after their attendance to the training presented within this study.

It is seen that 14 participants out of 30 stated the importance of attending similar training courses to learn new technologies and tools to integrate them into teaching when their statements were analysed as seen in the following examples.

P11: "Yes. Because it is practical training rather than theoretical. It is almost impossible not to reach any theoretical information at the time we are in. In this kind of training, there is a kind of master-apprentice relationship between teacher and student to learn

and apply new tools and technologies. This is the style that I'm looking for. Theoretical education should be minimized in schools." (Evet. Çünkü teoriden çok pratiğe dönük bir eğitim. Bulunduğumuz zamanda teorik herhangi bir bilgiye ulaşamamak nerdeyse imkansız. Bu tarz eğitimlerde öğretmen-öğrenci arasında yeni teknolojileri öğrenmek ve uygulamak için bir nevi usta-çırak ilişkisi oluyor. Aradığım tarz bu. Teorik eğitim okullarda minimize edilmeli.)

P7: *"In order to attract the attention of students born into technology, teachers should also be using new technologies effectively. Therefore, these kinds of trainings help us in this regard."* (Teknolojinin içine doğmuş öğrencilerin ilgisini çekmemiz için biz öğretmenlerin de sürekli gelişen teknolojiyi etkin bir şekilde kullanıyor olması gerekiyor. Bu tarz eğitimler bizim bu konuda yeterli düzeye gelmemize ciddi derecede yardımcı oluyor.)

P13: *"Of course, I would like to participate in similar trainings because I think that digital literacy or other similar training will be rich enough in terms of technological and web tools that we do not know, and I think there will emerge new tools and technologies to be learned."* (Tabi ki katılmak isterim çünkü dijital okur-yazarlık veya benzer diğer eğitimlerin bilmediğimiz daha teknolojik ve web araçları bakımından birçok zenginliğe sahip olduğunu ve her zaman öğrenilecek yeni araçların ortaya çıkacağını düşünmekteyim.)

Also, the data shows that some of the participants, 10 out of 30, show willingness to attend similar professional development trainings to empower their current knowledge and share this knowledge with their professional network afterward. For example;

P10: *"I would definitely like to participate in similar trainings because I have learned a lot of useful information. When I go back to school, I would like to share this information with my friends and inform them about the tools and technologies to be used in teachings as much as possible."* (Kesinlikle katılmak isterim çünkü birçok faydalı bilgiler edindim. Okula dönünce bu bilgileri arkadaşlarımla paylaşıp mümkün olduğunca onları da bu uygulamalardan haberdar etmek isterim.)

P15: *"I have taken my knowledge in the use of technology and digital tools in teaching to a higher level but I think there is more that I can learn so I would consider attending this kind of training again."* (Teknolojik açıdan bilgi birikimimi daha ileri seviyeye taşıdım fakat bilmediğim daha fazla şey olduğunu düşündüğüm için tekrar bu tarz bir eğitime katılmayı düşünürüm.)

P19: *"Of course I would like to participate in. I want to improve myself, learn new information from new experts whom I will meet, and reflect it to my students and my teacher friends in the best way that I can. I want to be a teacher who will break the chain in the education system and make a difference by touching my students' hearts. I want to*

improve myself on behalf of me and my students." (Elbette katılmak isterim. Kendime bir şeyler katıp,tanıyacağım yeni uzmanlardan yeni bilgiler öğrenip bunları öğrencilerime ve öğrenmen arkadaşlarıma en iyi şekilde yansıtıp iyi bir öğretmen olmak istiyorum. Eğitim sistemindeki zinciri kırıp farklılık yaratıp öğrencilerime dokunacak, hayatlarında hatırlayacakları bir öğretmen olmak istiyorum. Hem kendim, hem öğrencilerim adına kendime katkı sağlamak istiyorum.)

P23:"I love taking part in trainings like this. Lessons that might last for weeks can be learned in an intensive and applied manner. We learn many things that we can improve ourselves in academic life. Apart from these, we contribute to our personality socially. In the future, we will keep these friendships and contacts, and maybe we will become part of an academic circle. I would definitely like to take part in similar trainings". (Bu gibi projeleri çok seviyorum. Haftalarca alınabilecek dersler yoğun hızlandırılmış biçimde art arda pekiştirilerek uygulamalı şekilde öğreniliyor. Çok fazla akademik anlamda kendimizi geliştirebileceğimiz şeyler öğreniyoruz. Bunların haricinde ise sosyal anlamda kişiliğimize katkı sağlıyoruz. İleriki zamanlarda da bu arkadaşlıkları ve irtibatları koruyarak belki akademik anlamda da ileride iş ortağı olacağız .Benzer eğitimlere kesinlikle katılmak isterim.)

It can also be deduced from following participants' statements that they think there is far more to learn about digital tools and technolgoies as well as their use in teaching. Also, some of the participants, 6 out of 30, think that different trainers in such training have different potential to be discovered by the participant in simiar professional development trainings.

P22: "I would like to participate in similar trainings because there are too many tools that we can use in teaching and their numbers are increasing or they are developing day by day. It is not possible to learn all of them in a week period. I would like to learn to use different tools in similar trainings." (Katılmak isterim çünkü eğitimde kullanabileceğimiz çok fazla araç gereç var ve gün geçtikçe de artıyorlar ya da gelişiyorlar. hepsini bir haftalık bir zaman diliminde öğrenmek pek mümkün değil. Bildiğimiz uygulamaların bile tüm özelliklerini kullanamıyoruz. Benzer eğitimlerde farklı araç gereçleri kullanmayı öğrenmek isterim.)

P19: "I would like to participate because I am aware that as someone who always seeks opportunities to increase my knowledge in the use of technology and digital tools in teaching, I think there is more to learn. I also think that being in an educational process with trainers who have expertise in different fields from different universities will add a lot to every student." (Katılmak isterim çünkü teknoloji bilgimi artırmak için her zaman fırsatları kollayan biri olarak öğrenecek daha çok şeyim olduğu bilincindeyim. Ayrıca farklı üniversitelerden gelen farklı alanlarda uzmanlıkları olan öğretmenlerle bir eğitim sürecinde olmanın her öğrenciye çok şey katacağı düşüncesindeyim.)

All in all, it is clear from the statements of the participants that they seem to be willing to take part in similar trainings in the future to develop their skills in using and integrating technology and digital tools, to learn more about digital tools and technologies, to meet different experts and participants with similar interest, and to keep up with the pace of the ever-developing and emerging tools and technologies to be used in teaching contexts.

4.2. Pre-Service English Teachers' Views on the Integration of Technology and Digital Tools into English Language Teaching

As stated in the introduction part of the study, this study also focuses on the integration of technology and digital tools into English language teacher by pre-service English teachers. Thus, participants of the study were trained within the pedagogy of TPACK during the training which aimed at increasing participants' awareness of in the use of digital tools and technologies and their integration into English language teaching with appropriate pedagogy.

Therefore, participants' answers to the following questions with reference to the research question "how do participants consider digital literacy in increasing their awareness of integration of digital tools and technologies into their teaching?" are given to find out in-depth information.

Question 1: What do you pay attention to when integrating digital tools and technologies into English language teaching considering the information you have learnt in the training? (Proje eğitiminden edindiğiniz bilgiler ışığında düşünürseniz, dijital araçların ve teknolojinin İngilizce öğretimine entegre edilmesi sürecinde nelere dikkat ediyorsunuz?)

Question 2: If you were asked to plan a lesson integrated with technology and digital tools, what would you use during that process considering the information you have learnt in the training? (Size sunulan eğitimi dikkate alarak, sizden teknoloji ve dijital araç-gereçlerle bütünleştirilmiş bir ders planlamanız istense, bu süreçte nelere hangi amaçla yer verirdiniz?)

The main research question corresponding to the questions is: "How do the participants view digital literacy training in terms of integrating digital tools and technologies into teaching?" Based upon the main research question and after careful examination of the statements of the participants, participants' view of digital literacy was analyzed in two parts: considerations in integrating digital tools and technologies, and potential toos and technologies to be integrated into teaching.

4.2.1. Integrating Digital Tools and Technologies

Taking the first question in to account, "What do you pay attention to when integrating digital tools and technologies into English language teaching considering the information you have learnt in the training?", in order to examine participants' views on the integration of technology and digital tools into English language teaching, it is seen that participants have different considereations as shown in Table 11.

Table 11: Considerations in Integrating Digital Tools and Technologies into Teaching

Theme	Codes	f	%
Considerations in Integrating Digital Tools and Technologies into Teaching Question 1: What do you pay attention to when integrating digital tools and technologies into English language teaching considering the information you have learnt in the training?	Practicality of the Tools and Technologies	14	47
	Objectives of the Course	10	33
	Appropriateness of the Tools and Technologies Considering Student Age -Level	6	20

The first consideration, as proposed by 14 of the participants our of 30, is "practicality of the tools and technologies". When the following staments are examined, it is asummed by the participants that the tools and technologies should be practical enough to be used by students in the learning process. For instance;

P28: "In this process, I pay attention to the fact that the tools I will use are practical and they will not cause problems both for students and me while using them in class. Also, I pay attention to the tools I have chosen to create a collaborative education environment in the classroom and to encourage my students to learn independently in the following process." (Bu süreçte, öncelikle kullanacağım araçların pratik olmasına, kullanırken hem öğrencilere hem de bana mümkün olduğunca sorun yaratmayacak olmasına dikkat ediyorum. Ayrıca, seçtiğim araçların sınıfta işbirlikçi bir eğitim-öğretim ortamı yaratmasına, sonraki süreçte de öğrencilerimi bağımsız olarak öğrenmeye teşvik edici olmasına dikkat ediyorum.)

P15: "We would like to address to children born into technology for that reason we need to prepare materials, activities and etc. with the help of technology. In this respect, I use and pay attention to digital tools that are user-friendly and enable students to learn while they entertain themselves." (Hitap edeceğimiz öğrenciler teknolojinin içine doğmuş çocuklar. Bu nedenle dikkatlerini çekmek için teknolojiyle içiçe etkinlikler, materyaller vb. hazırlamak gerekiyor. Bu açıdan öğrencilerimin eğlenirken öğrenmelerini

sağlayacak, materyal hazırlama süresince ve sonrasında kullanıcı dostu olan dijital araçları kullanmaya dikkat ediyorum.)

