CHAPTER II
Review of related literature

Chapter II is the review of the related research theories. This chapter describes theories relevant toward research, theories description, they are: The definition of vocabulary, Kind of Vocabulary, The importance of vocabulary, The Aspects of Vocabulary, Teaching vocabulary, Learning vocabulary, definition of MALL (Mobile Assisted Language learning), and Scientific Approach.

2.1 Vocabulary
2.1.1 Definition of Vocabulary

Vocabulary cannot be separated in learning new languages. This means that people must know vocabulary when learning new languages. In various ways vocabulary can be defined. According to Renandya and Richards (2002: 255), vocabulary will provide many bases for how students write, listen, speak, and read. Vocabulary also includes a center constituent of language proficiency. Without strategies for acquiring new vocabulary and broad vocabulary, students often reach their potential and may not be advised to take advantage of language learning chance on every side them such as listening to native speakers, listening to radio, using language in dissimilar contexts, watching television or reading . In addition, Vocabulary can be defined as " words to communicate effectively which we must know. Receptive vocabulary or words in listening and expressive vocabulary or words in speech"(Dwyer&Neuman, 2009, p. 385).

Hornby (1995) explains vocabulary as "entire number of words in a language; vocabulary is a word that has meaning ". Whilen (1998) states "Vocabulary can be defined, as words in foreign languages that we teach. However, new vocabulary items could be more than one word itself: for example, mother-in-law and post office, which consists of three or two words but explains one plan. A useful agreement is to fulfill all way by talking as regards vocabulary "items" rather than "words". In

addition, Burns (1972) describes vocabulary as the supply of words used by a person, profession or class. According to Huckinand Coady (1998) who quote from Zimmerman""the center of language is vocabulary which is typical language learning and Furthermore". Diamond and Gutlohn (2006) in www.readingrockets.org state that vocabulary is the meaning of words and knowledge of words ".

Kamil and Hebert (2005: 3) defines vocabulary is learning about the meaning of words. The term vocabulary has various meanings. For example, some teachers take the term to avoid sight-word vocabulary, refer to students' prompt recognition of words in print; other teachers refer to their words significance vocabularies. As yet other teachers use the terms to imply listening vocabularies, or students' know of words that they hear in the spoken language. Value teachers use the expression academic vocabulary to mention to content-specific words. Within this section, we use the term vocabulary to refer to students' understanding of verbal and print words. Vocabularies incorporate conceptual knowledge of words that go well on the far side of a simple dictionary definition. Students' vocabulary knowledge is a process that happens over time as they relate to other words, and use the word consensus in the context of the sentence (Snow, Burn, & Burns, 2005 & Griffin s, 2005).

Ur (1994: 60) defines vocabulary as the words we teach in the foreign language. In addition, Brown (2001: 377) views vocabulary items as a boring list of words that must be defined and memorized by the students, lexical forms are seen in their central role in contextualized, meaningful language. Richard in Schmitt (1997: 241) also states that knowing a word meaning knowing how often it occurs, the company it keeps, its appropriateness in different situations, its syntactic behavior, its underlying form and derivations, its word associations, and its semantic features.

Hatch and Brown (1995: 1), say that vocabulary refers to a list or set of words for a particular language or a list or set of words that individual speakers of language might use. They also state that vocabulary is the only system involved of alphabetical order.

From the above definition, it can be deduced that vocabulary is a roster of words as a basic component of language acquisition that has expressions or forms and contains aspects, namely the use of words, meanings, forms (pronunciation and spelling) and vocabulary is the total number of words needed to express the definitions of the speaker and communicating ideas. That is the reason why it is important to learn vocabulary.

2.1.2 Kind of Vocabulary

Vocabulary is dividable into two kind by several experts, passive and active vocabulary. These 2 types of vocabulary are distinguished by Harmer (1991). Passive vocabulary is when students meet these words they will immediately understand and will recognize the vocabulary. What they might not say. While active vocabulary is a type of vocabulary taught by the teacher to students and students are expected to use it properly and correctly.

