CHAPTER I
INTRODUCTION

This chapter outlines the introduction of the research which consists of several points. Discusses the background of the research, describes the identification of the phenomenon, assures the delimitation of the research, raises the question of the research, demonstrates the aims of the research, reveals the significant of the research, elaborates the theoretical foundation, links the previous research, demonstrates the frame of thought of the research, introduces a research method that guides the researcher to conduct the research, and shows the research timeline of making this research.

1.1 Background of the Research

Teachers in the previous period are facing much greater problems with money today. In this century, English teachers should be aware that they should successfully lead their students to master high English standards so that they can make best use of ICT to maximize their contribution to the health, stability, and prosperity of humanity and other creatures in the universe (Suherdi, 2012, p. 4). There has been a massive change of different ways in the 21st century which is driven by four main interconnected forces, one of which is globalisation. Globalization that made the world appear borderless has prompted international comparisons between colleges, curricula, methods of evaluation and achievement of students. Advances in IT have increased versatility in the information gain for each person, both teacher and student. Meanwhile, as a pre-service teacher must be able to prepare everything that will be faced when directly involved in teaching. Pre-service education is the phase of preparing educational personnel to acquire the knowledge, skills, and attitudes needed before serving.

The education delivery framework has a significant effect on the way that learners build skills in the 21st century (Kim, Raza & Seidman, 2019, p. 110). Pedagogy, curriculum, school rules and environment, evaluation and the learning of benchmarking skills are all important factors in the

production and evaluation of skills in the 21st century. Pedagogy is knowledge about the process and practice of teaching (Limbong, 2017, p. 63). It includes classroom management skills, teaching strategies, evaluation techniques and the nature of the target audience (Limbong, 2017, p. 63). Therefore, it is equally necessary to prepare and train teachers not only in the acquisition of skills from the 21st-century but also in the dissemination of those skills. This can serve an important first step to measure the classroom processes and teacher practices which allow and support the development of 21st-century skills in the classroom. To participate and progress in the new culture of learning, learners are expected to exhibit skills and dispositions that are widely acknowledged as 21st century competencies, which include technology, information and media literacies, collaboration and communication skills and problem-solving abilities (Dede, Voogt & Roblin as cited in Chai et. al., 2017).

The importance choosing this area of study because to become a teacher in the 21st century must have certain skills and competencies that should be prepared. The 21st century is a very different century from previous centuries. These changes are increasingly felt, including in the world of education. To create students who have 21st century skills, the teacher or pre-service teacher must understand and have these competencies. Are sure that competency is characterized by a unique feature to transfer a person ability in a new condition that are different from those which these competencies was initially formed (Rychen & Salganik as cited in Auhadeeva, L et. al., 2017, p. 3). Teachers who are able to face these challenges are professional teachers have competences including professional competence, pedagogical competence, personality competence, social competence and digital literacy. However, the researchers only focus on discussing one competency, namely digital literacy. Because of in the 21st century there is still many teachers who have not fulfilled the competence of digital literacy in this century. Digital competence can be

defined as a set of knowledge, skills and attitudes towards ICT and digital media (Ferrari as cited in Guillen-Gamez et. al, 2020, p. 2).

Many previous researchers have conducted research on teachers' profile. This can be seen from a variety rresearch in the area of profile teachers in the 21st century includes some clusters. For example, teacher professional (Handayani 2017, Afriyanto 2018), Teacher qualities (Faulkner 2016, Ulla 2016, Chai 2017, Koksal & Ulum 2019). Teacher competence (Prachagool, et. al 2016, Irie, Ryan & Mercer 2018, Yuksel & Saglan 2018, Jan 2019, Blume, et. al, 2019, Siregar, et. al 2020). Teacher profile (Hammond 2016, Yahya, et. al 2017, Diyanti 2020). Teacher skills (Boholano 2017, Tican & Denoz 2018, Bedir 2019, Kim, Raza, & Saidman 2019, Haerazi, Sudiyanto & Hidayatullah 2020). Furthermore, Technology literacy (Fatimah 2017, Akmal 2017, Isler, Yildirim 2018, Ally 2019, Saricoban, Tosuncuoglu & Kirmizi 2019).

The research has indicated distinct findings. Furthermore, from those researches there are not explain more about the specific digital literacy competence, what the needs of English pre-service teacher digital competence and there is not discuss about pre-service in the 21st century. Meanwhile, there is the important topic in this research.