P6: "First of all, I should say that I learned which tool can be used for a specific teaching aim, and which tool can be suitable for reaching the aims of the courses in an easier and faster way. Also, I can better interpret the pros and cons of digital tools; I can understand their limitations and the benefits they provide us now. We can reach an aim with more than one tool but I have learned which one will be more effective and efficient for us in our teaching during this training. Accordingly, I learned which of these tools would provide us more convenience in the process of integrating them into the lesson and I noted them throughout the training. So, I will use tools which are suitable for a specific purpose and practical enough". (Öncelikle şunu belirtmeliyim ki hangi aracın hangi iş için kullanılması gerektiğini, hangi işin hangi araç ile en kolay ve en hızlı şekilde ortaya koyulabileceğini öğrendim. Bununla birlikte dijital araçların artı ve eksilerini, kısıtlılıklarını ve bize sağladıkları faydaları daha iyi yorumlayabilir hale geldim. Bir işi birden fazla araç ile yapabiliyoruz ama hangisinin bizim için daha efektif ve verimli olduğunu bu eğitim süresince görmüş oldum. Buna göre bu araçların hangilerinin ders içine entegre edilme aşamasında bize daha çok kolaylık sağlayacağını gördüm ve bunları not aldım proje boyunca. Dolayısıyla, hangi araç daha kolay ve kullanılabilirse onu kullanmaya dikkat edeceğim.)

Additionaly, some of the parcipants, 6 out of 30, focused on the importance of considering students' age and leve in technology integrations. It is understood from the following statements that parcipants consider student age and class level prior to the technology integration or using digital tools as they think that students should be given prior information on the tools or technology and they should be supported by the teacher if they have difficulty in using digital tools and technologies in class. For example;

P17: "I try to use the tools that are appropriate for the students' levels, their prior knowledge, preferences, and the content of the course." (Öğrencilerin seviyelerine, önceki bilgilerine, tercihlerine ve dersin içeriğine göre uygun olan araçları kullanmaya çalışıyorum.)

Participant 21: "In the integration process, I think that information regarding digital tools and technologies should be given to students to use them effectively. In the next stage, students need to be warmed up by instilling the awareness that our age necessitates technology without removing students from paper and pencil excessively. I am in favor of the observations made by the teachers until the use of technology and digital tools are settled in class as some of the tools may be above their age and level." (Entegrasyon sürecinde öncelikli olarak, öğrencilerin teknolojik araçları etkin bir şekilde kullanması için, cihaz opere etme bilgisinin verilmesi gerektiğini düşünüyorum. Sonraki aşamada, öğrencileri kağıt ve kalemden aşırı bir şekilde uzaklaştırmadan, çağımızın gerekliliği

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olduğu bilincini aşılayarak, öğrencilerin ısındırılması lazım. Sistem oturana kadar da, tekmolojinin ve dijital araç gereçlerin uzaktan gözlem uygulamalarıyla öğretmenler tarafından gözlenmesi taraftarıyım çünkü bazı araçlar onların yaşından ve sınıf seviyelerinden yukarıda olabilir.)

P11:"In this process, I pay attention to the tools which are practical and will not cause problems both for me and my students and me while using them. Also, I pay attention to the tools to create a collaborative learning environment in the classroom and to encourage my students to learn independently in the following process." (Bu süreçte, öncelikle kullanacağım araçların pratik olmasına, kullanırken hem öğrencilere hem de bana mümkün olduğunca sorun yaratmayacak olmasına dikkat ediyorum. Ayrıca, seçtiğim araçların sınıfta işbirlikçi bir eğitim-öğretim ortamı yaratmasına, sonraki süreçte de öğrencilerimi bağımsız olarak öğrenmeye teşvik edici olmasına dikkat ediyorum.)

The second code shows that 10 of the participants out of 30 considered "objectives of the course" in integrating technology and digital tools into their teaching. It can be understood from the statements of the participants that these participants evaluate appropriateness of the digital tools and technologies and they check their potential contribution to their course objectives. For example;

P4: "First of all, I think that the choice over technologies and digital tools to be use should be made in accordance with the objectives of the course. Also, different profiles of learners should be considered. In order to use the technology properly, we should familiarize students with these new tools and technologies with short orientation programs." (Her şeyden önce dersin amaçları ve kazanımları doğrultusunda seçim yapılması gerektiğini düşünüyorum. Bununla birlikte öğreniclerin farklı profilleri ve göz önüne alınmalı. Teknolojinin uygun biçimde kullanılması için de öğrencileri öncesinde küçük oryantasyon programlarıyla bu yeni kullanımlara alıştırmalıyız.)

P1: "When I integrate technology into my lessons, I pay attention to the digital tools' contribution to my courses to achieve my goals. Whichever digital tool I choose, I consider whether it fits into my purpose, my students' profile, and classroom conditions." (Teknolojiyi derslerime entegre ettiğimde, dijital araçların belirlediğim amaçlarıma ulaşmamda katkı sağlayıp sağlamadığına bakıyorum. Hangi dijital aracını seçsem daha çok amacıma, öğrenci profiline ya da sınıfın şartlarına uygun olur. Bu gibi etkenleri düşünüp teknolojinin en iyi şekilde İngilizce öğrenimine katkı sağlamasını amaçlıyorum.)

P22: "When I want to integrate technology into my lessons, I check t whether these tools will help me to achieve my goals. I consider which tool that I choose will be more suitable for my purpose, my student profile or my classroom conditions. I think about such factors and choose the tool that will contribute to learning English in the best way." (Teknolojiyi derslerime entegre etmek istediğimde, dijital araçların belirlediğim amaçlarıma

ulaşmamda katkı sağlayıp sağlamadığına bakıyorum. Hangi dijital aracını seçsem daha çok amacıma, öğrenci profiline ya da sınıfın şartlarına uygun olur. Bu gibi etkenleri düşünüp teknolojinin en iyi şekilde İngilizce öğrenimine katkı sağlamasını amaçlıyorum.)

All in all, the statements of the participants indicate that the are 3 key considerations in integrating digital tools and technologies into teaching. These considerations are "practicality of the tools and technologies, objectives of the course, and appropriateness of the tools and technologies considering students' age – level" as evidenced in the statements of the participants.

4.2.2. Potential Tools to be Integrated into Teaching

As for the second part of the inquiry regarding participants' views on the integration of technology and digital tools into English language teaching, they were asked to answer this question: "if you were asked to plan a lesson integrated with technology and digital tools, what would you use during that process considering the information you have learnt in the training?" As a result, these tools are found common to the participants when their statements are analyzed as shown in the following table.

Table 12: Potential Tools to be Integrated into Teaching

Theme	Codes	f	%
Potential Tools to be Integrated Question 2: If you were asked to plan a lesson integrated with technology and digital tools, what would you use during that processconsidering the information you have learnt in the training?	Google Classroom	12	80
	Sketch Engine	12	80
	Quizizz	12	80
	PowerPoint (flashcards)	8	53
	Plickers	8	53
	StoryBoard	5	33
	Testmoz	4	27
	Kotobee	4	27
	Google Drive	2	13
	Kahoot	2	13
	Edpuzzle	2	13
	Gradecam	2	13
	Prezi	1	7
	Edmodo	1	7
	Quizlet	1	7

When the statements are taken into consideration for the analysis in order to find out which tools participants want to integrate into their English language teaching if they were asked to plan a lesson with digital tools and technologies, it seems that 30 of the participants mentioned 15 different tools as listed with the numbers

and the percentages were given in Table 9 above. Therefore, the following statements can be given ad verbatim as examples to provide additional information regarding participants' willingness to use these specific tools.

It is understood from the following participants' statements and the following examples that *Google Classrom* and *Sketch Engine* are seen as 2 of the most potential tools out of 76 to be used in a course plan if these participants were asked to integrate the tools and technologies thay they have learnt in the training. Although participants seem to have different aims in using such tools, it seems that they tend to use *Google Classroom* for managing classroom as well as sharing class notes, and they plan to use *Sketch Engine* for vocabulary and grammar activities as seen in the examples below;

P29: "I will use Google Classroom applications to manage the class. I will use interactive web pages. I am sure it will attract the attention of the students. I will get help from Sketch Engine for all kinds of language structures to be taught. It will be a more authentic." (Sınıfı düzenlemek adına classroom uygulamalarını kullanırım. Web üzerinden interaktif aktiviteler kullanırım. Öğrencilerin ilgisini çekeceğine eminim. Verilecek her türlü kalıp için Sketch Engine' den yardım alırım. Daha otantik bir eğitim olacaktır.)

P30: "I would like to use Google Classroom to keep in touch with my students and assign them homework, I would like to use Testmoz to prepare questions for my students, and I would like to use Kotobee to divide my students into groups to make my students write stories, and to evaluate them." (Google Classroom'u öğrencilerimle sürekli iletişim halinde olmak ve onlara ödevler verebilmek için kullanırdım, Testmoz'u öğrencilerime sorular hazırlamak için kullanırdım. Kotobee'yi ise öğrencilerimi gruplara ayırıp hikaye yazmaları için kullandırıp onları değerlendirirdim.)

P7:"Google Classrom: I would make announcements to my students here. Students sometimes miss the announcements made. Therefore, if every student sees the announcements on the computer screen, this risk can be eliminated with the use of this tool. In addition, it can also provide convenience for me to store classroom announcements, homework, and assessment of my students as well. It allows my students to see their work again later so that they can see their progress". (Google Classrom: Öğrencilerime duyuruları buradan yapardım. Öğrenciler bazen yapılan duyuruları kaçırabiliyor. Bu nedenle her öğrenci bilgisayar ekranında duyuruları görürse bu risk ortadan kalkabilir. Ayrıca yapılan duyuruların, ödevlerin vb. arşivlenebilmesi de bunların değerlendirilmesi noktasında benim için kolaylık sağlayabilir. Öğrencilerimin yaptıkları çalışmaları tekrar görebilmelerine, kendi ilerlemelerini görebilmelerine olanak sağlar.)

Furthermore, similar to the number and percentages of previous tools, Quizizz is the one of the most potential tools to be integrated in teaching by the parcipants. This tool is suggested by 12 diffrent participants and it also equals to %80 of 15 different tools suggested by all the participants. When the statements and foollowing examples are taken into accounts, it might be said that participants want to integrate this tool into their lesson plan to evaluate the learning and assess students as evidenced in the following examples;

P25: "I would use Sketch Engine to describe and teach the words in detail. Then, I would prepare flashcards by PowerPoint for exercises, and finally I would finish the lesson with a fun test by Quizizz." (Sketch Engine'i kelimeleri detaylı olarak kullanım ve diğer birçok yönden anlatmak için kullanırdım. Daha sonra PowerPointten flashcard etkinliği oluşturarak alıştırma yapardım ve son olarak dersi eğlenceli bir Quizizz testiyle bitirirdim.)

