

## **CHAPTER II**

### **LITERATURE REVIEW**

In this chapter, the researcher presents the theoretical review related to the study consists of perception, the role of technology in education, Mobile-Assisted Language Learning (MALL), and the concept of vocabulary. The researcher also presents related previous studies and the basic assumption.

#### **A. Students' Perception**

##### **1. Definition of Perception**

In recognizing an object that is around, humans experience a process called perception, so that perception has the meaning of individual processes in recognizing objects around them. Perception also has a meaning about a person's experience of an object or experience which is then concluded through the information obtained, so that each individual has a difference in perception. According to, perception comes from the Latin "perceptio, percipio", which means "to receive, collect, capture with the mind or the senses, and the act of taking over". According to Sari (2020), perception is the act of being aware of one's environment through physical touch to show the individual's ability to understand it. Whereas in general terms, perception is defined in the Longman Dictionary of Contemporary English as: a) the way a person thinks about something and one's ideas about what it looks like,

b) the way a person pays attention to something with the senses of sight, hearing, etc. c) a person's natural ability to pay attention and understand something quickly (Yuanda, 2020).

According to Slameto (2010) perception is the process of entering an information or message into the human brain related to its environment. According to another opinion, perception is a process that begins with the sensing process where the individual receives the stimulus through the senses (Walgito, 2004). In addition, Tahir (2014) also argues that perception is a process of giving meaning to an object in the environment. In addition, Tewal et al., (2017) explained that everyone has different perceptions because different individuals can see the same thing but interpret and understand it differently.

## **2. Factors Affecting Perception**

Everyone has different perception of particular conception information, and this is due to factors that affect perception. According to Slameto (2010) two factors influence a person's perception, including:

### **a. Internal factors**

Internal factors come from within one's own self, based on psychological factors such as thoughts, feelings, gender, willingness, attention, and motivation. So, every human being has different characteristics and personalities that individual families and their environment form.

a. External factors

External factors are factors that come from outside one's own self. These factors will affect one's perception. Stimulus is an internal factor in the monitoring process. The stimulus process will connect through reason or receptors such as sight, sound, hearing, etc. Hence, one's reason organ is a liaison between a person and the objects they encounter in this world.

The process internal factors and external factors are interconnected when both are also influenced by factors in the situation such as time, working conditions, and social conditions. From the three a perception is formed which is shown in a person's behavior which causes everyone to have a different perception (Robbins, 2007).

**B. The Role of Technology in Education**

The rapid development of technology makes all human needs inseparable from it, especially in education. According to Budiman (2017), technological tools such as radio, printing press, radio, TV, computers, smartphones have long been discovered and used in education. Even though these tools are not specifically made for educational purposes, they can be used for educational purposes. In addition, the flow of globalization has also triggered trends in the world of education, such as changes in the conventional face-to-face learning system towards open education.

In addition, Maghfiroh (2020) argues that the role of information technology in the world of education is an absolute value that must be mastered in this era of globalization because, due to competition, technological progress is developing very rapidly. If people had to meet in person in the past to meet experts to discuss a problem, now this can be done from home via telephone communication tools or email. Even in schools, assignments can also be done remotely by utilizing existing technology. These changes can be seen with e-learning, a change from face-to-face learning to virtual meetings. E-learning itself has a meaning as learning delivered through electronic media such as the internet, audio/video tape, TV, etc. (Gani, 2016).

Changes in learning such as E-learning show that the world of education must adapt to these changes, namely the existence of Information Communication and Technology (ICT). In addition, Sudibyo (2011) also explains that the development of information technology in education has a significant positive impact because it can be seen from previous learning. Previously, distance and time were still a problem, but the development of technology in education is not a problem.

In addition, Priyatmojo et al. (2017) explains in constructivism theory that the characters behind the theory include Dewey (1916), Piaget (1972), Vygotsky (1978), and Bruner (1990). In constructivism theory, learning will run well depending on three essential factors: students, the learning environment, and teachers.

- 1) Students. The first factor is students. To achieve good learning, students must have a sense of responsibility, social interaction, learning that encourages student independence, scientific development, and a sense of ownership in learning.
- 2) Learning Environment. The second factor is the learning environment, which must have a complex, relevant, and realistic learning environment. In addition, the learning environment must also be able to provide a source of ideas and scientific ideas.
- 3) Teachers. The third factor is the teacher, who acts as a facilitator, provides scaffolding, and provides facilities that support learning activities.