1.2 Identification of the Issue

The issue of teacher quality has gained great importance so far considering the strong connection between teacher quality and students' academic achievement (Darling-Hammond & Youngs as cited in Yuksel, & Saglan, 2018, p. 206). essentially, from the five existing teacher competencies, one of the competencies that teachers must have is ability to use the technology, but in reality these competencies are not fully owned by teachers in Indonesia. Digital competences are becoming increasingly important and essential to work both personally and professionally. It is necessary to go one step further than digital literacy towards digital competence, which is understood as the domain of ICT in a professional context with good pedagogical-didactic judgment (Krumsvik as cited in

Guillen-Gamez et. al., 2020, p. 2). There are some problems related teacher's digital literacy, the first cases is related to information literacy, the second is how to understand media literacy and the last is how to understand ICT literacy. Information literacy is how do teacher define information needs for ourselves and how do find the information need on the internet. Then, once found, how can identify the accuracy of the information. This is called being critical of information so that it can differentiate between what is hoax and what is not. Information literacy is a level of knowledge and understanding in using existing information accurately and that matches the needs (khlaisang & Koraneekij, 2019, p. 117).

The digital age has made it easy for anyone to create media, media literacy is the ability to identify different types of media and understand the messages they are sending. Understanding that reason is the basis of media literacy (learn how to use movies and TV to teach media literacy). Then, media literacy is defined as ability to access, analyze, evaluate and create the content in a variety of contexts, aware of the impact of media exposure, choose to receive useful content and avoid unwanted content that the media offers (khlaisang & Koraneekij, 2019, p. 119). For doing that, the teachers need to understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments as well as understand and utilize the most appropriate media creation tools, characteristics, and conventions (Partnership for 21st century skills, 2009, p. 5). The important principles that need to be mastered by teachers are understanding both how and why media messages are constructed, and for what purposes and applying a fundamental understanding of the ethical/legal issues surrounding the access and use of media (Partnership for 21st century skills, 2009, p. 5).

The role of ICT in education can facilitate the learning system or understanding of the material taught by the teacher, and support positive interactions between teachers and students in the learning. ICT can assist the administrative management of educational institutions in managing administrative problems. Mastering ICT is priority that must be understood by all teachers as a competency standard in the digital era. With the ICT features, schools or educational institutions can provide more accurate information so that school policy making can be more targeted. Teachers also need to apply a fundamental

understanding of the ethical/legal issues surrounding the access and use of ICT and media (Partnership for 21st century skills, 2009, p. 5). In this case there are still many preservice or teachers who have not been able to define, access, manage, integrate, evaluate, create, and communicate information properly.

1.3 Delimitations and focus of the research

In this research, the researcher limits the study research with the title "Analyzing the needs of digital literacy competence of pre-service English teachers at student of IAIN Cirebon". This study has focus on in the 8th semester pre-service ELT teacher at IAIN Syekh Nurjati Cirebon. Furthermore, the focus of this research is to further discuss digital literacy competence ELT pre-service teacher in the 21st century (no with other competence).

As a delimitation of the results based on the explanations presented above, the researcher emphasizes that this study explores the digital literacy competences that pre-service English teachers must have in the 21st century. The reason researcher chose subject or data source for this research is because in the digital era like today it is very important to know and how to use the internet as a learning medium that can provide benefits and good knowledge according to their needs.

1.4 Research Questions

Based on the background of the research, the research question of this research is:

1) How do ELT pre-service teachers perceive digital literacy competence based on their experiences?
2) What are needed for ELT pre-service teachers to have digital literacy competence?

1.5 Aims of the research

According to the questions of the research above, the aims of the research can be defined as follows:

1) To find out how do ELT pre-service teachers perceive digital literacy competence based on their experiences.

2) To find out what are needed for ELT pre-service teachers to have digital literacy competence.

1.6 Significances of the research

The significances of the research are to:

From theory, the significance of the research is to add other theories about the needs of pre-service teachers in the 21st century, especially for the pre-service in the 21st century to find out what is needed to become a teacher who has the characteristics of digital literacy competencies in the 21st century. Because of previous research that researchers read only focused on the needs that teachers must have in the 21st century, especially on digital literacy competence.

From practically, the significance of the research is to show the needs of preservice teacher in the 21st century, to facilitate pre-service ELT teacher in finding information and knowing how to become quality teachers in the 21st century and plan more experienced other reseacrhers digital literacy competence that will be implemented. In addition, it is good if the pre-service teachers know they need. For other researcher this analysis is useful as a measure of differenc in digital literacy competence in the 21st century and previous years for other researchers.