P16: "I would use Google Classroom to share the activities with my students before the lesson, I would use Sketch Engine to teach vocabulary while I am teaching, I would also use tools such as Plickers and Kahoot quizzes to evaluatemy students' learning at the end of the lesson. (Google Classrom da yapacağım etkinlikleri dersten önce öğrencilere duyururum, sketch engine' i ders anlatırken kelime öğrenmede kullanırım, ders bitiminde plickers kahoot quizzes gibi araçları bilgiyi test etmede kullanırım.)

P17: "For secondary school students, I would present an e-book that I prepare with the help of Kotobee at the beginning of the course. Then, I would continue with a Powerpoint presentation. I would prepare a fun quiz by Quizizz for the assessment" (Ortaokul öğrencileri için dersin giriş kısmında kotobee den hazırladığım bir e-book sunarım. Sonrasında bir powerpoint sunumuyla devam ederim. En son ölçme değerlendirme için quizizz tarafından eğlenceli bir quiz hazırlarım.)

P24: "PowerPoint flash cards; To introduce the subject to students, Quizizz; to make students to recall their previous learning in a fun way, and Testmoz; to assess students' knowledge on the subject." (Powerpoint flash cards; Konuya giriş yapmak ve öğrencilere konuyu tanıtmak için. Quiziz; Öğrencilerin eğlenceli bir yolla öğrendiklerini tekrar etmeleri için. Testmoz; Öğrencilerin konuyla ilgili bilgilerini, öğrenip öğrenmediklerini ölçmek için.)

To sum up, 30 of the participants suggest 76 tools in total be used in a course if they were asked to plan a lesson considering the training that they took part. Moreover, 15 of these tools out of 76 are found common to all participants. The frequency number of participants who refer to a specific tool is indicated in Table 9 in addition to the names of the tools that participants would use in their lessons if they were asked to plan.

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4.3. Pre-Service English Teachers' Views on Digital Literacy Training

This study focused on the lived experiences of the participants who took part in the digital literacy training sessions which included different theoretical and practical information related to the use of digital tools and technology in teaching English. The study is closely related to how pre-service teachers view and interpret the experience that they were given during digital literacy training.

So far, the data analyzed includes the understanding of the participants in terms of their definitions of digital literacy and skills as well as their views on the integration of digital tools and technologies. Thus, this part of the study involves participants' thoughts and views by including their ad verbatim statements on following questions:

Question 1: Did the training offered to you meet your expectations? (Size sunulan eğitim beklentilerinizi karşıladı mı?)

Question 2: Which of the tools would you like to use after the training? (Size sunulan eğitim sonrası hangi dijital araç-gereç veya teknolojiyi kullanmak istersiniz?)

Question 3: Are there any digital tools that you have discovered individually to be used in teaching English? (Proje eğitimi sırasında size sunulan dijital araçların dışında, sizlerinde bireysel olarak öğrendiğiniz veya yeni keşfettiğiniz İngilizce öğretimde kullanabilek dijital araçlar var mı?)

Question 4: Which of the tools that you have learned in the project training do you use most? (Proje eğitimi sırasında öğrendiğiniz dijital araçlardan en çok hangilerini şu anda kullanıyorsunuz?)

The main research question corresponding to the questions is: "What are the views of the participants over the digital tools and technologies presented in digital literacy training to be used in their future teaching?" Based upon the main research question and after careful examination of the statements of the participants, participants' views of on tools and technologies were analyzed in four parts to find out whether the training met participants' expecations, which tools they might use in their future teaching if they were expected to plan a lesson, the most used tools by the participants, and self-discovered tools.

4.3.1. Participants' Expectations

Considering the first question "Did the training offered to you meet your expectations?", it is revealed from the statements of the participants in their reflective journals that 3 of the participants said that the training did not meet

their expectations and 27 of the participants stated that the training met their expectations as shown in Table 13 below;

Table 13: Training Expectations Met

Theme	Codes	f	%
Training Expectations Met	Yes, it met.	27	90
Question 1: Did the training offered to you meet your expectations?	No, it did not.	3	10

The ad verbatim statements of these 3 (%10 of the participants) suggested that the training did not meet their expectations. It can be deduced from their statements that this training did not meet their expecation because it included the information that they had alread known, and it had some basic theoretical and practical information for some part as seen in the example statements.

P12: "Although I am really satisfied with the training in general, I can say that it does not meet my expectations in some ways. I would like to learn more than what I know before. I think this training is more appropriate for someone who does not know anything related to digital literacy and integration of digital tools and technologies. I sometimes felt myself out of the group as I knew most of the information beforehand. We could learn about it in more detail such as 'What is digital literacy? Why do we need it?' At least, the articles we could study individually would be better. In addition, I would like to learn the scientific and theoretical basis of the tools and technologies that we learned." (Genel olarak eğitimden gerçekten çok memnun olsam da bazı yönlerden beklentimi karşılamadığını söyleyebilirim. Daha önceki bildiklerim üstünde bilgiler edinmeyi isterdim. Hiç bilmeden gelen birine daha uygun bir eğitim olduğunu düşünüyorum. Bazen zaten bildiklerimi görmek sürecin dışında hissettirdi. Bunun dışında teorik olarak biraz daha bilgiye sahip olmak da iyi olabilirdi. Dijital-okur yazarlık nedir? Neden ihtiyacımız var? bunun hakkında daha ayrıntılı öğrenebilirdik. En azından bireysel çalışabileceğimiz makaleler iyi olabilirdi. Dijital okur yazarlık evet öğrencilerden geri kalmamak açısından önemli. Ek olarak, öğrendiğimiz programların bilimsel ve teorik temellendirmesini de öğrenmek isterdim.)

P10: "Frankly speaking, there is not a big difference between what I knew and what I have learned so far. On the first day, I learned information and applications that would be useful for me in my prospective master's degree rather than in my teaching life. When it comes to the third day, I am on the opinion that it did not contribute much to me since I knew and used the applications beforehand." (Şuana kadar bildiklerim ve öğrendiklerim arasında çok büyük bir fark oluşmadı açıkçası.1. gün öğretmenlik hayatından ziyade yüksek lisansta işime yarayacak bilgiler/uygulamalar öğrendim. 2. gün eğitiminde ise ileri dönemde öğretmelik hayatımda kullanabileceğim uygulamaları/siteleri öğrendiğimi

düşünüyorum. 3. günde ise daha önceden bildiğim, kullandığım uygulamaları gördüğüm için bana pek katkısı olmadığı görüşündeyim.)

On the other hand, 27 of the participants out of 30 (%90 of the participants) focused on the contribution of the training into their professional development from different perspectives. Some of their lived-experiences are given ad verbatim below after the analysis of their statements in reflective journals to find out whether the training met their expectation. For example;

P24: "Yes, it met my expectations, and I learned many different aspects of the digital tools and technologies and the things I did not know. Apart from that, my awareness in this area has increased and I have also learned where to find such tools and applications as well as directives. In short, I think I am a better internet user and therefore I think the training met my expectations." (Evet, özellikle birçok bilmediğim araç ve bildiklerimin de farklı yönlerini öğrenmiş oldum. Onun dışında bu alandaki farkındalığım arttı ve bu tür uygulamaları ve direktiflerinin nerede bulabileceğimi de öğrenmiş oldum. Kısaca daha iyi bir internet kullanıcısı olduğumu düşünüyorum ve bu yüzden eğitimin beklentilerimi karşıladığını düşünüyorum.)

P5: "Of course, yes! "I have learned many programs, software and websites that help us to prepare presentation to assessment, in-class activities to material design that I can use both in my own computer use and more importantly in my teaching." (Evet kesinlikle! Sunumdan ölçmeye sınıf içi etkinlikten materyal tasarımına kadar gerek kendi bilgisayar kullanımımda gerekse ve daha önemlisi öğretmenlik hayatımda kullanabileceğim birçok program, yazılım ve web sitesi öğrendim.)

P20: "Certainly, it met my expectations. From the first day to the last day, I have learned many Web 2.0 tools and their use in teaching that I didn't know before. I also learned how to integrate them into my English lessons in the future. I can easily design my own authentic material." (Kesinlikle karşıladı ilk günden son güne kadar bilmediğim birçok web 2.0 uygulamalasını ve bunları kullanmayı öğrendim. Ayrıca ileride bunları İngilizce derslerime nasıl entegre edeceğimi de öğrendim. Kendi otantik materyalimi kolayca tasarlayabileceğim.)

P13: "Yes, it met my expectation. Before coming here, I expected to learn new theoretical information and acquire practical experienceto integrate digital tools and technology into English teaching, and this five-day training met exactly what I expected. In addition, sessions in the training would have been better if it had gone through lesson planning but it was still an effective and informative training." (Evet, karşıladı. Buraya gelirken yeni teorik ve uygulamaya dayalı bilgiler edinmeyi ve bunların İngilizce öğretimine nasıl entegre edilebileceğini öğrenmeyi bekliyordum ve beş günlük eğitim süreci de neredeyse tam beklediğim gibi gerçekleşti. Ek olarak, dersler biraz daha lesson plan uygulaması üzerinden gitse daha iyi olabilirdi ama genel olarak etkili ve bilgilendirici bir eğitimdi.)

P27: "Yes, it met my expectation. I took part in the project in order to learn useful and versatile digital tools, applications and technologies that I can use in my lessons, and this expectation was met in the training. I had many ideas about how I could use what I learned in the training." (Evet, kesinlikle karşıladı. Projeye derslerimde kullanabileceğim kullanışlı ve çok yönlü uygulamalar ve teknolojiler öğrenmek amacıyla gelmiştim ve bu amacım yerini buldu. Daha eğitimdeyken bile öğrendiklerimi sınıf içinde nasıl kullnabileceğime dair aklıma birçok fikir geliyordu.)

Thus, the first question is analyzed in this part of the study, and verbatim statements of the participants are given to show whether the training met their expectations or not. Consequently, three of the participants stated that the training did not meet their expectations, but other participants claimed that it met their expectations. As a result, it might be said that %90 of the participants found this training beneficial for themselves and thought it met their expectations.

