CHAPTER I

INTRODUCTION

1.1. Background of the research

The development of information technology in the 21st century is very significant. The needs of daily life, one of which is in the field of education, have been integrated into technological advances. In the 21st century, educators and students are expected to have teaching and learning abilities. Teachers and students must face a variety of obstacles and opportunities in order to survive in this era of information (Sasmoko, 2017, p. 2). Moreover, Information and communication technology (ICT) has developed significantly in the industrial era 4.0 and has a significant impact on student learning. Teachers must be able to take use of the ease with which technology is available in order to improve the quality of education, especially in classrooms. Technological developments have the potential to alter the learning implementation process (Khusniyah & Hakim, 2019, p. 20). Furthermore, the Indonesian government is still working to increase innovation in the field of education, especially in teaching and learning, because the success of a teacher in developing and implementing the learning process is intimately connected to a quality education system. A learning environment that supports the growth of facilities, studies refer, flexible support, and easy access, one of which is internet-based learning. (Oktavian & Aldya, 2020, p. 131)

Education in the 21st century is an education influenced by learning skills, and literacy. Learning skills are learning practices distinguished by teamwork, communication, and analytical and creative thinking (Margareta, Safnil & Koto, 2017, p. 35). It can also be said that 21st century learning is a way of educating the generation of the 21st century. Advances in information and communication technology (ICT) that are evolving so

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increasingly have an impact on different areas of life, including the method of teaching and

learning (Fauzan, & Pimada, (2018), p. 194). For example, students are given the opportunity to develop their skills in understanding information and communication technology, especially computers, and are required to develop skills. In this way, students have the potential to use technology in the learning process that helps to achieve the cognitive and learning abilities of students (Azmi, 2017, p. 111).

Furthermore, there is a general agreement, based on a literature review, that technological changes open the way for meeting the needs of a changing and evolving world. Many studies have agreed that information and communication technology (ICT) plays an important role in the field of teaching English as a Foreign Language (EFL) in this shifting perspective of education (Fauzan & Pimada, 2018, p. 193). EFL teachers and methodologists are required to follow a new mindset on developing basic ICT skills in EFL classrooms effectively with the advancement of ICT as a new tool in language teaching. This is a prerequisite for equipping language students with the technical skills available. Certain language skills and strategies are needed for the application of ICT (Fauzan & Pimada, 2018, p. 194). Moreover, many English teachers have used technology to improve language teaching in both formal and informal educational institutions ranging from high school to college using information technology to carry out learning as a result of technological progress. Several studies have found that technology has a variety of beneficial benefits on English learning. The internet has been used as a tool to support language learning (Martins, 2015, p. 12). An application on a smartphone is one of the most often used technology popular media.

Of addition, During the COVID-19 outbreak, the government's policy requiring changes in the teaching and learning process, which was initially carried out face to face in class, became an online or distance learning system (Efriana, 2021, p. 39). Using this system, students, teachers, and even parents of kids' guardians may face a variety of problems, such as course material that has not

been completed by the teacher and is then changed by other assignments (Hayati, 2020, p. 3). This is a problem for students and parents of students since the teacher gives more assignments to students, and parents and guardians of students must provide online learning facilities such as smart phones, internet quotas, and so on. Face-to-face communication practices can be an alternative approach to learning issues using the facilities of the age of globalization with the E-Learning process (Efriana, 2021, p. 40).

The use of e-learning provides a method of learning that allows for the learning process to be carried out online. Especially in the context of the fact that the entire community must accept the government's call for complete distance by conduct all activities at home, including learning, working, and praying. With the development of e-learning madrasas, this phenomenon spread to the field of educations (Zuhri, Agung, & Ramdhani, 2020, p. 141).

In the 21st century the educational system develops using advanced technology. Education plays a very significant and strategic role, especially technology and media literacy, efficient communication, critical thinking (Goodchild 2018 & Fatimah 2017). Problem solving and collaboration. in it known what are the impacts of technology (Shrader 2016, Bulman 2016, Taj 2017, & Ahmad 2015), Advantages of technology (Luis 2017, Henriksen 2018, Szumski 2017), how to use the technology (Sholihah 2019, Zhou 2018, Howard 2017, Ostanin 2018, Ghanizadeh 2015, Ersoy 2017, Shenoy 2020, & Singh 2020). Related to English foreign language education.