1.7 Theoretical Foundation

The research is also challenged when the research investigates the issue raised obviously. Later, the research would explain some of keywords in the tittle explicitly to investigate which consist of 21st century education; needs analysis; digital literacy; and pre-service English teachers.

1.7.1 21st Century Education

Educator professional development has always been a critical enabling factor for educational change. Many factors must be considered in order to improve educators' competencies for 21st century teaching and learning. Teaching and learning is a process in which a teacher collaborates with students to acquire new knowledge or experience. Halimah (2017) defined teaching and learning is an

interaction involving learners and contexts such as teachers, materials and settings. The twenty-first century is marked by the development of innovation, unlike the time before human history; this century has a distinctive feature in terms of technological development.

P21 described the four abilities that are frequently used as learning and creativity abilities of the 21st century, and these abilities are "increasingly recognized as the abilities that separate students in the 21st century who are prepared for increasingly complex life and work environments and those who are not" (P21 as cited in Bedir 2019, p. 232). Chu (2017) stated that twenty-first century skills "are not new, only newly significant", in general terms (p. 8). For over decades, such skills, such as language skills and critical thinking, have been the subject of attention for educational institutions around the world, while some other skills, including digital literacy, have recently emerged. Chu (2017) stated that three key areas of knowledge are composed of 21st century skills: (1) creative thinking; (2) information, media and ICT (information, communication, and technology) skills (collectively referred to as digital literacy); and (3) life and job skills competences (p. 8). It consists of eleven competencies which are classified into three gist elements including (1) learning and innovation skills, (2) information, media, and technology skills, and (3) life and career skills (P21 in Chu 2017, p. 3). Chu (2017) explained the first skill for learning and innovation which include communication and capacity for thinking, second shared set of skills stresses the importance of mastering information technology (IT) skills, which include both standard IT skills, such as keyboarding, web browsing, word processing and information literacy (IL) skills, including some more sophisticated usage of information, such as properly and ethically scanning, reviewing and citing information contained on the web, third ability focuses on the ethical side of citizenship (p. 21). All of the three tested systems were found to

accept similar sets of skills and competencies. Education in the 21st century momentarily provides students with the requisite skills they can learn and practice to succeed in the globalized world. Bedir (2019) explained that teacher education institutions have been reconstructing their curriculum around the world so that pre-service teachers can be trained enough to incorporate the 4Cs into their teaching activities effectively (p. 232). The concepts related to 21st century learning in the curriculum are "Critical thinking, Entrepreneurship, Problem solving, Communication, Collaboration, Decision making, Innovative thinking, doing Research, ICT," however, evaluation policies or teacher preparation programs explicitly address this ability are not yet in place (CoHE as cited in Bedir, 2017, p. 234).

1.7.2 Digital literacy

Digital literacy is the ability to access, organize, understand, evaluate information that include multimodal outlook through digital technologies, and engage in the rapid growth of the digital communication channel by interpreting, managing, sharing and creating meaning. Digital literacy in relation to a web of "literacies of the digital" including ICT/computer literacy, information literacy, network literacy, e-literacy, digital competence, digital building (Martin in Bawden, 2008, p. 4). Web literacy, game literacy and writing digital media in the context of developing an ideal of digital literacy in terms of what young people need to know about digital media (Buckingham in Bawden, 2008, p. 4). For many 21st century students, the notion of tablets and other mobile devices, Internet access, information accessibility, and "connecting" are now part of daily personal activities and expectations of classroom learning (MacLeod & Kraglund-Gauthier, 2015, p. 1). As a general rule, students' digital literacy competence focuses on the development of skills, attitudes and knowledge of technologies in social and playful contexts, and does consider their transfer to educational contexts,

which propitiate optimal teaching-learning processes, which is necessary for the successful construction of knowledge (Kennedy and Colleagues as cited in Guillen-Gamez et. al., 2020, p. 1). The ability to analyze is one of the skills included in digital literacy. Information literacy is a term used to describe the ability to critically evaluate information. There are three main components of digital literacy (Chu, 2017, p. 22) including:

1) Information literacy (IL) the ability to identify when data is needed and capacity to efficiently and ethically identify analyse and use data. For example, search for information via the Internet or other sources (e.g., books, newspapers, television, YouTube).
2) Information and communication technology (ICT) ability to use, view, handle, incorporate, analyze and produce information on digital technologies, communication platforms and/or networks, skills, and media literacy. For example, using MS Excel is to produce charts or histograms from a set of data.
3) Media literacy (ML) ability to decode assesses, evaluate and generate print and electronic media. For example, recording and editing music file.