4.3.2. Tools to be Used in Future Teaching

When the second question is considered to have more in-depth information from the participants to find out their views on the training, participants were asked to answer the question "which of the tools would you like to use after the training?" and they were expected to suggest tools that might use after they took part in the training. This question required participants to suggest tool(s) and technology(ies) because of the training which provided them both theoretical and practical information.

Table 11 has very similar information shown in section 4.2.2. and in Table 9. On the other hand, the participants were not expected to provide additional information on how to integrate them into English language teaching while presenting information which is different from the previous one. Therefore, following table only shows which tools they might use after the training, their frequency, and the percentage over participants' choice on these tools.

Table 14: Tools to be Used by Participants After the Training

Theme	Code	f	%
Participants' Preference on Tools to be Used in Their Prospective Teaching Question 2: Which of the tools would you like to use after the training?	Sketch Engine	11	69
	Plickers	9	56
	Google Classroom	8	50
	Quizizz	7	44
	E-book	5	31
	Testmoz	4	25
	Edpuzzle	4	25
	Gradecam	4	25
	Google Drive	4	25
	Edmodo	3	19
	Powerpoint	3	19
	Pixlr	2	13
	Pixton	2	13
	Kotobee	2	13
	StoryBoard	1	6
	Prezi	1	6

Thus, it is clear from the information that the participants suggested 16 different tools which they thought they would use after the training. When the table is examined, it is seen that participants would like to use Sketch Engine, Plickers, Google Classroom and Quizizz most with the frequency numbers of 11, 9, 8 and 7. Also, it can be understood from the table that two least preffered tools were Storyboard and Prezi since they were suggested two times by the participants.

4.3.3. Self Discovered Tools by the Participants

Considering the third question "Are there any digital tools that you have discovered individually to be used in teaching English?", participants were expected to give examples to the tools that they discovered or learned themselves (the tools were not included in the training sessions). The statements of the participants were analyzed to find out their suggestions and the following tools were listed as the self-discoered tools to be used in English language teaching thanks to participants' suggestions:

Table 15: Self-discovered Tools

Text to Speech	Voscreen
Projeqt	Weebly
Schoology	Blogspot
Babbel	Tesblendspace
H5P	Padlet
Powtoon	Pictochart
Glogster	Lingro.com
Superteachertools	Nearpod
Sutori	Voki

As a result, 11 of the participants stated that they could not suggest a new tool to be used in English language teaching and 4 of them they left this question unanswered. On the other hand, 19 of the participants suggested different tools, websites, or mobile apps to be used in English language teaching as listed in Table 12.

Moreover, although participants were not expected to explain the tool they suggested, some of the participants explained which tool they have discovered to be used in English language teaching and shown in the examples below.

P29: *"Text to speech" and "voki" by stating that "text to speech is a very useful site if students want to voice the story or they can use it for their phonetic lessons. Student can copy and paste the texts to the website and create mp3 either voiced by a male or female. Voki is another tool which allows you to create your own character and voice this character on your own." (Text to speech çok kullanışlı bir site daha çok fonetik derslerinde öğrenciler kullanabilir ya da bir storyi seslendirmek istiyorlarsa. Seslendirmek istedikleri kelimeyi ya da texti yapıştırıp ister kadın ister erkek farklı versiyonlarda bunun farklı aksanlı hallerinde mp3. formatında kullanılabiliyor. Voki ise başka bir uygulama burda da kendi online karakterimizi tasarlayıp kendimiz seslendirebiliyoruz.)*

P28: *"Apart from training, one of the digital tools I have just discovered is Projeqt, which allows one to prepare interactive presentations with students and students' progress can be followed. The other is Schoology which is similar to Edmodo" (Proje eğitimi dışında yeni keşfettiğim dijital araçlardan biri; öğrencilerle interaktif sunum hazırlamaya olanak veren ve ilerlemelerinin takip edilebildiği Projeqt. Diğeri ise, kullanım amacı açısından Edmodo'ya benzer olan Schoology.)*

P1: *"I am currently taking an online course called Educational Technology in English Language Classroom and I learned there an online dictionary called lingro.com. When you post the URL of the website there, it shows you to the original web page but*

you can click and search the meaning of every word." (Şuan 'Educational Technology in English language classroom' diye online bir kurs alıyorum ve orada lingro.com diye online sözlüğü öğrendim. İstediğin bir yazının URL' sini bu siteye yapıştırdığınızda size yazının orjinalini veriyor aynı zamanda kelimelerin üzerinde gezindiğinde anlamını gösteriyor.)

To sum, 19 of the participants suggested 18 different tools to be used and integrated in English language teaching. When the tools and participants' explanations towards these tools are examied, it might be said that these tools range from classroom management tools to speech editing tools as well as online collaborative tools such as *padlet, schoology* and *text-to-speech*.

4.3.4. Most Used Tools by the Participants

The last question in the after-training interview is "which of the tools that you have learned in the project training do you use most?" and the participants are expected to list the most used tools that they have learned in the training presented within this study. When the data collected is examined, it is seen that there are different tools used by the participants because of their attendance to the training as shown in the table below.

Table 16: The Most Used Tools by the Participants After the Training

Theme	Codes	f	%
	Quizizz	7	58
	Pixlr	5	42
	Google tools	5	42
	Sketch Engine	5	42
The Most Used Tools of the Training by the Participants	Prezi	3	25
Question 4: Which of the tools that you have	BNC	3	25
learned in the project training do you use	Testmoz	2	17
most?	COCA	2	17
	Kahoot	1	8
	Edpuzzle	1	8
	HP Reveal	1	8
	Storyboard	1	8

The table above shows the most used tools by the participants after the training they took part in. It is seen that among the most used tools are Quizizz, Google tools, Sketch Engine and Pixlr with the frequency numbers of 7, 5, 5, 5 respectively as suggested by different participants. These tools have different

uses in English language teaching which is also explained in the literature review part of the study.

All in all, 4 of the questions were analyzed to understand the views of the participant on the training which included different theoretical and practical information related to the use of digital tools and technology in teaching English. Therefore, ad verbatim statements of the participants as stated in their interviews were shown to provide in-depth information regarding their experience in the training. Moreover, the tables provided additional information on the tools and technologies used by the participants, such as tools that participant would integrate if they were asked to plan a lesson, tools that they discovered themselves to be used in English language teaching, and tools which are used most by the participants after the training.

4.3.5. Participants' Views on Digital literacy Training: Reflective Journals

Although there is a limited literature review on the use of reflective journals as data collection tool, reflective journals in qualitative research enable researchers to put aside their assumptions and pre-choices and facilitate clarification of participants' views and experiences on a specific issue (Orttlip, 2008:695). In this study, reflective journals provide qualitative data which is rich and profound enough for the analysis that unveils participants' own views and experiences pertaining to the learning process in the digital literacy training andreflective journals can be used to foster "the value of learning process and experience". (Yong &Hoon, 2008:41).

Thus, participants' reflections in this study provided information for participants' learning process before, during and after the training which made participants keep track of their own learning experience in terms of digital tools and technologies as well as their integration into English language teaching in their prospective teaching contexts.

The qualitative data which was collected by means of reflective journals was examined by the content analysis and shown in the table to clarify the analysis that included participants' previous knowledge on the digital tools and technologies, their knowledge that they have during the training and their plan on the integration of digital tools and technologies in their future teaching.

Reflective journals that were kept in three different time periods provided information for participants' learning process before, during and after the

training. The qualitative data regarding these journals for each participant were kept separately.

The data that comes for the first participant in this regard shows a steady development from the average user to almost an expert user profile in various ways. First of all, before the event, the first participant (P1) was asked to report previous knowledge of the tools and technologies and reported very little or no knowledge of corpus tools and the ways to use them.

P1: "I never heard about Wordsmith, AntConc, Sketch Engine before. Also, I knew about Powerpoint flashcards but I had no idea about Word processor tools and digital story-telling tools".

During the event, the participant was asked about his current knowledge following the training they were given on daily basis, and he reported increasing awareness towards the use of corpus tools and flashcards and other computer programs such as Edmodo and Google classroom. The participant also reported significant exposure to the use of other online tools during the training experience.

After the training, the participant again was asked about his plans to integrate his knowledge in his future training, and he reported increased awareness, motivation and knowledge of the online tools to be used in his future classrooms.

P1: "I will integrate Canva to my teaching to prepare a board game. By using Storyboard and Pixton, I will make my students create their own books which will be more motivating. I will also use Google Classroom to communicate my students professionally".

Similar to P1, the second participant (P2) also reported limited knowledge of corpus and online collaborative story telling tools and presentation tools. On the other hand, he reported some knowledge of cloud technologies before the training sessions.

P2: "I had very limited knowledge on the topic of Corpusand did not have any idea aboutonline collaborative story telling tools and presentation tools".

During the training week, P2 reported significant development of the use of digital tools and e-assessment tools and management tools as well as creating stories and comics for teaching.

P2: "I learned how to use web tools to create stories and comics for teaching"

P2, after the training, reported increased knowledge of how to integrate corpus tools in the classroom as well as share documents and using cloud systems. He seems to have gained the ability to integrate corpus tools to "*provide a controlled way to learn about grammar and vocabulary*" and that he "*will inform his students of about cyber-security and ethics of using digital tools and technologies prior to lessons that I will plant to teach with digital tools"*. It is seen that P2 has increased his knowledge of digital tools and seems to be ready to implement his new skills into the classroom atmosphere.

Different from P1 and P2, P3 stated that he had previous knowledge on corpus by stating that '*I took corpus courses*'. However, he also said that his previous knowledge on language assessment tools and Google tools was limited and he had some practical knowledge on editing visuals before the training.

P3: "I took corpus courses. I only know about Kahoot as an online assessment tool. Although I had not used Google and its tools, my knowledge was limited. I did not know that I could create flashcard by using Powerpoint. I only used Photoshop for creating and editing visuals. I learned how to use Canva. I had no idea about language assessment tools".

During the training event, P3 showed a development in the use of tools for editing and sharing visuals as well as in language assessments tools. The participant also stated that we learned about using digital tools and technologies to create digital stories.

P3: "Also, I had thought that I knew Google Classroom and Powerpoint but I learned many need things about them. I became aware that there was a new world called Web 2.0 and I learned Plickers, Gradecam, Testmoz and Edpuzzle for language assessment activities. I also learned how to create digital stories with the help of some tools such as Pixton and Storyboard".