However, in the cluster list contained in the sources that have been found there are still studies that are not listed in the source, such as focusing on any skill such as writing skills. In addition, sources who take their research subjects are rare in MAN 4 Cirebon. Likewise, in MAN 4 Cirebon. The learning process also uses online classes at MAN 4 Cirebon. To order for students to continue to engage to learning events, the school must also address this issue quickly (Diana & Mansur, 2018, p. 209). The researcher analyze what students need in this research in the 21st century learning process based on the obstacles in English learning using ICT/ E-learning Madrasah.

1.2. Identification of the phenomenon

The use of ICTs to provide educational services has significant potential to enhance learning outcomes. In addition, the need for innovative solutions to optimize education efforts is increasing. Many programs have attempted to improvise with new technologies such as Zoom, Google Meet, E-Learning, etc (Almarzooq, 2020, p. 3). In Indonesia, there has been a growth in platforms that support learning activities, which require a subscription to deepen knowledge on the platform.

The increasing use of technology and the development of technology have many impacts, be it economic, social, even education. In addition, technology is made to make it easier to communicate and find information. However, not a few students have abused this technology which resulted in less effective media and methods that have been used by the teacher to provide material, especially in learning English.

In this research, the researcher find out the problems that arise in the process of learning English using ICT that is suitable for the current needs of students that occur in MAN 4 Cirebon. This research is only determine the students' needs for learning English.

1.3. Limitations and focus of the research

In developing an educated community that has skills of the 21st century. Education plays a very significant and strategic role, especially technology and media literacy, efficient communication , critical thinking, problem solving and collaboration (Çakici, 2016, p. 74). One way this can be achieved is by enhancing the standard of education. For instance, zoom meetings have also been prepared by several Madrasah Aliyah, namely a video conference application that is used on all platforms, both Android, IOS, and Zoom, Google Meet, E-Learning Madrasah. The hope is that, in real time, the online service system will still communicate.

Until now, student understanding of online learning in the millennial era is still expected, while some lecturers and students are still doing

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assignments, but the views of some Technology professionals are lessons that can be learned in the context of English learning. In this reaserch, the reasercher focus on one platfom such E-Learning Madrasah.

The online learning system also offers teachers and students assistance with its development or use. Since this online system is included in the learning methods or learning facilities that need to be established as well. Researcher find out the learning needs of students by using ICT.

1.4. Research questions

1.4.1. What are the students' obstacles in using ICT in English learning?

1.4.2. What are the students' needs in using ICT to learn English in 21st Century?

1.5. Aims of the research

1.5.1. To find out the students' obstacles in using ICT in English learning.

1.5.2. To find out the students' needs in using ICT to learn English in 21st Century

1.6. Significances of the research

ICT applications in English language teaching, and particularly multisensory delivery, have limitations. The cultural component of teaching material can be challenging and confusing. An appropriate use of ICT requires adequate training and pedagogical planning (Azmi, 2017, p. 111).

There are several reasons why the research done by researcher on ELT learning using ICT is significant. ICT has an important role in education in the 21st century because it greatly facilitates the interpretation of material concepts, can improve the learning system or teachers' understanding of the material presented, and supports teachers and students in classroom learning to communicate positively. It might be more interesting to offer at least some

content. ICTs are a source of curricula and materials with endless opportunities to better direct knowledge.

Moreover, in the digital era, mastery of ICT is a priority that must be recognized by all teachers as a competency level. The role of ICT will assist management, administration and educational institutions in administrative matters. With the existence of the ICT feature, more detailed information can be provided by schools or educational institutions so that school policy making can be more targeted. (Nazara, 2016, p. 127). Furthermore, In many schools, the use of ICT media is due to its practical importance, economic value and usage. All of these factors make learning more interesting, easy and can be applied anywhere and anytime. (Margareta, Safnil & Koto, 2017, p. 35).

As a result, researcher expect the findings of this research to be useful and provide a clear picture for researcher conduct similar research on the English learning process that is adapted to the students needs using ICT for English teaching in the 21st century.

1. Theoretically

   With this literacy-based research, it is important to increase references in the 21st century related to technology-enhancing English learning, which is in high demand by various educational fields.

2. Practically

   It useful for several different points of view such as:

   a) For school

      for schools, they are take advantage of technology that has been applied to the learning process and find out about the broader technology. Therefore, it is not left behind with the advanced times.

   b) For teachers

      The teacher is expand her knowledge about the learning process using the technology that has been provided. in order to make it easier and add new skills to teachers and students.

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c) For students

Students get several positive things about this research, namely gaining new knowledge about ICT and its use in the English teaching and learning process.

d) For another researcher

With this research, it become a reference for other researcher and expand knowledge about ICT in English education.