Based on the explanation of constructivism theory, three crucial factors in achieving good learning must be fulfilled. In the digital era like today, to fulfill these factors, technology plays an essential role in it, especially to create learning media in the learning process. In the world of education, information and communication technology cannot be separated because it is one of the components in supporting educational activities. Sudibyo (2011) explains the six roles of information and communication technology in education, namely:

- 1) Information technology as a skill and competence,
- 2) Information technology as educational infrastructure,
- 3) Information technology as a teaching resource in supporting the learning process,
- 4) Information technology as a tool and educational facility,

- 5) Information technology as education management,
- 6) Information technology as a decision support system.

Maghfiroh (2020) argues that technological developments also impact the world of education. The impact of these developments is divided into two, namely positive impacts and negative impacts, including:

- 1) Positive Impact

Positive impact means that technological developments can support the continuity of an education system. Among these positive impacts are:

- a. The emergence of mass media, especially electronic media as a source of knowledge. With the development of existing technologies such as the internet, the internet network can be a source of knowledge that students can use. So that when students learn, they are not only fixated on one source or only fixated on what their teacher teaches, but the existence of electronic media can be a source of other knowledge that is free for students to access.
- b. The emergence of new learning methods and the existence of technology can add new learning methods that teachers and students can use to learn and understand abstract materials to make it easier.
- c. The learning system does not have to be face-to-face. The existence of technology that can be used for the learning process, such as e-learning, can create distance learning so that students and teachers do not have to meet face to face to hold a lesson.

- d. The existence of an assessment data processing system that utilizes technology. If in the past, when the research was calculating or analyzing data, they still used manual methods, now they can use technology that is easier to calculate so that it can save time.
- e. Meeting the need for educational facilities can be met quickly. Many needs are needed in education, including the existence of national exam questions and school exams. In the process of manufacture, tools such as computers or photocopiers are needed to reproduce them.

## 2) Negative Impact

According to Sudibyo (2011), the negative impacts of technological developments in education are:

- a. E-learning, which has the potential to replace teachers in the learning process. The trend of e-learning will gradually replace the function of the teacher because students can individually learn science with the help of existing technology.
- b. Students' frequent access to the internet can cause them to access bad things such as pornography and online games instead of accessing knowledge.
- c. Learners can be exposed to information overload, which can cause them to become addicted to accessing endless amounts of information.
- d. Cybercrime in education is like an act of plagiarism by other people.

- e. In a virtual meeting, the emergence of a sense of apathy for each individual, both students and teachers, is less than in a face-to-face meeting.

### **C. Mobile-Assisted Language Learning (MALL)**

#### **1. Definition of Mobile Assisted Language Learning (MALL)**

The beginning of MALL was started with research conducted by Twarog and Pereszlenyi-Pinter in the 80s that looked at telephone-assisted language studies where they use the telephone to provide language learning assistance and provide feedback. Over the last decade, Mobile Assisted Language Learning (MALL) has grown, as evidenced by the many studies on MALL that have found various mobile devices used in MALL. The researchers also stated that the MALL application trial had been around since 2001 (Hashim et al., 2017). Mobile-Assisted Language Learning (MALL) is now a term known as MALL providing promising advantages from mobile phones to enhance language learning similar to Computer Assisted Language Learning (CALL) which utilizes the use of computers in language learning. In addition, the researchers also found a relationship between MALL and several characteristics, one of which is the idea of mobility where this idea offers new learning opportunities for language learners (Yudhiantara & Saehu, 2017).

Mobile-Assisted Language Learning (MALL) is defined as the use of personal devices and portable devices that enable the learning process and

emphasize continuous internet access or spontaneity and diverse uses. In addition they also argued that Mobile-Assisted Language Learning (MALL) as formal and informal learning that utilizes mobile devices that allows learning to be done anytime and anywhere (Kukulka-Hulme & Shield, 2008). It can be concluded that Mobile-Assisted Language Learning (MALL) is language learning by utilizing mobile devices.