2.1.3 The importance of vocabulary

Vocabulary learning is very important for people who learn English both as foreign language and as second language. Tozcu and Coady (2004: 473) point out learning vocabulary is an important aspect of language two and foreign language acquisition and academic achievement and is vital to reading comprehension and proficiency, to which it is closely linked. Moreover, Heubener (1965: 88) states that learning of vocabulary is based on the formation of specific habits. Since this involves the association of symbols and their meaning, it is clear that an enrichment of the meaning of the word is as important as its frequent repetition. In addition, according to Grauberg (1997: 15) larners of a foreign language are highly expected to use the target language as effectively as possible in their daily conversation through oral and written production.

The modern approach to vocabulary teaching gives a balanced responsibility to the teacher and the learners on how to develop the word power of the target

language, so that they could use the language as effectively as possible. There is a relationship between words and entities that we will not talk about in our experience of the real world. This relation is termed as reference denotation. Furthermore, sense relation is helpful to distinguish the meaning of individual items interims of what they mean in the real words (denotation) from their meaning in relation to other words with in the vocabulary system of the language, MCcarthy(1990:16). Both of them contributed to characterizing the meaning of a lexical item but they are the fundamental relationship which most language teacher encounter with greatest frequency. In day to day teaching vocabulary, synonym, antonym and hyponym must be considered. These are relation of sameness, oppositeness and inclusion respectively. The followings are brief summary indicates what they mean and how they could be practiced in the classroom.

2.1.4 Teaching vocabulary

Teaching vocabulary is a pivotal aspect in learning a language as languages are based on words (Alqahtani, 2015). It is nearly unthinkable to learn a language without words; indeed communication among human beings based on words. Recent research show that Teaching vocabulary may be problematical because many teachers are not self-assured about the best praxis in vocabulary teaching and at times do not know where to commence to establish an instructional pressure on word learning (Blachowicz&Berne, 2008). They have problems of how to teach students in sequence to gain satisfactory outcome. The teachers must be anxious that teaching vocabulary is something fresh and distinct from student's native language. The teacher has to organize and discovery out the suitable techniques, which will be execute to the students. A good teacher should prepare himself or herself with sundry and up-to-date techniques. Teachers should be creative and be able to master the material in order to be understood by students, and build them interested. The teachers have to realize the trait of his\her learners. They more upstairs want to whip

up best method and compatible with material in order to obtain the goal of language teaching.

Commonly, there are few techniques concerning the teaching of' vocabulary. However, there are a several things that have to be keep in mind by extremely English teachers if they want to put on a new vocabulary or lexical items to their students. It means that the English teachers want students to look back on new vocabulary then it necessity to be learnt, adept, and mended to avoid students from forgetting. Techniques engage by teachers depend on some factors, such as time availability, the content, and its value for the learners (Singleton &Takač2008). This create teachers have some rationale in employing particular techniques in presenting vocabulary. In give one planned vocabulary item, the teacher usually concatenate more than one technique, moreover of employing one single technique. Teachers, furthermore, are prompt to employ planned vocabulary presentation as sundry as possible (Pinter, 2006).

2.1.5 Learning vocabulary

The type of activities focusing on vocabulary learning via mobile phone differs from one research project to another, depending on the level of language proficiency of the learners. Sending e-mail or SMS to students is a common way of learning new vocabulary based on the lessons covered in the classroom. In a study Kennedy and Levy gave the learners the option to receive messages covering known words in new contexts through SMS to their mobile phones amounting nine or ten messages per week. The results indicated that the messages were very helpful for learning vocabulary.

Similarly, Thornton and Hauser sent short mini-lessons for learning vocabulary through email to mobile phones of the students three times a day. They used new words in multiple contexts for the learners to infer the meaning. The results showed an improved range of scores on post-tests which were very encouraging. There are other strategies for learning vocabulary via mobile phones. Learners can be

provided with some tailored vocabulary practices based on activities performed in the classroom.