After the training, the participant implied his plans to integrate his knowledge on these tools and technologies in his future teaching by focusing on cloud technologies, language assessment tools and online collaborative writing tools by stating that 'I *will also use Google drive more active in class because it provides us a space for both during and after classroom activities. By using Kotobee, I think I can make my students to create their own books which will show me their understanding of English and its grammar rules*'.

Similarly, P4 stated that '*I knew how to use Sketch Engine but I had no idea about other corpus tools and web sites such as COCA and BNC*' and he said that his knowledge on visual editing tools and online assessment tool in addition to classroom management systems were limited before the training.

P4: "I had a limited knowledge about how to use Google Classroom, Edpuzzle, Kotobee and Plickers. Also, I had no idea about how to use web engines effectively and Online collaborative tools like Edmodo".

However, during the training P4 improved his skills and felt himself '*ready for the use of corpus tools in language teaching as well as other tools*'. He also developed himself in the use of digital tools and technologies to use visual editing tools, and online assessment tools.

Moreover, it is understood from the statement of the participant that he improved his skills to integrate digital tools and technologies into his future teaching at the end the training week and he focused his integration plans on could systems, online story telling tools and assessment tools.

P4: "I will use cloud systems to compile data store for my learners, and they can collaborate with each other there. Also, I will use Kotobee to prepare mini books with my learners. I will also use Quizizz to prepare tests and quizzes for my learners".

When it comes to P5, it is seen that he has some prior knowledge about digital tools and technologies such as Google classroom, Drive and Grammarly. Before attending the training, he also said that he knew about the internet security.

On the other hand, during the training, he improved his skills in '*how to search and find correct words and collocations for language studies thanks to some tools that I have learned in the training such as Sketch Engine and BNC*'. He also focused on online visual tools, language assessment tools in addition to storytelling tools which is quite similar to previous participants.

P5: "I have learned how to crate flashcard on Powerpoint and some hints to use them properly. I also learned designing forms and preparing presentations on Google Drive that I didn't know before. I learned how to create online books by using Canva, Storyboardthat, and Pixton. I used Gradecam to evaluate students' papers".

Furthermore, at the end of the training, his technology integration plans included tools and technologies related to language assessment, vocabulary and grammar teaching, and storytelling tools. It is understood that he increased his previous knowledge of technology and improved his integration skills.

P5: "Firstly, I will look for most frequent words used in exams such as YDS. I will also make my students use these tools to search for words, grammar rules and word collocations. I will use Testmoz, Edpuzze and Plickers for assessment activities. I will use tools for creating e-books and interactive books because I can integrate other multimedia forms to these tools and they will be more engaging for my learners".

Before the training, P6 had similar knowledge and skills in digital tools and technologies to be integrated in language teaching as he stated that '*I only knew the terms regarding corpus studies, but I had no idea about corpus tools and technologies that can be used for language teaching*'.

However, the study showed that the participant improved his skills and the training brought new and fresh practical tools to be used in his future language teaching contexts. Similar to P5, P6 also learned about new tools and technologies in terms of visuals and storytelling tools.

P6: "In the training, I considered my teaching from a different perspective. I learned that corpus tools were useful for language teaching. I realized that even a tool that we used regularly could be used in many different ways. For example, I used Powerpoint for preparing presentations but I learned that we can use it for creating flashcards for students. Furthermore, I learned that we could create online collaborative story writing activities by means of some tools like Kotobee. Also, I learned about interactive web tools to create classroom activities and how to search online in an effective way".

At the end of the training week, the participants decided to integrate some features of Powerpoint. His plan for technology integration after the training included assessment tools that the learnt during the training which also included assessment tools and cloud systems.

P6: "I will use Powerpoint to create tests and flashcards in order to recall my students previous learning and I can keep them in my Google Drive to use them later. I will also use Testmoz to create assessments for my learners because it is easier and more organized".

The data that comes for the seventh participant in this regard shows similar aspects in terms of some of the tools when compared to previous participants as he stated that '*I used COCA, Edmodo, and Plickers but I never used cloud technologies for storing my data*'. This shows that he had some previous information about Corpus, classroom management and language assessment tools.

On the other hand, during the training, P7 showed a steady increase in his knowledge of corpus tools, he added more to his knowledge of classroom management tools, and also leart about visual editing tools as well as language assessment tools.

P7: "I learned compiling my own corpora with the help of tools such as Antcont and Sketch Engine. I have never heard about Google classroom, creating flashcards and quizzes by using Powerpoint. It amazed me a lot. Edpuzzle and Testmoz were among the tools that I have learned here. I learned that Google tools are great. I can prepare slides and forms for my teaching activities. I was introduced with Canva which is a great tool for creating visual and Storyboard for online stories. I learned about assessment tools like Quzizz and Gradecam".

After the training, the participant was asked to reflect upon how to integrate these tools and technologies into his language teaching, and he showed development in classroom management tools as well as visual editing tools.

P7: "For each activity in the classroom, I can use flashcards by using Powerpoint. For example, I can teach word synonyms and antonyms by using it or I can prepare vocabulary cards. With the help of Google Classroom, I can share any material with my students. I can make classroom announcements, share activities, prepare quizzes and manage their learning by using it".

Before the training, P8 lacked some basic knowledge of Corpus tools and different from two of the previous participants and he further stated 'I didn't have enough knowledge about Antcoc, Sketch Engine or COCA. Those are new for me and I am really amazed by them'. He also stated that he lacked of previous knowledge about language assessment and classroom management tools.

On the other hand, it can be understood from the statement of P8 that he discovered different tools and commented on their use in language teaching. Moreover, he also developed himself in visual editing and storytelling tools as stated below.

P8: "Now, I have learned how I can reach the most frequent words and phrases as well as collocations through using corpus tools. In the training, I have learnt about online assessment tools such as Quizizz and Gradecam and preparing flashcards by using Powerpoint. I learned Edpuzzle and video editing tools for teaching activities. I have learned about e-book and tools that can help me in preparing interactive stories with help of tools such as Kotobee and Storyboard".

P8, after the training, reported increased knowledge of how to integrate language assessment tools in the classroom as well as visual editing tools. He seems to

have gained the ability to integrate tools *like Quizizz which is more motivating and the tests or quizzes seem like a game when prepared there and this can reduce the anxiety of my learners*'. It is seen that P8 has increased his knowledge of digital tools and seems to ready to implement his knowledge of these tools into his future teaching.

Similar to the P8, P9also reported limited knowledge of corpus toolsbut he reported some knowledge of classroom management tools although he never used them for teaching purposes before the training sessions.

P9: "I did not have any idea about corpus and corpus tools before the training. I knew some of the tools such as Google Classroom and Drive but I did not use them actively for teaching".

During the training week, P9 reported significant development of the use of corpus tools and online assessment tools as well as creating visuals and presentations for teaching.

P9: "Before the training, I have never heard about corpus tools for language teaching activities. Interestingly, I thought that I knew Powerpoint very well but I saw that I could create many different things with the help of it. Plickers, Testmoz and Gradecam could help me in creating assessment activities. I could create different and catchy presentation by using Prezi. I could add many games and other contents in it. I could prepare online surveys and questionnaires by using online forms. I could use Storyboard to create online stories and I could use Canva to create posters and visuals. Gradecam could help me in assessing my learners".

After the training, when P9 was asked about his plans to integrate these tools and technologies into his language teaching, he stated that he has some uncertainty about integrating some of the tools that were present to him. However, he seemed to improve his ability to manage his classes online.

P9: "I am not sure yet how to use some of the tool but I will use corpus tools for teaching grammar and vocabulary. I the class that I will teach will have large number of students, I will use Google classroom to share classroom presentations and I will give them homework by using this tool".

When it comes to P10, it is seen that he had limited knowledge about Corpus tools and technologies but he had previous knowledge of tools such as Google classroom, Drive and Prezi. Before attending the training, he also said that he knew some tips of effective online search.

During the training, P10 improved his ability to use Corpus tools '*to search for verbs, nouns and collocations*' for language teaching and he also learned about online visual editing tools. Moreover, he stated his interest in language assessment and classroom management tools as well as creating stories online

P10: *"Now, I know that I can use Sketch Engine and Antconc. to search for verbs, nouns and collocations for my future teaching. When I become teacher, I will use Edpuzzle. I learned about Google classroom, Plickers and Testmoz. Flashcards and Google classroom will be two of the main tools that I will integrate into my future teaching. I learned how to create online stories and texts. I knew some of the tools beforehand that were shown to me here. Canva, Storyboard and Pixlr were very new to mean and I tried other apps before, but I will use these tools in the future".*

Similar to his development during the training week, he aimed at integrating visual editing tools in his teaching as he stated that '*I will use PowerPoint flashcards especially when I will teach young learners and when I repeat some parts of the lessons for my students*'. Moreover, his integration plan included tools for language assessment and classroom management in addition to storytelling tools. This certainly shows that the training improved his ability to integrate digital tools and technologies into his language teaching.

P10: *"For each of the classroom that I will teach, I will use Google Classroom as a virtual class because it is easier to upload and download class documents and check students' progress there. Also, I will check my students' readiness with Plickers while starting a new week at school. For my young learners, I will integrate Storyboard to visualize and animate their own stories. I think they will like it".*

As for P11, it is seen that the participant had very limited knowledge about Corpus tools and had very little information on how to use them for teaching purposes before the training. P11 also did not have theoretical or practical information about assessment tools as mentioned below.

P11: *"I had a very limited knowledge about how to use corpus and I thought that I could use it only for word search. I had previous information about Google tools from the online ads but I had no idea about how to use them in teaching. I only knew about how to prepare slides but I did not know how to use them collaboratively online. I did not know about web 2.0 tools and assessment tools such as Quizlet and Gradecam".*

During the training, P11 was asked about his current knowledge of the tools that were presented to them and the participant reported development in the use of corpus tools and classroom management tools like Google classroom. The

participant also showed development in language assessment tools which he lacked information prior to the study.

P11, after the training, reported increased knowledge of how to integrate corpus tools in the classroom as well as sharing documents and using cloud systems. He seems to have gained the ability to integrate corpus tools to "*check the authenticity of the words and teach his students them by compiling these words into corpus tool*". Also, it is seen that P11 has increased his knowledge of digital tools and seems to have some new plans on the integration of these tools.