1.7. Theoritical Foundation

In this research theory taking has several stages. Collection, such by identifying research topic keywords to search for related literature such as journals, books, and other research relevant to the research that carried out (Togala, 2013, p. 3). Next, make a literature map that reflects the relationship between theories and concepts, then record a complete bibliography of literary sources, then make a literature review by describing the existing literature in an article that is in accordance with the rules of scientific writing. Furthermore, taking this theory by utilizing the internet to search for specific database sources.

1.7.1. The 21st Century Learning

Education in the past always focused on learning essential content for each subject, then assessing this content knowledge with quizzes and tests at the end of lessons made students more in line with times. (Trilling, & Fadel, 2009, p. 49). First, traditional core subjects are taught in most schools today, typically including reading, writing, language arts, foreign languages, civics and applied subjects, and history. Then along comes 21st century subject themes that present creative skills in thinking, critical thinking and problem solving, and communication and collaboration. 21st century education also requires a higher level of imagination, creativity, and innovation to continuously create new

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services and products in processing and designing learning materials tailored to students'

abilities. Thus, skills, creativity, and innovation third, focus on discovery and discovery (p. 50).

In addition, to meeting the new demands of learning in the 21st century. The skills of answering questions critically explain what others say about a subject, for posing and solving problems. For communicating in learning, and for creating new knowledge and innovations that help build a vibrant world of education better (p. 50).

There are four factors that include to the psychological factor such as intelligence, skill, interest, and motivation (Slameto, 2010, p. 54):

a. Intelligence

According to David Wechsler, intelligence is defined as a people's ability to think and think perfectly while also managing and controlling their situation. Besides that, the researcher found data from this intelligent factor when investigating and interviewing several students at MAN 4 Cirebon. This factor affects their learning process of their psychological problems. In everyone that have weaknesses and strengths from their problems inside. It could be their positive or negative reaction to learning, especially in English lessons. Students feel less proficient in the lesson.

b. Skill

Everyone has different skills and a person will learn something according to his skills. A person will find it easier to learn something based on the skills he has mastered. If someone learns a subject that is out of context with his skills, he will soon get bored and give up. This is indicated by students who always interfere with the learning process, make things crowded, and do not pay attention to lessons so that students get low grades, as well as in Learning English.

c. Interest

Interest is a propensity to behave in ways that is oriented toward specific things, activities, or experiences, and it is not as significant between

individuals as it is between groups of people This is the most important factor in determining how respondents will be able to relate their experiences with English as a second language. Interest indicates a strong desire for something, as well as a proclivity for it. Interest does not include popular in psychology because it is strongly dependent on other internal factors such as intelligence, skill, and motivation.

d. Motivation

Motivation is defined as everything that inspires someone to achieve something and includes both internal and external motivation. Motivation drives someone to produce good results, gain success, or obtain something that becomes students objective, as well as someone's participation in a project (Purwanto, 2007, p. 69). Motivation is considered to act as a stimulus for learning, pushing students forward and helping them in overcoming the challenges of learning a foreign language. According to Brown (2007) is an affective component that plays a key role in learning a second or foreign language. Motivation is a dynamic process that is neither stable nor constant.

The 21st century learning is learning that prepares the next generation to become a generation with 21st century skills. There are at least four things that must be owned by creating the 21st century, such as: ways of thinking, ways of working, tools to work and skills to live in the world. (Prayitno, 2013, p. 1).

Education in the 21st Century has 7 characteristics that make it distinct from an approach to the 21st Century These are: (1) Specific learning. (2) Equality, inclusivity and diversity. (3) By doing, learning. (4) Changing the teacher's role. (5) Relations with the culture. (6) Technology. (7) Professionalizing teachers.

One of the ICT tools that can be used when learning foreign languages is the web. In addition, the use of the web in learning also has features that can be done such as receiving or sending assignments and material about lessons (Nazara, 2016, p. 128). Furthermore, non-web-

based learning tools, this method is usually used for learning environments that are not familiar with the internet. Examples of tools included in non-web such as DVDs, projectors, language labs (Nazara, 2016, p. 129).

1.7.2. **ICT 21ˢᵗ Century**

In a sense, technology is something that refers to objects that are used for the convenience of human activities, such as machines, tools, or hardware. In other words, technology can include the notion of systems, organizations, and techniques. However, along with the development and advancement of the times, the understanding of technology has become more and more widespread, as a result of which technology is currently a concept related to the types of use and knowledge of tools and expertise, and how that technology is able to influence human ability to control and renew. something that is around it (Margareta, Safnil, & Koto, 2017, p. 35).