Learning vocabulary can also be accompanied by the pictorial annotation shown on learners' mobile devices for better understanding of new words. In a study conducted by Chen, et al., learners were provided with verbal as well as pictorial annotation for learning English vocabulary. Results of a post-test showed that the pictorial annotation assisted learners with lower verbal and higher visual ability to retain vocabulary.

2.2 MALL (Mobile Assisted Language learning)

2.2.1 The understanding of MALL

Definitions of MALL are offered in simpler forms such as by Sharples (2007, p. 24) who characterized MALL as the use of personal, portable devices that enable new ways of learning, emphasizing continuity or spontaneity of access and interaction across different contexts of use. by O'Malley et al. (2003) who described MALL as any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies. Kukulska-Hulme (2013, p. 3701) defined MALL as the use of "mobile technologies in language learning, especially in situations where device portability offers specific advantages." Palalas (2011, p. 76) put together and proposed a more complex definition of MALL: language learning enabled by the mobility of the learner and location, portability of handheld devices (Kukulska-Hulme, 2005), human interaction across multiple situations mediated by mobile technology within a networked community of practice (Sharples et al., 2007), embedded in contexts that are relevant and pedagogically sound (Laurillard, 2007), and informed by the real-life context in which the learning takes place.

For the theoretical, Mobile phones have been identified as potential platforms that can assist in the language teaching and learning process (Abdullah, Hussin, Asra & Zakaria, 2013; Demouy & Kukulska-Hulme, 2010; Jarvis & Achilleos, 2013).

MALL has been shown to be feasible for language learning. In most of the studies, in the past two decades on MALL, the vocabulary learning skill has been the target skill (Duman, Orhon, & Gedik, 2015; Kim & Kwon, 2012). Using mobile technology in this way not only takes instruction outside of the classroom, but it also brings language learning out into the real world.

Base on Thornton and Hauser (2005) they used MALL to improve their students 'vocabulary, they emailed their students three times a day and their research proved that the mall can improve students' vocabulary skills. Besides Derakhshan and kaivanpanah (2011) have also proven that MALL can develop the knowledge of university students, but they are not individually but use groups for communication. In other hand katemba (2019) in his research, he said that the mall can improve English vocabulary. To improve that he texted his students. In one study, Lu (2008) had students learn two sets of English vocabulary words either through mobile phones or by a paper-based format. Students who learned via SMS were found to understand more words than students presented with the paper-based tasks. Based on the research above, researchers will use MALL as an alternative to develop vocabulary of eighth graders by using the WhatsApp group.

Since the term mobile-assisted language learning (MALL) was first coined by Chinnery (2006), the use of mobile devices to support language learning has increased exponentially. Although, in general, MALL has been considered as a subset of both mobile Learning and computer-assisted language learning, Kukulska-Hulme and Shield (2008) note That MALL differs from CALL "in its use of personal, portable devices that enable new ways of learning, emphasizing continuity or spontaneity of access and interaction across different contexts of use" (p. 273). Language educators have been quick to seize the potentials of mobile devices for language learning. There have been more than 100 research studies on mobile assisted language learning (MALL).

The potential of mobile technology to assist language learning was discussed in numerous studies (Huang & Chiu, 2014). Kukulska-Hulme and Shield (2008)

stated that m-learning (mobile learning) can offer a language learning experience where students are able to enjoy learning anytime and anywhere. According to Chen, Hsieh and Kinshuk (2008), and Huang and Chiu (2014), m-learning can aid both formal learning in traditional classrooms and informal settings outside classes, thus increasing access to learning activities and engagement in learning tasks in and outside the classroom. Furthermore, mobile devices allow students to coordinate and interact more easily and thus enable them to carry out collaborative learning (Huang, Chiu, Liu, & Chen, 2011; Huang &Wu, 2011; Huang, Huang, Huang, & Lin, 2012).Buston (2014) reviewed current studies on MALL and found that these studies could be mainly categorized into six types: Mobile phone-based applications, PAD-based applications, media player applications, Web-based applications, smartphone applications, and phone-based communication applications. All these applications were used for both first language learning and second language learning.