Similarly, iP12 had "v*ery basic knowledge about corpus and corpus-based books but he did not know which corpus tools and technologies could be used for language teaching*" before the training. Also, P12 reported limited or no knowledge in collaborative language teaching tools and visual editing tools such as Google classroom, Drive and Canva.

P12 stated development in corpus tools and learned about its use in language teaching. Moreover, P12 showed further development in tools and technologies to be used in language teaching during the training as he stated that he learnt new tools which "he never heard of such as Plickers, Edpuzzle, Quizizz, HP reveal, Kotobee, Grammarly, Pixton, Storyboard and Kahoot".

After the training, P12 showed interest in the use of language assessment tools which is different from his previous interest that can be inferred from his before the training journal. Thus, P12's integration plan included language assessment tool which he planned to use to assess his students' prior knowledge or as a part of follow-up activity.

P12: "I will use Plickers in the school as an ice-breaker before the lesson or I can use it at the end of the lesson to check my students' learning and support them because it is easier to prepare tests or quizzes by using these kinds of tools".

When it comes to P13, it is understood that the participant had very basic knowledge of corpus tools and their uses in language teaching before the training. Similarly, P13's knowledge of visual editing tools was limited to '*Canva and Pixton*'.

On the other hand, during the training, P13 showed development in the use of some features of Powerpoint and he had progress in creating flashcards and tests by using it which was different from his previous knowledge of the tool. Also, he

developed his skills in online story telling tools '*to create online books by using some tools like Kotobee*'.

At the end of the training week, it is understood that P13 is interested in online assessment tools and their uses in language teaching considering that these tools can be used collaboratively and they save time. Also, P13 reported that he planned to use visual editing tools to take attention of his learners as understood from his journal.

P13: "I am planning to use Quizizz because both students and their parents can take part in the process of assessment and evaluation. Also, this tool provides whole class results which save time and I will most probably use it. Also, Testmoz is very practical for preparing tests and quizzes. I will make my students prepare their own quizzes so that I can involve my students in their own learning. Moreover, before the class, I can prepare visuals by using tools like Pixlr and Pixton and make my lessons more attractive and effective for my students. Moreover, the result of the assessments can be sent to parent via e-mail".

Different from P13, P14 had no knowledge of corpus tools before the training. On the other hand, P14's knowledge of Powerpoint is similar to previous participant who had also basic knowledge on the tool. Moreover, P14's knowledge and command of classroom management and assessment tools were limited at the beginning of the training.

P14: "Before the training, I had no idea of corpus tools and I used some online dictionaries for word search. I only knew how to prepare presentations via Powerpoint but I did not know how to create flashcards by using it. Specifically, I had no idea of online classroom management tools such as Edmodo and Google classroom. Before the training, I knew using Canva and Pixlr but I did not know that web 2.0 can provide various opportunities for online collaborative classroom studies".

During the training, P14 was asked about his current knowledge that occurred daily basis and he reported development in his knowledge of corpus tools and he said that '*I learned which words are used by native speaker in a specific context by using corpus tools and I learned how to compile corpus for my teaching*'. Moreover, he further developed new skills in the use of '*classroom management systems such as Edmodo and Google classroom*'. The participant also reported significant exposure to the use of other online tools during the training experience such as Edpuzzle, Testmoz and Google forms.

After the training, the participant again was asked about his plans to integrate his knowledge in his future training and he reported increased awareness, motivation and knowledge of the online tools to be used in his future classrooms.

P14: "Antconc and Sketch Engine will help me in preparing lessons and my students will be more autonomous in their learning process by using these tools. I will use flashcards to make my presentations more effective and informative because students like visuals a lot. Especially, Plickers will help in preparing assessments for my learners".

Similar to the P13, P15 also reported knowledge of corpus and presentation tools but his knowledge of presentations tools was limited as he stated that '*I learned very new tools such as Google Slides and Canva*'. Before the training, P15 also had no knowledge of online assessment tools.

In the training, although he had previous knowledge of corpus tools, '*he had a chance to practice more about corpus tools like Sketch Engine and Antconc*'. Also, his development in the use of digital tools and technologies continued with Google tools and language assessment tools '*to evaluate the students learning process*'.

After the training, P15'S integration plan included corpus tools. Moreover, he showed interest in creating visuals and managing his classroom online.

P15: "In writing classes, I will use Corpus tools for vocabulary teaching and Grammarly for the exact uses of English. When I want to make my classes more enjoyable, I will create flashcards. I will also assign homework to my students by using Google Classroom".

Before the training, when P16 was asked to explain his previous knowledge of tools and technologies to be used in language teaching, the participant had knowledge in Google classroom and Drive. On the other hand, P16 had no knowledge in visual editing and storytelling tools.

During the training, P16 showed interest in Corpus tools for writing and grammar activities for his students. He also found some of the online storytelling tools useful in English language teaching as well as online assessment tools.

P16: "I learned that I could use Sketch Engine for the analysis of student writings and grammar activities. The tools that can help me is COCA, BNC and Antconc. For the gamification, I liked Plickers a lot. Testmoz and Powerpoint can be used for assessment and Kotobee is great for creating online stories".

After all, the participant showed a steady development in corpus tools and '*planned* to *use word Sketch Engine in my lessons for vocabulary teaching*'. In addition, P16's development further continued to develop in assessment tools such as 'Powerpoint and Plickers'.

Similar to P14, P17 had very limited knowledge of Corpus tools about which he only knew 'I only knew that corpus is the skeleton of the language studies before the training. P17's knowledge of tools and technologies for editing visuals was limited to 'Canva for editing and sharing visuals' and P17 added that he learned the rest of the tools in the training.

During the training week, P17 reported significant development of the use of digital tools and corpus tools and management tools as well as creating assessments and online collaborative writings for teaching.

P17: "In this training, I developed my skills and learned that I could create corpora and analyze my students' class works by using tools such as Antcons and Sketch. I have learned that I could create online classrooms for my students and their use in language teaching by means of Edmodo. I became aware of the fact that Powerpoint could be used for creating flashcards. I also learned that tools such as Edpuzzle, Testmoz and Plickers could be used for language assessment activities. I learned aobut creating professional presentations by using Prezi and online stories by using Kotobee. They were the tools that I heard about here. Moreover, I learned about creating and editing visual and photo-stories".

P17, after the training, reported increased knowledge of how to integrate assessment tools which he found '*fun, competitive and informative*. He seems to have gained the ability to integrate these online assessment tools 'to *check students' understanding of the lesson frequently*'. It is seen that P17 has increased his knowledge of digital tools and seems to ready to implement especially assessment tools to improve learning.

The data that comes for P18 shows a steady development from beginning to end in various ways. First, before the event p18 was asked to report previous knowledge of the tools and technologies, and he reported very little or no knowledge of visual editing tools, assessment tools and the ways to use them.

P18: "Before this course I was aware of some of the classroom management tools such as Edmodo and some tools about creating infographics, but I learned about Powerpoint and Prezi. Also, before the training, I did not know much about collaborative teaching tools and assessment applications, but I knew about effective search engine usage".

During the event, the participant was asked to reflect upon his current knowledge following the training they were given on daily basis. P18 reported increasing awareness towards the use of assessment tools and classroom management tools. The participant also reported significant exposure to the use of other online such as Canva and Prezi.

After the training, the participant again was asked about his plans to integrate his knowledge in his future training. P18 reported increased awareness, motivation and knowledge of language assessment tools to be used in his language teaching.

P18: "I hope to use corpora to establish a base for the process of designing authentic activities. I believe most applicable and feasible tools to be used are firstly; Plickers which I intent to start using starting from my first upcoming teaching. Then, I will use Edpuzzle with the purpose of involving students in teaching-learning process to make them learn through making choices and based on their own experience".

Before the training, P19 had very limited knowledge of corpus and had no idea about its tools to be used in language teaching. Some of the tools that were presented in the training were totally new to the participant when compared with his previous knowledge. On the other hand, P19 showed knowledge of some of the classroom management and assessment tools.

P19: "I used to know there was a concept called corpus and I had no idea of online corpus tools. I used Google classroom and Plickers before. I already knew some of the principles of using them in language teaching. I had never used Canva for creating and editing visuals. I heard about ethics of using internet and online some of the tools like Edmodo and Kotobee were very new to me".

In the training, P19 developed further skills and knowledge in tools such as 'Pixlr and Storyboard' which he learned '*how to create interactive stories and visuals*'. Moreover, P19 developed his previous knowledge over language assessment tools.

After the training week, P19 reported development in digital tools and technologies '*to create more authentic materials*' for his learners. Furthermore, he planned to integrate these tools and technologies '*to create some competitive activities in his class as they increate the pace of their learning*'.

Similarly, P20's knowledge of corpus tools and their use in English language teaching were limited to basic information prior to the training event. On the other hand, he had command of tools such as '*Google classroom, some cloud technologies, Plickers, and Hp Reveal*'.

During the training, P2o reported significant development of corpus tools and language assessment tools. In addition, he reported development inonline collaborative tools as well as creating stories and visuals for teaching English.

P20:"I learned about Sketch, Sketch Engine, Antconc. and their use in language teaching as well as Plickers and Testmoz for language teaching. I learned how to create online forms, slides and documents for real- time and collaborative class activities. I also learned about creating a template for writing activities and also online stories with Canva, Pixler and others. Gradecam can help us in assessing students and test results can be sent to anybody by e-mail".

After the training, P20 was asked about his plans to integrate his knowledge in his future training and he reported motivation and knowledge of the online tools such as Google Forms, Docs, and corpus tools to be used in his language teaching activities.

P20: I want to teach common vocabulary so I will select frequent words by using corpus tools to teach them. If I study literature or teach some words for writing articles, I will definitely use them because they will save my time. All of the tools that I learned were great. However, I will use online platforms such as Google Forms and Docs because it saves our time and money because we do not need to print out papers for our students and they can work together anywhere.

Before the training, when P21 was asked about his previous knowledge of digital tools and technologies to be used in language teaching, he reported very limited knowledge of Corpus and Google Drive and Quizziz. On the other hand, P21 showed no knowledge and command of other tools.

P21: "I heard about corpus and I knew that studying corpus was difficult. Actually, before the training, I only knew some terms regarding corpus and I knew how to use Google classroom, Google Drive, Quizizz but I did not have any idea about other online assessment tools and collaborative writing tools".