## **2. Advantages and Disadvantages of MALL**

### **a. Advantages of MALL**

Experts state that Mobile Assisted Language Learning (MALL) has many advantages. In general, MALL has advantages for both teachers and students in language learning. Teachers can provide various assignments using mobile devices and applications anywhere and anytime (Solihin, 2021). The advantages of MALL are as follows:

#### **1) Freedom to access the internet for both teachers and students**

The existence of internet access provides an opportunity for students to find and receive information about any topic so that they will get many language learning resources. Students can access Youtube to see and hear music videos and video clips. In addition to students, teachers can use internet access to find various exciting learning sources and various learning methods (Chartrand, 2016).

## 2) Features that have multimedia capabilities

Mobile Assisted Language Learning (MALL) consists of various kinds of mobile devices, for example, smartphones with many features that students in language learning can utilize. Like the voice recording feature, which can be played back, students can compare their voice recordings with native speakers to learn a lot from them. Not only recording sound but also recording video to be used to increase their level of confidence when speaking (Chartrand, 2016).

## 3) Flexible learning

The advantage of mobile device-based learning is that it is not limited by time and place. Students can access learning anytime and anywhere using smartphones or laptops, such as accessing videos, articles, and pictures (Putri, 2020).

## 4) Providing prompt feedback

The existence of mobile devices with capabilities that can directly correct or provide direct feedback will make it easier for teachers to evaluate student learning. For example, students can answer survey questions, exercises, or a quiz automatically corrected, and their scores appear (Chartrand, 2016).

## b. Disadvantages of MALL

### 1) Enables students to cheat

Increasingly sophisticated technology allows cheating in the learning process. This can be seen by the many students who plagiarize the other people's work. Chartrand (2016) argues that students can search for answers via the internet to answer exam questions or look at online dictionaries. In addition,

### 2) Cost-related issues

It is undeniable that mobile devices have prices that are not cheap, so for those who want to use them, they must be willing to spend quite a lot of money. In addition, rapidly developing technology requires the latest version to be upgraded because otherwise, the mobile device that someone has will be behind the times (Putri, 2020). In addition, Solihin (2021) notes that in several cases, some students in Indonesia have not been able to have a smartphone used in learning activities, especially in underdeveloped areas in Indonesia.

### 3) Grow students' attitudes and reduce social interaction

Mobile learning requires students to spend much time using mobile devices, which will cause alienation among classmates when in class. Hence educators believe they should do group activities in class when learning a language to increase social interaction compared to when using mobile devices (Chartrand, 2016).

#### 4) Can cause interference in the learning process

Chartrand (2016) argues that when students can access online dictionaries in the classroom simultaneously, they can also access videos and play online games that have nothing to do with learning, which disrupts the learning process in class is considered inappropriate.

### 3. Mobile Learning

There is no universally accepted definition of “mobile learning” because the area is undergoing rapid change and partly because the word is ambiguous “mobile”, whether this refers to mobile technology specifically or the more general idea of student mobility. However, both are equally important, because it can be concluded that mobile learning draws attention to mobility not only in fact but also in its consequences which can create new methods for allocating time and bridging geographical boundaries (Kukulka-Hulme, 2009). In addition, Kukulka-Hulme (2009) argued a variation of m-learning in the context of language learning is called Mobile Assisted Language Learning (MALL) which is technology-based language learning that utilizes mobile devices.

Mobile learning (m-learning) can be said to include the use of portable learning materials, such as e-books, audio cassettes, audio CDs, portable radios, and DVD players and all of these are included in the scope of modern technologies. In addition, mobile learning is defined as learning that is

accessible at any time and place and is mediated by mobile technologies (Kukulka-Hulme & Shield, 2012). From the exposure of other researchers, it can be concluded that mobile learning is learning that utilizes the use of mobile-based technology, and language learning is related to Mobile-Assisted Language Learning (MALL).

#### **4. Mobile Application**

As was previously explained, mobile devices are required for the use of mobile learning. Mobile applications play a critical function as a beneficial tool in the achievement and acquisition of a learning that cannot be understated when discussing mobile devices that are directly tied to teaching and learning innovation (Darsih & Asikin, 2020). The mobile application itself has the meaning of software that operates using mobile devices such as smartphones, tablets, and iPods. Kukulka-Hulme and Shield (2008) explain that mobile applications are a type and part of Mobile Assisted Language Learning (MALL) found on portable devices. In addition, Liu and He (2014) defined mobile applications is software designed to be used on mobile devices such as smartphones, tablets, and personal computers.