Warsita (2008, p. 150) states that there are three approaches to using or utilizing ICT (Information Communication and Technology) for education and learning, such as:

a. *Computer and internet knowledge*, with technological literacy as the ultimate goal. Computers, for example, can be utilized as learning objects in computer science. This includes implementing ICT (Information, Communication, and Technology) as a subject in schools.Moreover, basically technology is a kind of the result of a human handwork in order to be able to make maximum and effective use of nature and something around it. Thus, in simple terms technology aims to facilitate the fulfillment of human needs. Therefore, technology was created by humans in order to assist humans in completing their work in daily life quickly, easily and briefly.

b. *Computer and internet-based learning*, where ICT (Information, Communication, and Technology) aids learning in keeping with the school's curriculum. For example, as an alternative teaching tool in SMA, SMK, and Madrasah Aliyah, the Ministry of National Education's Pustekkom developed an interactive multimedia CD software for Biology, Islamic Religious Education, English, and other subjects.

c. *Computer and internet-based learning*, i.e. integrating the development of ICT-based skills (Information Communication and Technology) with curriculum applications. Computers can also be used to conduct particular tasks, such as calculating or analyzing, data storage, and word and data processing.

Technology products have been found and are increasingly being applied in various ways (Arsyad, 2013, p.34) states that technology has the following main characteristics such as: Can be used randomly, sequentially or linearly. Can be used according to the wishes of students, not just in the way the designer planned and wanted. Ideas are often presented realistically in the context of student experience, according to what is relevant to students and under student control. The principles of cognitive science and constructivism are applied in the development and use of lessons. Learning is organized and centered on the cognitive sphere so that knowledge is mastered when the lesson is used. Learning materials involve a lot of student interactivity. Learning materials combine words and visuals from various sources. In addition, ICT is able to expand access to education (Tinuoye & Adogbeji, 2013, p. 23)

a. Internet can be accessed at any time and from any location

Information and communication technology (ICT) will provide a solution to the problem of time and location in the learning process. Because technology allows students to access material at any time and from any location, ICT can create time delay and distance learning problems. Distance is also no longer a factor because students and teachers

will enjoy from easy access to materials, such as educational programs in virtual learning materials.

b. Motivating students to learn:

Students can be process of learning by using challenging and real material from video, radio, or even computer software that combines text, sound, and even moving images. In addition, there are other aspects of technology that can be useful. Because of these attractive features, students will be more motivated.

Technology products can certainly be applied in learning, some are even created specifically for use in learning. Especially for learning media, computer-based technology products for learning media are very numerous, not only in the form of hardware or hardware but also including software and computer programs (applications).

Examples of hardware that can be used as learning media include computers or laptops, projectors, and other types of learning media based on computer technology. While examples of software or software that can be used to design or directly as learning media such E-Learning.

1.7.3. English Language Learning

Learning is often seen as an interactional process of interaction between learners and educators and learning resources in a learning environment. Learning is one of the efforts of people whose purpose is to help people learn. There are several characteristics of learning (Brown, 1994, p. 9), namely (1) attracting attention so that students are ready to receive lessons, (2) informing lesson objectives, (3) stimulating memory for previous teachings, (4) presentation of teaching materials and learning aids (5) provide tutoring, (6) generate performance in learning, (7) provide feedback, (8) assess work performance, and (9) transfer of learning.

English is generally taught as a foreign language in Indonesia. In the field of language education, the word 'foreign language' is different from 'second language'. A foreign language is a language that is not used in a single country where it is taught as a means of communication (Wijaya, 2020, p. 121). The second language, meanwhile, is a language that is not the dominant language but one of a country's widely used languages. Meanwhile, foreign languages are typically taught in schools as a subject with the goal of basic communication is 4 language skills (listening, reading, writing, speaking) in that language (p. 122).

Futhermore, teaching use of technology in various fields such as education has been so successful and beneficial for teachers. Therefore, English is the only valid language that can be understood by all people in the whole world. English has become the ideal language for expressing feelings and using technology (Sarica, & Cavus, 2009, p. 439). In addition, learning English through the web and using new technology in education in schools makes students want to learn languages more diligently.