See the following table of indicators digital literacy adapted from Khlaisang & Koraneekij (2019)

Components	Indicator
Information literacy	Identify, access, manage, to apply, have ethics in using information.
Media literacy	Assessing, analyzing, evaluating, creating, accessing and using media creatively.
ICT literacy	Accessing, communicating, managing, integrating, evaluating, and creating ICT.

Table 1.1 Indicators Digital Literacy

1.7.3 Pre-service English teachers

Teacher training institutions are required to educate potential teachers in their classroom to incorporate technology. Promoting pre-service teachers' competencies for educational technology use in an integrated manner is a complex process that demands specific strategies in order to be successful (Agyei et. al., as cited in Tondeur, et. al., 2018, p. 32). The teacher of the 21st century will look at their experience and respond to the needs of their students. They need to be able to change their style of teaching to include various learning modes, adapt when a lesson fails, and adapt to emerging technologies.

Pre-service teacher training programs focus only on general skills, resulting in the ineffectiveness of bridging the difference in their actual classroom instruction between theory and reality (Bedir, 2019, p. 232). Pre-service teacher training programs share the outcome of providing a clear set of measurable, essential, up-to-date and coherent teacher competencies to determine and predict the student teachers' level of 'readiness-for-the-job' and their effective teaching performance as well as teacher quality (Darling-Hammond, Mergler & SpoonerLane, Yuksel as cited Yuksel I., & Saglan, S. 2018, p. 206). Education in the 21st century momentarily provides students with the requisite skills they can learn and practice to succeed in the globalized world. Meanwhile, the curriculum for teacher education must encourage prospective teachers to establish clearly established theoretical beliefs that help them form teaching strategies as they begin teaching beliefs about teaching (Bedir, 2019, p. 232). In order to incorporate them into the teaching and learning process, pre-service teachers must develop these skills in order to enhance the standard of teaching for education in the 21st century (Bedir, 2019, p. 232). Thus in translating twenty-first century skills into school practice, the role of ELT pre-service teachers for the implementation of the 4Cs is important. The incorporation of the 4Cs into ELT pre-

service teacher education will help them to learn the skills required to be effective 21st century teachers. Learn English as a medium of communication, rather than a school subject. Meanwhile, it is the definition of 21st-century skills for pre-service teachers (Urbani, et. al, 2017, p. 30) there are:

1) Creativity is the capacity to build, select and implement novels, unconventional and creative teaching and learning approaches. Pre-service teachers suggested that all other subject areas offer more opportunities for imagination through debates, exploration of concepts, and freedom of choice (Beghetto et. al, as cited in Urbani, et. al 2017, p. 31). Although these perceptions can exist because of possible curriculum limitations, it is important that teacher education systems create, model and analyze what it means to be innovative (Beghetto et. al, as cited in Urbani, et. al, 2017, p. 31).
2) Critical thinking is the capacity to use higher order thinking efficiently. Skills for organizing, training, and focusing on teaching experience while integrating teaching, learning, and growth theories and applying them. Research on critical thinking in teacher education has typically focused on critical reflection during course work and fieldwork (Urbani, et. al, 2017, p. 31). To this end, teacher educators have designed assignments that allow pre-service teachers to practice and demonstrate critical reflection.
3) Communication is the capacity to use interpersonal skills efficiently, and literacy components (reading, writing, speaking, and listening) to contribute to instruction, learning and development.
4) Collaboration is the opportunity to collaborate in diverse educational environments productively and equitably while valuing others.

5) Information Media and Technology Skills (IMTS). Moreover, to the development of creativity, critical thinking, communication, and collaboration, emergent technologies have altered how and to what extent 21stcentury skills are integrated in the classroom.is the ability to access, handle, submit, analyze and assess digital knowledge and technical resources for instruction. In the midst of rapidly evolving technical development, these involves using technology innovatively and efficiently in complex learning environments to collaborate, interact, think critically, and develop new functions.

1.7.4 Need analysis

The need analysis is directed at the goals and content of a course (Nation & Macalister, 2010, p. 24). Need analysis makes sure that it contains related and interesting things. It studies what the learners know already and what they need to know about the topic. The aim is to make sure that the course will contain relevant and useful things to learn (Nation & Macalister, 2010, p. 24). There are two types of the needs, namely target needs and learning needs. Target needs are what students need to do in certain situations. The components included in the target needs, namely necessities, lacks, and wants (Hutchinson & Waters in Nation & Macalister, 2010, p. 24). Meanwhile, learning needs learning needs are what the learner or students need to do for the purpose of learning. Learning needs are what the learner needs to do actually acquire the language (Robinson in Widianingsih & Listyaningrum, 2018, p. 136).