The benefits of using MALL as follows. First, MALL enables students to more easily and more promptly access language learning materials and communicate with people at any time, from anywhere. Second, the nature of digital technology facilitates students' participation in both collaborative and individualized language learning activities synchronously and/or asynchronously allowing rapid development of speaking, listening, reading, and writing, skills. Third, mobile technology provides various resources and tools for language learning that encourage learners to be more motivated, autonomous, situated (site-specific), and socially interactive.

Numerous studies have reported on the use of mobile devices being used to develop Language skills in the last few decades. Thornton and Houser (2005) used mobile phones for English vocabulary lessons and asserted that, compared with paper, and computer-based lessons, mobile-learners perceived more and preferred learning with mobile phones. Levy and Kennedy (2005) also implemented short message service (SMS) for Italian vocabulary instruction to send word knowledge's and to request feedback. 94.4% students responded positively to the project.

Current research on MALL has examined the effects of mobile assisted learning on the development of different language skills. The majority of current MALL research focused on vocabulary learning via mobile device, taking up 45% of current MALL studies, and listening comprehension and speaking represented relatively moderate rate approximately 21 % in total, with the rest exploring the learning of Grammar, pronunciation, writing community building and culture (Burston, 2014).

Kennedy and Levy's (2008) research investigated the acceptability of a pushed mode of mobile phone operation; these authors sent short messages containing known words and new words mixed together. They found that the students appreciated the experience of reviewing learnt information and that the students found the message content often useful or enjoyable. Butgereit and Botha (2009) described a system that allows language teachers to create spelling lists or vocabulary lists in English and Afrikaans. The system then generates a fun mobile phone application using multiple texts-to-speech engines to encourage African pupils to practice spelling the words. Cavus and Ibrahim (2009) developed a system to send technical English language words together with the meanings in the form of SMSs.

In a study conducted in Iran, Derakhshan and kaivanpanah (2011) provided evidence for the effectiveness of SMS on university students' vocabulary learning. During the experiment which lasted for seven weeks, the participants were taught fifteen to twenty words each session and were asked to work in groups to talk about the words. Then the experimental group's participants were told to send a sentence for each word taught in class to the researcher and to three of their classmates. The participants of the control group were asked to write sentences and bring them to the class. The practice of producing output helped to make input comprehensible for students. According to cognitive psychologists, having opportunities to produce language can make input more comprehensible and learners can construct their own understanding of the language (Warschauer & Meskill, 2000).The result of the post-test showed that the experimental group had higher scores than the control group;

That is, they outperformed the control group in vocabulary retention. Also a delayed post-test was administered two weeks later to compare the long-term effect of mobile vocabulary learning. It was found that there was no significant difference between the two groups. This result is in line with Lu (2008) in that the participants, scores diminished in the delayed post-test and none reached the significance level. However, in both studies, the experimental group had more vocabulary gain compared to the control group.

2.2.2 WhatsApp

Hamad (2017) said that Whatsapp is the most common chatting application to use among the students, students do not need to have computer, it is attainable and it does not cost much. Moreover, Ashiyan & Salehi (2016) also stated that Whatsapp is a tool that can be used for different educational purposes. This is because Whatsapp sends message through Internet connection that can be in the form of text, audio files, pictures, videos as well as one's location. Many studies found out new ideas on language learning related to the use of Whatsapp. Hamad (2017) claims that Whatsapp can be a solution to the problem of teaching the meaningful and contextualized interaction in English teaching. The results of his research shows that Whatsapp can help the students to develop their listening skills, speaking skills, reading skills, writing skills as well as their vocabulary. Whatsapp was also claimed to help the students to learn from their peers' mistakes, to think in English, and to get immediate feedback from their teacher. Hani (2014) in his study: *The Impact of WhatsApp Group's Utilaizition of EFL Students' Vocabulary Writing Amelioration* showed that the findings imply a significant difference between the overall writing scores of the pretest and posttest of the participants who used journaling. Additionally, test of individual item scores shows that there are statistically significant developments in vocabulary choice and voice as two pivotal writing characteristics. The study can promote a favorable educational change by assisting