1.7.4. Leaning English in 21st Century

An essence of ability in the 21st century is processing information technology into knowledge and making it a competency to overcome problems that exist in the area of education. Therefore, ICTs are essential for achieving capability in the 21st century (Prayitno, 2013, p. 1). Furthermore, the latest learning techniques by adapting the times to meet the needs of the 21st century are things that must exist in the field of education (Trilling & Fadel, 2009, p. 38). Because, in effort to match educational goals or needs of the times, education progress is intimately connected to or influenced by the role of increasing effective technology (Trilling & Fadel, 2009, p. 16). The first set of 21st century skills focus on critical thinking skills and creativity:

a. *Problem-solving and critical thinking*, the ability to apply information, facts, and data to effectively solve problems is related

to as problem solving and critical thinking. This does not mean that anyone must have an immediate response; however, someone must be able to think quickly, assess difficulties, and find solutions. Such a student, put a high priority on the skill to develop a well-thought-out solution in a reasonable period of time in learning (p. 16).

b. *Collaboration and communication*, students learn about how to think, work together, and communicate clearly is one of the learning activities to increase productivity and the overall quality of activities in the classroom. In addition, students will also learn about other things such as how to work in groups properly, in which it will develop communication between students (p. 17).

c. *Innovation and creativity*, all levels of educational activity, not just the arts, involve innovation and creativity. Understanding the learning process necessarily involves a knowledge of the creative process. New ideas, new ways of looking at things, new procedures, and new items that have value are all examples of innovation. The idea of output, or actually creating or doing something different, making something happen, or implementing something new, is at the core of innovation. The idea of output, or actually creating or doing something different, making something happen, or implementing something new, is at the core of the idea. Hard work is usually always needed when it comes to innovation; perseverance and patience are important because many good ideas are never explored and developed. (p. 17). Creative thinking is described as thinking that allows students to use their imagination to produce ideas, questions, and predictions, experiment with alternatives, and evaluate their own and others ideas, final product, and processes, (Kampylis & Berki, 2014, p. 6).

Internet technology and gadgets were introduced to the field of language education in the 1990s. Because ICT has become a part of everyday life, students have a great opportunity to find a learning environment that they find more interesting and informative. The internet accepts learning materials available

online and can be accessed anytime and from anywhere (Nazara, 2016, p. 128-129).

Today, education is in the age of knowledge with a tremendous increase in knowledge. The acceleration of increasing knowledge is supported by application of digital media and technology. Learning activities during this knowledge period must be tailored to the needs. Learning materials must provide a more authentic design for going through challenges in which students can collaborate to create solutions to solve lesson problems. Problem solving leads to questions and answers by students who can then seek solutions to problems in context learning using available information resources (Trilling, & Hood, 1999, p. 21).

1.7.5. **E-Learning Madrasah as a learning aid**

At this time the field of education has many subjects which are generally studied, for example educational psychology, educational technology, etc. Especially the technology used for learning aids (Parhi, 2017, p. 110). Since technological learning is a part of their development, technology is also a part of distance learning. Other essential abilities include the ability to connect with other equipment, particularly computers, the ability to present learning material, and the ability to generate communication (Novaliendry et. al, 2020, p. 712).

In addition, the Ministry of Religion has inaugurated an application, namely Madrasah E-Learning in early 2020. This inauguration is very useful for the implementation of learning with information and communication teckology. Armed with the Guidebook provided by the Ministry of Religion on Madrasah E-Learning and with the principle of mutual cooperation and complementarity among teachers, parents and students. therefore learning can be carried out properly (Hikmah, 2020, p. 74).

Furthermore, the subject matter can be obtained free of charge in the form of files that can be downloaded. Meanwhile, interaction between

visitors, both students and teachers, can be done in the form of discussion forums or e-mail (Zuhri, Agung, & Ramdhani, 2020, p. 144). In addition, this Madrasah E-learning has an online class feature. Where each student and teacher will have their own account to be able to enter and access the Madrasah e-learning application. The features provided are very diverse. Preparation for learning, learning, assessment and value processing can be carried out based on Computer Based Training (CBT). There are 6 types of accounts in this Madrasah e-learning, such as 1). Madrasah operators, 2). subject teachers, 3).counseling teachers, 4). homeroom teachers, 5). Madrasah principal supervisors & staff, and 6). students (Sutini et, al, 2020, p. 126).

1.7.6. Students Needs

Needs analysis is an important aspect of education that is used as the basis for curriculum development. Needs analysis is also known as needs assessment. Meanwhile, (Nunan, 1999, p. 148) states that needs analysis is a set of tools, techniques and procedures to determine language content and the learning process for certain groups of students. Needs analysis also has a variety of users for different purposes that needs analysis can be used for various purposes. Some of these are: to identify changes in direction that people in the reference group feel are important, to identify gaps between what students can do and what they need to be able to do, and to gather information about specific problems students are experiencing (Fauzia, Refnaldi, & Adnan, 2017, p. 78).