1.8 Previous study

Related to this study, this research is able to find the needs of digital literacy competence of pre-service English teachers. However, this study cannot be distinguished from previous supporting studies. Some compilations of research drawn from some references.

The first research from Akayoglu, et. al (2020, p. 85-97). The research was conducted about *"Digital literacy practices of Turkish pre-service EFL teachers"* The aim of study is to investigate Turkish PTs' conceptualization of digital literacy. That study purpose to explore issues 1) PTs concept of digital literacy consist of many levels from knowledge to use, and to critical, creative, and collaborative use. 2) Observed that university professors play an important role in the development of digital literacy levels of PTs. 3) it was found that PTs use social media platforms heavily for various purposes, however, we identified a need for further guidance in supporting PTs' use of these platforms for their professional development. The finding show that shed light on the current digital literacy skills of PTs in Turkey and will be beneficial for educational policy makers and teacher trainers in teacher education for the twenty-first century.

The second research from Eryansyah, et. al (2020, p. 402-412). The research was conducted about *"Pre-Service EFL Teachers' Digital Literacy and Factors Affecting Digital Literacy Development"* The aim of study is to investigate pre-service EFL teachers' digital literacy skills and factors affecting them in developing their digital literacy skills. That study purpose to explore issues 1) developing digital literacy competence were a limited number of computers with online access on campus, 2) no ICT training provided by the university for them, less practice of digital technology in teaching and learning activities, 3) lack of budget to access the internet outside campus. The finding show that revealed that pre-service EFL teachers' digital literacy was categorized above acceptable level.

The third research from Anggeraini, et. al (2019, p. 453-459). The research was conducted about *"Pre-service English Teachers` Views on Digital Literacy Competences in Language Teaching"* The aim study is investigating the pre-service English teachers` views on digital literacy competences in language teaching. Survey research was conducted to gather the data and 67 pre-service English teachers were as the participants. The finding show that indicated that the pre-service English teachers were in

average digital literacy competences, 84% of them were familiar with social media, 87 % of them argue that digital literacy competences as one of important things in digital teaching, 70% of them were familiar with digital media for EFL teaching.

The fourth research from Napal Fraile, et. al (2018, p. 1-12). The research was conducted about *"Development of Digital Competence in Secondary Education Teachers' Training"* The aim of this study is to accompany young learners in the development of competence, and to guarantee optimal implementation of information and communication technologies (ICTs), it is necessary that teachers are, in turn, literate. The finding shows that knowledge or skills they exhibit are largely self-taught and, so, we perceive an urgent need to purposefully incorporate relational and didactic aspects of ICT integration.

The fifth research take from Ata & Yildirim (2019, p. 1-16). The research was conducted about "*Exploring Turkish Pre-Service Teachers' Perceptions and Views of Digital Literacy"* The aim of this study is to investigate digital literacy perceptions of pre-service teachers, and to identify quantity characteristics of first and second year pre-service teachers' digital literacy at a public university in Turkey. The findings show that indicated that the model showed a good fit with the data and standardized regression weights indicated that attitude, technical, cognitive, and social factors were significant predictors of digital literacy.

The sixth research take from Ersanli (2016, p. 18-27). The research was conducted about *"Improving Technological Pedagogical Content Knowledge (TPACK) of Pre-Service English Language Teachers"* The purpose of this study to explore the effectiveness of a five-week workshop and training sessions on Technological Pedagogical Content Knowledge (TPACK) of pre-service English language teachers. The results indicate a statistically significant improvement in TPACK scores of both male and female pre-service English language teachers.

The seventh research take from Altun (2019, p. 249-263). The research was conducted about "*Investigating Pre-Service Early Childhood Education Teachers' Technological Pedagogical Content Knowledge (TPACK) Competencies Regarding Digital Literacy Skills and Their Technology Attitudes and Usage"* The aim of this study sought to understand the contribution of the technology attitudes and usage, digital literacy skills, and online reading comprehension strategies in pre-service early childhood teachers' TPACK competencies. The participants in the study were 481 voluntary pre-service early childhood teachers (female=398, male=83). The finding show that revealed that pre-service teachers' TPACK competencies are associated with their technology attitude and usage, digital literacy skills, and online reading comprehension strategies, as well as that the variables explained 38% of the variance.