During the training event, he developed his skills in using *corpus tools such as COCA, Sketch Engine, BNC and Antconc*'. P21 also focused on different uses of Powerpoint which could also be used for '*language assessment and creating flashcards*'. Moreover, P21 learnt how to create e-books by using Storyboard and using Grammarly.

P21, after the training, reported increased knowledge of how to integrate corpus tools in the classroom. He seems to have gained the ability to integrate corpus tools and assessment tools to "increase students' knowledge before they study

actual texts in the lesson" and that he "*will make his students create their own tests or quizzes*".

When it comes to P22, it seems that the participant had some surface knowledge of corpus tools but he stated that he had knowledge of some tools and used them before the training.

P22: "I have heard about 'corpus' but the things that I have learnt about was different. On the other hand, I knew how to use Google Classroom, Google forms, Prezi, Grammarly, Quizizz and Powerpoint".

During the training week, similar to previous participants, P22 reported development in corpus tools and found them '*very useful for language teaching*'. In addition, he reported increasing awareness towards classroom management and language assessment tools as well as online story telling tools such as '*Kotobee and Storyboard*'.

After the training sessions, P22 seems to have gained the ability to integrate corpus tools to "teach words and collocations used by native speakers by choosing them with the help of Sketch Engine" and that he can teach his students '*daily-life vocabulary which is used by the natives*'byintegrating this tool.It is seen that P22 has also increased his knowledge of the digital tools like '*Katobe to make his students write their own diaries or make them write their own books by adding them images and videos*'.

The data that comes for P23 in this regard shows that there is a steady development for the participant in different ways. First of all, before the training, P23 was asked to report previous knowledge of the tools and technologies, and he reported no knowledge of corpus tools. Moreover, P23 had no idea and use of online assessment tools prior to the training event.

P23: "I had no idea about Antconc and Sketch Engine. Everything was new to me about corpus tools. I already knew PowerPoint but I had never created flashcards by using it. I had not known about Plickers, Testmozand Edpuzzle before".

During the event, P23 was asked about his current knowledge following the training, the participant reported significant exposure to the use of other corpus tools during the training experience. Also, he reported development in online assessment tools like 'Testmoz'.

After the training, when P23 again was asked about how he planned to integrate his knowledge of the tools and technologies to be use in his future training, he

reported increased awareness, motivation and knowledge of the online tools. He also developed his skills of using visual editing and storytelling tools.

P23: "I can prepare interactive Quizizz for my class and I can also prepare answer sheet by using other assessment tool called as Gradecam. I will use Canva to create infographics. Additionally, I may also use Storyboard to make my students create their short online stories".

Similar to the P23, P24 also reported limited knowledge of corpus but the participant had no idea to use these tools for teaching purposes. On the other hand, he reported some knowledge of visual editing, classroom management, and assessment tools before the training sessions.

P24: "I always heard the corpus tools and Sketch Engine in the class, but I had no idea about how to use them in class. I knew how to use classroom tools but I did not know Flashcard or testing tools. I knew some of the effective online search tips but not all of them".

During the training week, P24 reported significant development of the use of digital tools and online assessment tools as well as creating online stories and visuals.

P24: "I learned Testmoz, how to create a test and flashcard with Powerpoint. I learned to design a book that has a lot of visuals and creative tools".

P24, after the training, reported increased knowledge of how to integrate corpus tools in the classroom as well as online assessment tools. He seems to have gained the ability to integrate corpus tools to "to *check the reading passages and find the authentic materials for the real use of the language"* and that he "*will prepare homework tests for his students at the end each week so that he can see their progress instantly".* It is understood that P24 has shown development in its knowledge of the digital tools and technologies to be used for teaching purposes.

Prior to the study, P25's knowledge and use of corpus tools as well as assessment and classroom management tools were very limited. Moreover, he reported no knowledge of visual editing tools for language teaching in addition to storytelling tools.

P25: "I didn't know the terms such as corpus, data driven learning, and lexical priming but I learned and comprehend them here. I also didn't know and use corpora tools and software. I knew Edmodo which is an important classroom application that includes controlling the whole class activities. Google tools are now new to me and I use them

regularly. I did not have any idea about visual search engines and I didn't know how to use Pixlr, Canva, Pixton and storyboard. I didn't really know using digital tools and materials while evaluating students but I knew how to use Kahoot".

In the training, the participants reported an increasing development in corpus tools and their uses in language teaching. It seems that the training has increased his awareness in that he could '*create flashcards by using Powerpoint and online stories by means of web tools like Canva*'.

In addition to P25's learning in the training, when the participant was asked how to integrate his current knowledge into his future teaching activities, his technology integration plan included classroom management tools and language assessment tools after the training.

P25: "I will integrate the classroom management tool (Google Classroom) into my teaching because I think it is very decent and useful tool to use via uploading everything you use for a lesson and archiving them when needed. I will also use Plickers while I want to evaluate my students in a quick and fun way. It was very different tool to me but I really love it".

P26, before the training, reported knowledge of corpus tools and some online assessment tools as well as Google's online collaborative tools which can be used for language teaching for different purposes. On the other hand, it seems that the participant lacked knowledge how to integrate them into teaching or use them for teaching purposes.

During the training, P26 increased his knowledge in corpus tools in that he learnt '*idea behind corpus and its tools such as Antconc and Sketch Engine*'. The participant also developed his skills in tools such as '*Kotobee, Canva, Quizizz and Testmoz*'.

After the training, P26 again was asked about his plans to integrate his knowledge into future teaching activities, and he reported increased awareness and knowledge of digital tools and technologies to be used for teaching English.

P26: "When I plan to teach vocabulary and grammar, I will first check it up in the corpus tool to find the frequency of the word forms. In addition, I will not provide them isolated words but chunks. Also, I will assign my students some writing activities by using Google Docs to make them work collaboratively and I will provide them feedback by using the same document which can be checked at any time by the students".

Similar to the previous participant, P27 had some knowledge and use of corpus tools. Moreover, the participant reported knowledge of classroom management tools such as Edmodo and Google classroom, but he never used them for teaching before the training.

In the training week, it is understood from the P27's reflective journal that he increased his knowledge of corpus tools and he reported that he '*learned creating quizzes by using web tools like Plickers and Testmoz*'. Moreover, he also increased his awareness in online storytelling tools such '*Kotobee and Storyboard*'.

After the training, P27's integration plan included tools such as '*Quizizz*' for language assessment activities and '*Canva*' for visual editing and sharing activities. He seems to develop his skills in tools and technologies to be used for reading and writing activities.

P27: "I plan to use Quizizz for my 8th grade learners. I sometimes like preparing my own materials when I can't find an ideal one online. Canva will help me a lot when I want to use right visuals for a specific aim. I will also use Kotobee and assign my student homework as a part of extensive reading activity. I can also make my students use Grammarly while they are writing".

The data that comes for P28 in this regard shows a steady development from the beginning in various ways. First of all, before the event, P28 was asked to report his previous knowledge of the tools and technologies, and he reported no knowledge of corpus tools and the ways to use them.

P28: "I was not well informed about corpus. I did not know very well about the tools and technologies that I was introduced here. I learned here online presentations tools and digital story telling tools".

During the training, P27's awareness and development of digital tools and technologies to be used for English language teaching increased in corpus tools, online visual editing tools and classroom management tools as well as language assessment tools.

P28: "Now, I am informed about corpus and its tools. I can find correct words and phrases. I learned how to create materials for my classes by using Powerpoint and Google Classroom. I have learned using Drive, Prezi, Kotobee and Quizizz".

P28, after the training, reported increased knowledge of how to integrate corpus tools in the classroom, in addition, he could '*create an online class on Google*

classroom and share classroom materials there before the lessons'. He also showed interest in online collaborative tools such as Google Drive.

When it comes to P29, it is seen that he had knowledge about Corpus tools and technologies and t he had previous knowledge of tools such as Google classroom and Prezi. On the other hand, he had no knowledge of online assessment tools like Quizizz.

During the training week, P29 reported further development in the use of corpus tools. He developed his skill in tools like 'Grammarly' for writing activities as well as creating visuals and presentations for teaching using tools.

P29: "I learned the ways of implementing corpus activities into teaching by using corpus tools that was presented. I learned how to create activities by using presentation tools and how to improve my writing skills by using Grammarly. I learned how to search effectively by using Google search engine tips. I learned how to edit and share visual and create online stories by using some tools".

At the end of the training week, it is understood that P29 is interested in online assessment tools and their uses in language teaching considering that the training has increased his knowledge and skills of integration of technology into English language teaching.

P29: "I usually use videos and presentations in my class. From now on, I will prepare class activities and assessments by using some of the tools that I have learned here. I was hesitant in integrating digital tools and technologies into my teaching before attending the training but I am more confident now".

Similar to the 29, P30 also reported limited knowledge of corpus and classroom management tools and assessment tools. Also, the participant reported no knowledge of online collaborative tools.

P30: "Before attending the training, I only knew about COCA which I used for my linguistics course but I did not have any idea about other corpus tools such as BNC, Sketch Engine, Antconc, and Wordsmith. I also used Google classroom, Edmodo, Edpuzzle and Powerpoint flashcards but I learned here other tools such as Quizizz and Gradecam and I fully discovered some online tools for teaching English like Google forms and Drive".

During the training week, P30 reported significant development in the use of online assessment and management tools as well as creating stories and searching effectively.

P30:"I learned how to use Powerpoint effectively, and I learned that I can prepare quizzes from Testmoz. Google classroom is a very interactive platform where students and teachers can work together. I learned Kotobee that I can create stories with the help of it. I learned about HP reveal and tips of searching effectively on search engines".

After the training, it is seen that P30 has increased its knowledge of the digital tools to be used for language teaching and seems to integrate tools such as 'COCA and Antconc.' to teach vocabulary and '*Google Drive*' for collaborative activities.

Eventually, the analysis of reflective journals of the participants revealed that although there were different statements regarding the participants' views on digital literacy training before, during and after the training, some of the statements were found common in participants' reflective journals. These common statements are categorized under the theme and codes and are shown in Table 14 below.

The participants reflected upon structured questions in the reflective journals which were delivered to them. The participants were asked to reflect on the following questions (see Appendix 2- 6).