There are several models developed by experts for the study of needs. The four philosophies mentioned in (Brown, 1994, p. 38) are one of them. In requires analysis, he breaks data collection into four philosophies, namely the philosophy of incongruity, the philosophy of democracy, the philosophy of analysis, the philosophy of diagnostics (p. 39). Hutchinson and Waters (1987: 45) divide needs into target needs and learning needs. Target needs are the needs of students in the specific context, so although

learning needs are what students need to learn. Analysis of target needs can see the needs, shortcomings, and wants of students.

It is considered, from that perspective, to examine the most successful listening content to accommodate student needs as the correct model to be applied in this research. Using the Hutchinson-Water theory to evaluate the weaknesses and expectations of students about the material, this research performed a requires review.

1.8. Previous Studies

The theoretical gap is a weakness, shortcoming, limitation or gap that theoretically has not been fulfilled in the theoretical framework. The theory gap is closely related to the phenomena in the process (Klingner, & Boardman, 2011, p. 128). This section showing gaps in the research data and raise criticism.

The previous study that first inspired the emergence of this research was the author Umar Fauzan and his partner, Luluk Humairo Pimada, with a research entitled *ICT-Based Teaching of English at Madrasah Aliyah in Kalimantan*. In his study, he analyzed foreign language learning activities using ICT as a tool when the foreign language learning process took place, in addition, researcher used applications that support learning activities to run smoothly using a slide percentage (Fauzan, & Pimada, 2018, p. 196). The discussion revealed that EFL students and teachers benefit from the use of ICTs, because ICT tools can support the collection and development of information, communication and reflection, and can make learning more interesting, enjoyable, diverse, inspiring and supportive.

The second is from Sutini, et al. (2020), entitled *Efektivitas Pembelajaran Daring Dengan Menggunakan E-Learning Madrasah Terhadap Optimalisasi Pemahaman Matematika Siswa*, in this study the researcher describes the problems that arise in society today in the field of education. In addition, the researcher explained the online learning innovation that provided Madrasah e-learning which had been inaugurated by the

Ministry of Religion. The results showed that online mathematics learning activities using Madrasah e-learning were quite efficient, considering that there were still problems with student ownership of equipment and inadequate internet networks, and students were not maximal in absorbing the material provided.

Third previous study is the research of Zuhri, Agung, & Rahmadhani, (2020) entitled *Effectiveness of The Use of Madras E-Learning Applications During the Covid Pandemic 19*, in this study the researcher described this research as aimed at determining the effectiveness of using e-learning application Madrasah. and finding inhibiting and supporting factors for the application of e-learning applications as a learning medium. The results showed that the components of using e-learning Madrasah tended to be less effective. due to several implementation factors including a lack of knowledge related to Madrasah e-learning, network problems, and however, it is very effective in online learning using other applications besides the Madrasah e-learning application.

Previous research is based on Rian Prasetyo's research titled, *Analisis Hambatan Belajar Pada Mata Pelajaran Teknologi Mekanik Program Keahlian Teknik Pemesinan SMK Negeri 3 Yogyakarta*. The purpose of this study is to identify the factors that cause learning obstacles in Mechanical Technology students from an internal factor. Knowing the external factors of learning obstacles of students in Mechanical Technology disciplines, as well as the relationship between students' internal learning obstacles and learning performance in Mechanical Technology, are very important. Knowing the relationship between students' internal learning obstacles and mechanical technology learning achievement, as well as the impact of internal and external learning barriers to mechanical technology learning achievement. According to the findings of this study, students face many obstacles, both internal and external.

The previous research listed in the explanation above is research that has inspired the emergence of this research which develop and add theories

that have not existed in previous research. However, there are still studies whose sources are not specified in the list of clusters included in the sources that have been collected, such as focusing on the needs of students in using ICT in the English learning process based on the obstacles that students have faced in using ICT (E-Learning Madrasah).

1.9. Frame of Thought

Basically, human nature that is never satisfied with what they have makes humans have increasingly creative mindsets and want to form something more innovative. From the urge of desire, the advancement of science was created which we now know as the word technology. Furthermore, technology that has been made by humans has spread into a habit, and continues to be cultural, social, political, one of which is education. The need for technology is getting bigger.