A software program that can only be run on smartphones and tablets is referred to as a mobile application. An application that can be downloaded and has specific features to extend the capability of the mobile device itself is referred to as a mobile application. Through specific mobile-friendly websites, the user can download the mobile application whenever they want

(Hasan et al., 2019). Darsih and Asikin (2020) explain that teaching and learning innovation is closely related to the mobile device itself, where the meaning of mobile applications as a helpful tool in the achievement and acquisition of specific learning cannot be ignored. So that Redhuan et al. (2019) in the context of using mobile applications in learning, learning materials are organized with a systematic learning style and delivered in a structured process so that learning is more flexible, dynamic, and attractive.

#### **D. The Concept of Vocabulary**

##### **1. Definition of Vocabulary**

Vocabulary can be defined as all the words in the language (Celik & Yafuz, 2018). When learning English someone must know the vocabulary because otherwise, it will be impossible to understand it, she also argued that language terms, comprising single objects, phrases, and collections of many words with specialized meanings, are referred to as vocabulary (Fajriani, 2020). In addition according to the Oxford Learner's Dictionary (2016) in Ozgur et al. (2018), there are three definitions of vocabulary: (1) Vocabulary refers to all words that people use or know; (2) Vocabulary refers to all words in a specific language; and (3) Vocabulary refers to a word that people use when discussing a specific subject.

According to Horn (1998: 1447) in Riskawati (2014), there are four definitions of vocabulary: 1) all words that a person knows and uses 2) all words in partial language 3) words that people use when speaking 4) lists

words with their meanings, especially in books for foreign language learning. A sound that expresses a meaning and constitutes an autonomous unit in a language is referred to as vocabulary. So, from some of the opinions about the definition above, it can be concluded that vocabulary is a collection of words that have meaning used by someone to communicate with other people.

## **2. The Importance of Vocabulary**

Vocabulary as a basic skill to be able to master other English skills is true because at least they must have basic vocabulary to be able to understand and learn English. Adequate mastery of vocabulary is essential for the successful use of foreign languages because, without vocabulary, language learners cannot use the functions and structures used in communicating. Learning vocabulary is essential in all of four skills in English because limited vocabulary mastery someone will difficult to master other skills (Fajriani, 2020).

Language used by humans is built on vocabulary, which is made up of three main language components: pronunciation, grammar and vocabulary, and the vocabulary serves as the fundamental building block for incorporating grammar's general patterns into sentences, patterns because without vocabulary there can be no sentence, essay, or even language. Vocabulary is one of the three essential parts (phonetic, vocabulary, and grammar), so vocabulary becomes an essential element in learning a foreign

language well (Pan & Xu, 2011). Language vocabulary seems to be one of the key components of learning a second language since without vocabulary knowledge, second language learners would find it challenging to understand and learn the language (Galti, 2017).

### **3. Teaching and Learning Vocabulary**

Many researchers have found methods and techniques in vocabulary learning and they also argue that unlike other English skills that require systematic guidance, vocabulary does not require systematic guidance so that students are more confident to learn it in their own way such as using mobile applications (Celik & Yafuz, 2018). However, this does not mean that teaching and learning vocabulary can be taken lightly because in fact, teaching and learning vocabulary is still something that must be considered because vocabulary has an important role in learning English.

Furieux (1999, p. 367) in Makoe and Shandū (2018) explained that the first principle of vocabulary development is the explicit teaching and learning of vocabulary, which refers to the "option and presentation of words for learners," because "merely offering pupils lists of words to memorize is not successful vocabulary instruction. The second principle of vocabulary teaching pertains to providing opportunities for practice through frequent exposure to the terminology and rehearsals. As a result, the mobile app needed to allow recurrent exposure to previously learned terms.

Based on the explanation above, it can be concluded that teaching vocabulary is not easy because there are several principles that the teacher must pay attention to when teaching vocabulary and require appropriate and efficient learning methods and it is not possible that vocabulary learning can take advantage of mobile applications. Mobile applications (apps) have shown the ability to improve and alter language learning in recent years (Chen, Liu, & Huang, 2019; Fu, 2018).