The eight researches take from Ustundag, et. al (2017, p. 19-29). This research was conducted about *"Turkish Adaptation of Digital Literacy Scale and Investigating Pre-service Science Teachers' Digital Literacy"* The purpose of this study was to adapt the digital literacy scale developed by Ng (2012) into Turkish and the other was to investigate pre-service science teachers' digital literacy. 979 junior and senior pre-service science teachers from 13 state universities participated in the research. The findings show that the digital literacy skills of pre-service science teachers seem generally qualified.

The ninth research take from Tang & Chaw (2016, p. 54-65). This research was conducted about "*Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?"* The aim of this research to answer the question: Do students require digital literacy to be effective in learning in a blended learning environment? To answer this question, this study examined the relationships between effective learning and four digital literacy constructs; i.e. underpinnings, background knowledge, central competencies, and attitudes and perspectives. Responses were first collected from the students who were taking courses in a blended learning

environment at a local university. The finding shows that evidence that digital literacy is a prerequisite for students to be effective in learning in a blended learning environment.

The tenth research take from Shariman, et. al (2012, p. 1489-1496). This research was conducted about *"Digital Literacy Competence for Academic Needs: An Analysis of Malaysian Students in Three Universities"* The purpose of this study is to analyse the digital literacy competence of Malaysian students which is needed in order to access and use digital contents for finding information required in academic tasks. The study was carried out as a qualitative focus group study in which three groups were selected, one from three universities in Malaysia, and interviews were conducted after each group had participated in a sequence of Internet based tasks. The findings of this study show that revealed that the digital literacy competence of students depended on several factors, including English language proficiency, and the design of multimodal forms in digital contents.

The eleventh research takes from Nabhan (2021, p. 187-199). This research was conducted about *"Pre-service teachers' conceptions and competences on digital literacy in an EFL academic writing setting"* the purpose of this study revealed that the pre-service teachers' conceptions of digital literacy were principally associated with the narrow proficiency of utilizing online tools and technological devices and set aside a critical mindset. This case study involved both quantitative and qualitative data taken from 107 preservice teachers' online questionnaires and one 5-member focus group discussion delivered to pre-service teachers taking academic writing subjects in English Language Education Department in an urban university in Indonesia. Furthermore, the findings have important implications for developing digital literacy framework in an EFL academic writing.

The twelfth research take from Liza & Andriyanti (2020, p. 74-79). This research was conducted about *"Digital literacy scale of English pre-*

service teachers and their perceived readiness toward the application of digital technologies" the aim of this study to describe the digital literacy scale of graduate school students of English Education Department in a state university in Yogyakarta as pre-service teachers and their readiness toward the application of digital technologies in teaching and learning contexts. The research used mixmethods to collect both quantitative and qualitative data through Likert-scale questionnaires and interviews. The study revealed that the research participants had high digital literacy scales and readiness toward the application of digital technologies.

Based on the explanation, however, there was no special discussion about the need for digital literacy of pre-service English teachers. Thus, this study will distinguish with the previous research above. The researcher intends to analyse the needs of digital literacy competencies in pre-service English teachers to carry out roles as teachers in class. 21st century.

1.9 Frame of thought

This researcher illustrates the framework of thinking in this research by presenting the figure below:

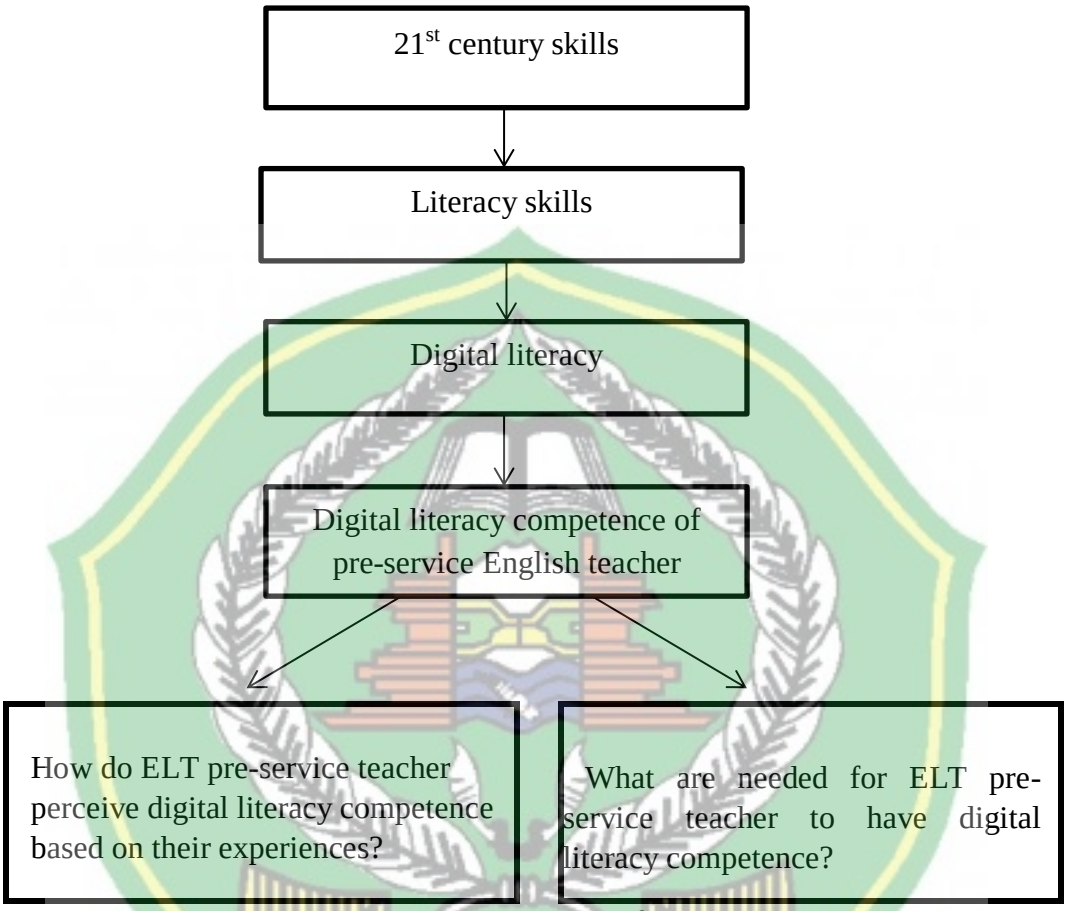

Table 1.2 Frame of Thought

The basic idea of researchers in conducting this research departs from the focus of this research, namely digital literacy competencies. Then the researchers explained several theories about digital literacy competencies and elements of digital literacy. Therefore, it is a concern in this study. Researchers clearly explain the definition of digital literacy. The latter provides detailed information about the digital literacy competencies that prospective teachers and English teachers must possess.

1.10 Research Method

In this section, research methodology is devided into several parts, those are: research design and steps of the research, sources and types of

data, data collection techniques and instruments, data analysis techniques and research timeline

1.10.1 Research design and step of the research

This study used qualitative approach. The qualitative method is one of the methods used by many researchers because it is easy to understand. The researcher build a complex, holistic picture, analyzes words, reports detailed views of information, and conducts the study in a natural setting (Cresswell, 1998, p. 15). As has been discussed by Subadi, qualitative research is in great demand because it is easy to understand its benefits by researchers, and is also widely used in research, especially in the fields of social sciences, education, psychology, and culture (2006, p. 10). The data for analysis was collected from interview.

The researcher writes overall of the research step will be conducted. There are nine steps according to Lodico *et al* (2006, pp. 265-267) First step is selecting a research topic or focus to investigate. The problem should be clear and can be measured. The problem also should be focus to the topic. After that, researcher clarifies the research questions.

Second is reviewing the literature on the problem. Researchers thoroughly review the relevant literature to gain more understanding and insight into the problem and to determine what research may already have been done. The beginning researcher likely turns to the literature for help in locating and formulating a researchable problem.

Third is defining the role of researcher. The researcher must deepen the participants to be studied in order to get a deep understanding of the participants. In this case the researcher must decide the extent of his involvement with the participants.

Fourth is managing entry into the field and maintaining good field relations. Before entering the field, firstly the researcher prepares the material clearly. The researcher will consider the preparation carefully. Then after entering the field, researchers must be able to maintain good communication with the school.

Fifth is selecting participant. The researcher uses a research question to determine the participants. Selected participants who have a background in accordance with the topics discussed.

Sixth is writing foreshadowed questions. This question serves to extract backup information from the field. The researcher prepares these questions to obtain adequate information. These questions will also help researchers to focus on the topic under study.

Seventh is collecting data. The next step involves executing the research plan. Qualitative researchers also have a toolbox of data gathering techniques, including in-depth interviewing including the schedule. Interviews will be conducted concurrently.

Eight is analysing the data. The data collected in research must be analysed. Qualitative data generally take the form of word (descriptions, observations, impressions, recordings, and the like). The researcher must organize and categorize or code the large mass of data so that they can be described and interpreted.