However, many people or technology users forget what the real function of this technology is. In the 21st century, it is very helpful and supportive of the role of technology. Besides, there are still those who do not understand the technology that has long developed in the world. Therefore, the solution launched was to guide and direct the generations of administrators to know the correct use of technology. Here the role of the teacher is very important to know the extent to which the use of information and communication technology (ICT) is known by these students in order to know the students' needs for ICT, especially for foreign language learners (English). The following is a framework that describes the ideas of this research on Figure 1.1:
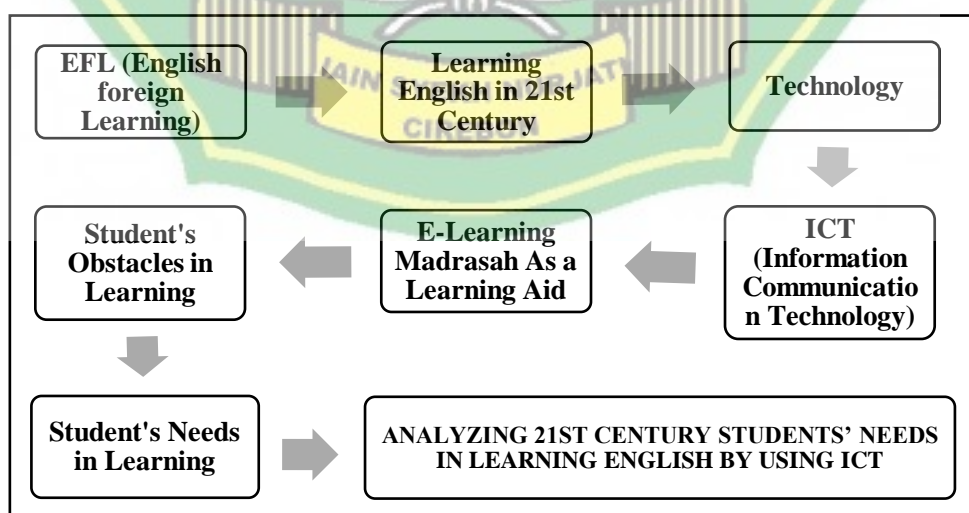

Figure 1.1 Frame of Thought

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The above moral framework is an overview of the research that conducted. Taking several research ideas and integrating them with the theme students 'needs in learning english in 21st century by using ICT/ E-Learning Madrasah which researched at MAN 4 Cirebon. to find answers to general questions It also respond to specific questions such as first what the students' obstacles in using ICT in English learning, and what the students' needs in using ICT to learn English in 21st Century. As a result, the researcher conduct several research steps, including observation, and interview, in order to come up with acceptable results.

1.10. Research Method

This part discuss the research methodology applied by the researcher in his research. Qualitative research is an understanding investigation process based on different research methodological traditions that explore a social or human problem. The researcher constructs a detailed, comprehensive picture, analyzes language, provides detailed information sources, and conducts the research in a natural setting. Moreover, the process of understanding social issues based on various methodologies is qualitative analysis. The researcher would compile a complex image in this case, interpret it word by word and compile the results of the analysis naturally or according to the evidence in the field.The contents are research methods, data collection methods and techniques, data analysis techniques, research instruments, population and samples, and the last is the length of time the research carried out during the research.

1.10.1. **Research design and steps of the research**

In conducting research, a research design is required. Several experts have different opinions about what is meant by research design. The research design is a research plan and procedure to a detailed method of data collection and analysis (Creswell, 2003, p. 3). The function of the research design is to ensure that the evidence obtained enables us to answer the original question as clearly as possible. In this research, researcher use a qualitative approach because this research focuses on analyzing student needs in learning English using ICT as a medium that supports the research. Besides that, there are several ICTs that use *E-Learning Madrasah*. This research is focused on students' needs for foreign language learning.

This research the researcher use the case studies as a research design contained in the 2014 Creswell theory. *Case studies* are a design of research used in many fields, especially analysis, in which the researcher performs in analysis of a case, often a program, activity, behavior, process, or one or more participants. Cases are constrained by time and activity, and researcher gather comprehensive data over a long period of time using a range of data collection procedures (Cresswell, 2014, p. 4).