#### **E. Previous Studies**

Many previous studies have studied the use of mobile applications in learning English, especially vocabulary learning. Among the previous studies related to this research are:

1. The research by Darsih and Asikin (2020) about the use of mobile applications in learning English. In this study, they focused on students' perceptions of MALL (Mobile Assisted Language Learning), specifically about mobile applications in learning English used questionnaires and semi-structured interviews with ninety-six students at the university who download and use a mobile application that helps them learn English. The research results show that there are six types of applications that students often use, including Kamusku, Google Translate, Elsa Speak, Youtube, Zoom, and Google Meet. The questionnaire results also show that students' perception of the use of MALL, in this case, is the use of mobile applications, and the

result is that the mobile application is considered helpful in their learning, besides that it is overall easy to use.

2. Other research conducted by Rinanda, et. al (2019) about students' perception towards using mobile application in learning. This study aims to determine students' perceptions and the factors that influence students' perceptions of mobile applications in learning English speaking skills. The participants are five students from a vacation school in Surakarta, Central Java, who are familiar with mobile applications taught in speaking classes using the Learn English Conversation application. The results of this study indicate positive perceptions of students towards the use of mobile applications, which are influenced by several factors, including flexibility and easy-to-operate mobile applications and this application does not require a lot of internet quota when using it.
3. Klimova and Polakova (2020) carried out the similar research about students' perception of an EFL vocabulary learning mobile application. The purpose of this study was to discuss students' perceptions of the use of mobile applications in learning new English vocabulary and phrases and to describe the advantages and disadvantages of mobile applications according to students' perceptions. The name of the application used is Anglictina (English) TODAY. The results of this study indicate that overall, students agree on the positive aspects. This is known from the questionnaires they previously filled out. The advantages of the applications were that it can be

accessed anywhere and anytime. The students also appreciate corrective feedback. The drawback of this application is that it is not very supportive regarding communication performance.

4. Other research conducted by Putri (2020) about a descriptive study on Mobile Assisted Language Learning (MALL) in English teaching and learning process. This study focused on mobile phones in learning English and the learning process at the Faculty of Teacher Training and Education, University of Muhammadiyah North Sumatra. This study aimed to determine students' perceptions of the use of mobile phones in learning English and how students use mobile phones in the learning process. This study used descriptive qualitative research by interviewing 20 students. This study indicates that students have different perceptions, including the use of mobile phones in learning English is very helpful, and mobile phones have an essential role in the learning process. Mobile phones also have advantages and disadvantages. Students utilize mobile phones by using several applications such as Google Translate, WhatsApp, Google Classroom, Gmail, U-Dictionary, Camscanner, Oxford Dictionary of English, and many more.
5. Sari (2019) carried out similar research about students' perception on the use of Mobile Assisted Language Learning". This study focused on the use of smartphones as one of the mobile devices as a medium and why students use smartphones as a medium for learning English. The participants in this study were fourth-semester students in the English Language Teaching Department

at the University of Muhammadiyah Purwokerto in the 2018–2019 academic year. The result is that there is the highest frequency of positive in the advantages of MALL, and the conclusion is that the majority of students perceive MALL positively towards the use of smartphones.

The previous studies have shown the general use of mobile applications in English learning that can positively impact on student perceptions. The use of mobile applications in learning English is focused on assisting the learning of four skills in English. The use of Mobile Assisted Language Learning (MALL) either in mobile applications and on mobile phones supported the students to learn English. The previous studies revealed that most students perceived the use of mobile application in learning English positively. Some application in their smartphones have supported them to learn English in more effective way. In addition, this study is expected to give more comprehensive information related to the students' perception on the use of mobile application in learning English vocabulary seeing from the university students.

#### **F. Basic Assumption**

The use of technology in the teaching and learning process is inevitably. It becomes a need for the students to use technology in learning especially learning English. Many researches have revealed that the use technology has impacted positively to the students' learning achievement especially on the use of Mobile-Assisted Language Learning (MALL). However, there are also

challenges in using technology in ELT classroom. The challenges can create positive or negative perception.