The last is Interpreting and disseminating results. The researcher next tries to interpret the findings in terms of research problem. Qualitative researchers present their interpretations and explanations in narrative form. They do not talk about probability but try to emphasize the trustworthiness and credibility of the findings. Then for reporting the result, researchers must make their procedures, findings, and conclusion available in a form intelligible to others who may be interested. This involves clearly and concisely

presenting the steps in the study in sufficient detail so that another person can replicate it.

1.10.2 Source and type of data

In this study the data were collected using primary and secondary data. Primary data is data taken by researchers by directly observing the problem under study. Primary data is data which taken by directly observe in the field. The first data the researchers took in this study was interviews from students at 8th semester. The researcher chooses because students at 8th semester already have teaching experience and also already know the problems that exist in the field. Then, the researchers interview English teacher. Here the researcher only takes a few of students at 8th semester in a class. Then, the second of source data is some of books that supported the research.

The secondary data is data obtained from documents or journals. Secondary data of this research is document, journals and some books that support the research. The data analysed to get more information. The data also can guide researcher when analysing the data.

1.10.3 Data collection techniques

The instrument of this research is the researcher itself. Afterwards, the researcher collected and analyse the data based on the theories to answer the research question. Data collection technique is the way used by researchers to collect the data to be analyzed. In this stage, for the data collection the researcher used interview.

1.10.3.1 Interview

Interview is a form on which the researcher records answer supplied by the participant in the study (Cresswell, 2012, p. 382). In this study, researchers conducted interviews to explain bias and attempts to obtain deeper and richer data

from the participants. Interview provides useful information the researcher cannot observe participants and they permit participants to describe detailed personal information. In process of collecting data using interview techniques, there are two things need to be considered: mode and type of the interview. Interview mode can be, face-to-face or online. Meanwhile, there are four type of interview; structured, semistructured, informal, and retrospective ((Fraenkel, Wallen & Hyun, 2012, p. 451). However, the question of interview formed in semi-structure that gives open-ended question.

The interviews conducted by the semi-structured instrument. The interviews are given to the English teacher and four students at 8th semester. In order to know target needs and learning needs of digital literacy competence. The researcher conducts an interview intimately by looking at some of the questions that have been provided. Then the researcher explores the questions as needed. Here, researcher easier to transcribe by using tape recorder and takes notes. Researcher transcribes the answer based on what the participant said. The answer is more detail and specific because researcher can re-hear the conversation and inspect carefully. The researcher uses interview to interpret of the result. Here are some of the benefits of triangulation based on Nugrahani: to correct instrument imperfections, increase the reliability of research results, and develop follow-up questions to dig deeper into the data (2014, p. 132).

1.10.4 Data analysis techniques

After collecting the data, the researcher analyzes the data. Data analysis is the process where the researchers systematically check for data and to organize the data in order to improve their understanding of the data

presented and to encourage them to present what they have learned to others. Data analysis is the most complicated and enigmatic process of qualitative research (Ary et al., 2010, p. 481). This stage supported with relevant source. Siyoto (2015) described that data analysis on qualitative includes: data reduction, presentation of data, and conclusion or verification. This process will be described below:

1) After gathering the data of participants, the next step is the researchers carry out an abstraction process, namely making a core summary, process and questions that need to be maintained. This process was carried out continuously while doing research. After that the researcher do the data coding process, namely sorting and centralizing the data, making notes, and limiting the problems from the results of questionnaires and interviews.
2) Data that has been reduced grouped into predetermined categories. Then the data is presented in tabular form. Then interpreted in a narrative by the researcher.
3) Researchers again look at the whole process of research steps related to the theme, subject matter, research objectives, data obtained and relevant theory to this research. Then draw conclusions from the data obtained by understanding each written meaning.

1.10.5 Research timeline

To finish this research, the research allocated 3 months to do this research.

1.	**Research proposal scho permission**	**1 week (1st week of Mei)**
2.	Making the instruments of data collection (Interview)	1 weeks (2nd and 3rd week of Mei)
3.	Collecting the second data for selecting participants (Interview for teachers)	1 week (4th of Mei)
4.	Sorting and analyzing the data	2 week (1s week of June)
5.	Making Chapter 2 of the thesis	2 week (2nd week of June)
6.	Making Chapter 3 of the thesis	2 weeks (3rd and 4th weekof June)
7.	Making data conclusion	2 weeks (1st and 2nd week of July)
8.	Finalizations of research	1 week (3rd week of July)
	Approximate amount	3 months

Table 1.2 Research Timelines