- Participant's previous knowledge on the topic, (what they knew on the topic)
- Participant's current knowledge after training (what they have learnt today)
- How participants are planning to integrate today's training into their future teaching (how participant will apply today's learning into their future teaching)

Table 17: The Encoded Analysis of Reflective Journals: Digital Tools and Technologies in the Reflective Journals

Theme How do the participants view digital literacy training **before, during and after** the training in terms of digital tools and technologies learnt and to be integrated?	Codes	ff	5%
Before	I have never heard about Corpus tools before the training.	113	343
	I did not know about cloud systems.	77	223
	I knew about online classroom management tools before the training.	44	113
	I knew some tips of effective web search.	33	110
During	I learnt how to integrate corpus tools into my teaching during the training.	117	557
	I learnt about online assessment tools.	110	333
	I learnt how to create videos.	66	220
After	I learnt how to create and integrate online assessment tools into my teaching during the training.	220	666
	I learnt about how to create and integrate digital stories.	112	440
	I will integrate classroom management tools.	110	333

It is clear from the codes that participants focused on Corpus tools, online assessment tools, classroom management tools, cloud systems, video editing and sharing tools, digital story telling tools as well as tips of effective web search. These codes were found common in the analysis of participant's reflective journals.

Most of the participants with the number of 20 which equals to % 66 of the participants had limited or no idea on how to integrate online assessment tools prior to the training, and 10 of the participants stated that they would integrate these assessment tools into their teaching activities.

Similarly, 13 of the participants had no idea of Corpus tools that can be used for teaching English before the training, and some others stated that they heard about Corpus studies but had limited knowledge of its tools and their use in language teaching. During training sessions, 17 of the participants stated that they learnt

about Corpus tools and how they could be integrated into English language teaching.

When it comes to visual editing and sharing tools, it is understood from the statements that 6 of the participants learnt how to create videos for English language teaching purposes during the training and 12 of the participants which equal to almost half of the participants stated that they learnt how to create digital stories by using tools and technologies that were presented to them during the training sessions.

Also, 7 of the participants had no idea about cloud systems which could be used for both data storage and online collaborative teaching activities. On the other hand, 4 of the participants said that they had previous knowledge of online classroom management tools before they attended the training, and 10 of the participants stated that they would integrate classroom management tools into their teaching after the training.

Lastly, 3 of the participants stated that they had prior knowledge of how to search effectively by using the tips of effective web search.

CONCLUSION AND SUGGESTIONS

Regarding the results of the study based on the analysis of the qualitative data and the findings, this section is aimed at presenting an overview of the study as well as suggestions for further investigations and implications for the applied linguists.

This study, within a framework of phenomenological research, represents how a structured training program can help the participants raise awareness of the digital tools and improve their intrinsic and extrinsic perspectives as to the integration of these tools into educational experience and practice. The study, among many other relevant studies and significantly far beyond the existing research, apparently revealed that the use of digital tools and technologies of pre-service English language teachers underwent a perceptual change from without and from within about various digital tools and technologies. The research, in some ways, not merely provided them with knowledge but also insightful experience into their current and prospective teaching experience. Hence, the study consolidated the educational ground with "phenomena" and its subjective traces on the individual practitioners. The study, therefore, has carefully taken multiple pictures of the phenomena as such and draws on the conclusions interrelated with the three states of "pre-research", "during-research", "post-research" corresponding to the different cases before, during and after the training. Thus, pre-service English teachers were chosen to participate in this study by purposive sampling method to gain in-depth data within the boundaries of phenomenology which included interviews and reflective journals as qualitative data collection tools.

Therefore, this study examined current literature, investigated digital literacy skills of pre-service English teachers, studied the development of pre-service English teachers' digital literacy skills by presenting training in order to raise awareness and accommodate digital literacy skills of pre-service English teachers in addition to the integration of technology in English language teaching. Consequently, the results and findings of the study are concluded in three parts as shown in the following paragraphs.

First, this study aimed at investigating pre-service English teachers' understanding of digital literacy. Hence, the study referred to the literature and focused on different definitions and descriptions related to the term digital literacy and digital literacy skills. The definitions and descriptions of these key terms was introduced with Glister's (2007) concept of digital literacy and

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theoretical basis pertaining to this study, and digital literacy training was drawn with California State's ICT Digital Literacy Policy Framework (2008) as explained in the literature review in detail.

However, the results of the study showed that the emerging themes regarding participants' views of digital literacy were associated with '*reaching, producing and sharing online information as well as the ability to use technology and digital tools'*. Most of the participants viewed and defined the term '*digital literacy as an ability to reach out online information with the help of digital tools and technologies*' which is quite similar to Glister's (1997: 1) definition of digital literacy as "[one's] ability to access networked computer resources, understand and use information in multiple formats, [and one's ability] to make informed judgements about what you find on-line".

On the other hand, it is seen that pre-service English teachers, as participants of this study, lack some basic elements of digital literacy in their definitions regarding their understanding of the terms when compared to the elements and definitions of digital literacy as well as digital literacy competencies as defined in California ICT Digital Literacy Policy Framework (2008: 5) which is accepted as the theoretical basis for this part of the study. These lacking elements in their definitions of digital literacy are '*one's ability to evaluate online information and to communicate information with the help digital tools or technologies*'.

In other words, when participants' definitions of the term are compared to the definitions which are shown in the literature review part of this study, it can be deduced that participants lack two basic elements of digital literacy; '*evaluate*' and '*communicate*'. Therefore, it seems that participants needed to evaluate quality, relevance, usefulness, or efficiency of information found online, and they were expected to communicate online information to meet different needs of their audiences with the use of appropriate digital tools or technologies when compared with the information related t to the definition and explanations of digital literacy in California ICT Digital Literacy Policy Framework (2008). Yet, it can be said that participants' understanding of digital literacy and their own definition of the term is closely related to Glister's (1997) framework.

Second, this study also focused on pre-service English teachers' views of the integration of technology and digital tools into English language teaching. In this study, technology integration meant the use of technological and digital tools in teaching to promote English language teaching within appropriate pedagogy. Thus, pre-service English teachers' digital literacy skills and their integration of

technology into teaching is closely related to their knowledge of digital tools and technologies and their ability to integrate technology into the content with relevant pedagogy. The pedagogical approach to integrate digital tools and technologies into English language teaching in this study took its basis from Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) framework.

In addition, it is deduced from the views of the participants related to the integration of digital tools and technologies into teaching that participants considered '*practicality of the tools and technologies, objectives of the course that were expected to teach, and the appropriateness of the tools and technologies in terms of students' age and level of education*'. Thus, it can be put forward that participants' views on the integration of digital tools and technologies might find a basis in three main domains of TPACK: '*technological knowledge*', '*pedagogical knowledge*', and '*content knowledge*'.

On the other hand, it can be said that '*some of the participants lacked technological content knowledge and technological pedagogical knowledge*' when the views of the participants and the emerging codes related to the integration of digital tools and technologies into teaching were examined under the light of TPACK framework. Moreover, 19 of the participants out of 30 were able to list some tools and technologies to be used in English language teaching, and this also showed that '*participants needed more theoretical and practical information in order to improve their technological content knowledge and technological pedagogical knowledge*'.

Also, this study presented different tools within digital literacy training such as web pages and applications to the pre-service English teachers to be used in their English language teaching contexts by the participants. These tools aimed at increasing participants' awareness of potential usability of these tools in educational setting as well as developing their skills for the integration of these tools into actual classroom setting. It is clear from the statements of the participants that the one-week intensive training brought about several changes as evidenced from the participants changing views towards using digital tools and these changes were explored as part of the phenomenological research approach. Most of the participants found the training useful by stating in their interviews and reflective journals that the training met their expectations. Moreover, they were able to give examples of how to use these tools and technologies in English language teaching in their reflective journals.

The study focused on the lived experiences of the participants and investigated pre-service EFL teachers' digital literacy skills and the integration of digital tools and technologies into English language teaching by focusing on the use of digital tools and their benefits. Also, it attempted to raise participants' awareness in the use of digital tools and technologies as well as their integration into teaching within appropriate pedagogy. Eventually, the finding of the study showed that some of the tools such as Corpus tools, classroom management, online assessment and story-telling tools took the attentions of the participants.

Particularly, the findings of the study revealed that pre-service English teachers had tendency towards using Corpus tools like SkethEngline, BNC, Coca and Antconc. The phenomenological study which included three consecutive interviews and reflective journals revealed that the participants seemed to be interested in these tools and had development have made progress compared to the average user in learning about these corpus tools through their efforts to implement grammar and vocabulary teaching activities.

The study, based on the findings above, suggests that similar training programsdealing with '*technology-related studies can be provided in a longer time period, and they might involve some teaching* practices', and the training period can be more than 40 hours, and it can be extended to other subjects such as micro-teaching activities requiring longer time.

Concerning pedagogical implications, professional development trainings in order to increase digital literacy skills and the integration of tools and technologies into English language teaching should not be limited to lecture(s) or training(s) of a specialist; rather*, hands-on activities should be enhanced into trainings where participants, pre-service English teachers in this study's case, experience tools and technologies themselves in order to have higher level of awareness*. Furthermore, micro-teaching opportunities, as stated before, should be provided to the participants in order them to experience classroom-like situations and practices.

Lastly, the findings of this study might attract the attention of both pre-service and in-service English language teachers in that this study presented different tools to be used in English language teaching, theoretical information on digital literacy and literacy skills, and TPACK framework for the integration of digital tools and technologies into teaching. However, the suggested tools and other theoretical information in the study might also be used by other content or subject

teachers considering that they evaluate the appropriateness of these tools and their possible outcomes in their teaching aims and contexts.

Implications

As regards, the implications for decision-makers, practitioners, and stakeholders, content-specific trainings should be provided to the target group of participants considering the emerging role of technology and digital tools in education and the necessity of integrating technology and digital tools into teaching which will assist both in-service and pre-service teachers to cope with both ever-changing teaching and learning situations today. The findings of the study showed that *the participants had interest in specific tools and technologies like classroom management and online assessment which have become more important for both pre-service and in-service teachers short after Covid 19 outbreak and its effect on teaching and learning* which need the use of such tools and technologies within the appropriate technologies

As for, the pedagogical implications, professional development trainings in order to increase digital literacy skills and the integration of tools and technologies into English language teaching should not be limited to lecture(s) or training(s) of a specialist; rather*, hands-on activities should be enhanced into trainings where participants, pre-service English teachers in this study's case, experience tools and technologies themselves in order to have higher level of awareness*. Furthermore, micro-teaching opportunities, as stated before, should be provided to the participants in order them to experience classroom-like situations and practices.

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