Research is a process of knowledge collection and analysis steps to enhance our understanding of a subject or problem (Cresswell, 2014, p. 4). The steps in a research process are:

a. Define research problem,

The first step is to find the problems that arise to clarify the purpose of the research to be carried out. By looking for unexplored aspects and areas of concern. The researcher's aim is to find gaps that can be filled by research.

b. Initial literature review,

The next step is to find sources of theoretical sources that can help. Researcher search the library and use the internet.

c. Research design,

In this step the researcher determine from a variety of designs or research designs. In choosing which design is the most appropriate, there are several questions that need to be answered and these answers are a reference in determining the research design.

d. Collection of data,

The process of collecting data that carried out by researcher is in several ways, namely by conducting observations, and interviews. with that, researcher take data from subjects related to research

e. Analysis of collected data,

The analysis process of data collection is carried out after making observations, and interviews in accordance with qualitative research, namely collecting and transcribing or written in a structured manner.

f. Finding

The last step is finding, here the researcher provide the results of the previous stages.

1.10.2. **Data sources and data types**

Qualitative data is descriptive data or data that is not in the form of numbers, usually expressed in the form of verbs, symbols, or pictures. Qualitative data can also be obtained through interviews, observations, literature studies. In addition, the data is objective, so that everyone who reads it will lead to a different interpretation (Putra, 2020, p. 2). In this research, researcher taken the data from two sources from research that carried out, including:

a. Primary Data

The primary data that collected by researcher are students at MAN 4 Cirebon that conducted direct research using techniques and instruments given to students and teacher.

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b. Secondary Data

Data that support or strengthen primary data in this research are theses, journals, books, websites, etc. The data to be retrieved as Secondary data must be closely related to the research to be carried out, so that ideas are not be confused.

In this research, researcher used the results of observation, and interviews as data sources, because the research taken outlined in a paragraph / written. Thus the research data is in the form of paragraphs. In conducting research, researcher use ICT as a medium that implemented according to the needs of students in learning foreign languages (English).

1.10.3. **Data collection techniques and instruments**

Data collection techniques are the techniques that researcher use to collect data. In this research, researcher used observation, and interview. Then the interview the researcher accompany the respondent from MAN 4 Cirebon both from the English teacher and the students themselves.

a. Observation

Observation is a data collection technique that involves observing and noting every event that occurs. An object, condition, situation, or activity is observed directly using this observation technique (Sugiyono, 2017, p. 193). Furthermore, observation is a process that begins with observing and then continues with methodical, logical, objective, and rational observation of many types of phenomena in actual and artificial situations (Kristanto, 2018, p. 9). In this research, researcher observed the students when the process of learning English using ICT E-Learning Madrasahs, both student attitudes in following English learning and student activity.

b. Interview

An interview is a meeting between two persons to discuss information and ideas through question and answer in order to develop meaning in a certain topic (Sugiyono, 2015, p. 72). Moreover, interviews in this research use the structured interview. In this way the researcher are create questions from a relatively developed interview guide (Kurniawan, 2020, p. 3). In the research process, this interview took a relatively long time. In this study, researchers generally used face-to-face interview techniques with research participants, where researchers visited the interviewee's school and home and conducted personal interviews. Researchers also conduct interviews via the WhatsApp app.

1.10.4. **Data analysis techniques**

The data that has been collected and analyzed using data analysis techniques. In addition, data presented in the form of writing, and pictures (Cresswell, 2014, p. 75). In this research, researcher used theory based on Sugiyono (2015) stated that the data analysis technique has four stages, sucha as:

a. Data collection

Data collected from a number of data that has been carried out during the research, whether it is in the form of observation results, and interviews.

b. Data reduction

Data reduction is the process of summarizing, sorting data, removing unnecessary data. So that there remains accurate and important data to discuss at the next stage (Sugiyono, 2015, p. 340).

c. Data desplay

On the data display the researcher present and summarize using a short description using narrative text (Sugiyono, 2015, p. 341).

d. Conclusion / Verification

The final step is conclusion / verification, in this step the researcher provide conclusions that include strong evidence in order to answer research questions and find new research results (Sugiyono, 2015, p. 345).

1.11. Research Timeline

The time allocated is a way for researcher to collect data, such as distributing questionnaires and conducting interviews and surveys at various times, because it take quite a long time to do so individually when conducting an interview.

	develop a research proposal	Month												
		Maret				April				Januari				
		1	2	3	4	1	2	3	4	1	2	3	4	5
1	Prepare a research proposal	X												
2	Instrumental development of research proposal	X	X											
3	Instrumental try out of research proposal		X	X										
4	Revision of research proposal			X	X									
5	Asking agreement to the principal of the school for doing survey				X	X								
6	Survey in the school environment					X	X							
7	Collection data using observation and interview							X	X					
8	Analyzing data from observation and interview									X				
9	Reduction the data									X				
10	Sorting data from observation, and interview										X			
11	Making data conclusion and verification											X	X	
12	Finalization of research													X