teachers grasp the possible merits of WhatsApp electronic dialogue journaling to develop the vocabulary word choice and voice writing skills of their students.

2.3 Scientific Approach

2.3.1 Definition of Scientific Approach

Scientific approach is defined as the process of finding out information in science, which involves testing the ideas by performing experiments and making decisions based on the result of analysis (Longman, 2014). It means that scientific approach is a body of techniques for investigating phenomena, acquiring new knowledge, and correcting and integrating previous knowledge. Tang et al. (2009) says that scientific approach has the characteristics of "doing science". This approach allows teachers to improve the process of learning by breaking the process down into steps or stages which contains detailed instructions for conducting student's learning. These two ideas became the basic of using scientific approach to be the basis for implementing the 2013curriculum.

According to Sani (2014) the scientific approach is closely related to the scientific method which should normally involve examination or observation needed for the formulation of hypotheses or data collection, while Hidayah (2013) mentioned that the learning with scientific approach is a scientific and inquiry approach, where students act directly either individually or in groups to explore the concept and principles during the learning activities and the teacher's task is to direct the learning process performed by the student and provide any corrections to the concepts and principles which the students have been obtained. According to Nur (2011) and Ibrahim (2010), the scientific approach or method is an approach or method to obtain the knowledge through two channels, namely mind (reason) path and observation. Based on the explanation above, it can be concluded that the scientific learning is the learning using the scientific method which involves the scientific processes through two channels, namely reason path and observation. The scientific approach allows teachers or curriculum developers to improve the learning process, namely by

breaking the process down into steps or stages in detail which contain any instructions for the students to carry out any learning activities (Varelas&Ford, 2008: 31). The required learning model is the one allowing the culture of scientific thinking skills, development of "sense of inquiry" and creative thinking abilities of learners.

2.3.2 The step of scientific Approach

In accordance with the standard competence of the 2013 curriculum, learning objectives should include the development of the realm of attitudes, knowledge, and skills. Attitudes are acquired through activity: accept, execute, respect, appreciate, and practice. Knowledge was gained through the activity of remember, understand, apply, analyze, evaluate, and create. Skills were acquired through activities of observing, asking, experimenting, reasoning, serving, and creating (Kemdikbud, 2013a). So, the teaching learning process in scientific approach referred to the process of observing, asking, reasoning, experimenting, and establishing network for all subjects.

Kemdikbud (2013) and Hosnan (2014) state that there are five steps of applying scientific approach in teaching learning process, they are observing, questioning, experimenting, associating, and communicating. The activities of each steps can be explained as follows:

a. Observing

There are two main activities that should be done to lead to the observing steps. First, the teachers give students a wide opportunity to do observation. The observation can be done through reading, listening, or seeing the object. Second, the teachers facilitate the students to do observation and train the students to observe the important things from the object. There are seven steps in observing process, (1) determining the object to be observed, (2) determining the purpose, (3) determining the way of observation, (4) limiting the object, (5) doing observation carefully, (6) reporting the result of observation, and (7) comprehending the result.In this research

the activities ware each week the teacher send the video about the material in the WA group, the student listening and watching the video, then understand the video

b. Questioning

Questioning functions to encourage and inspire learners to actively learn and develop questions of and for itself; to raise skills of students in talking, asking questions, and the other can answer logically, systematically using proper and correct grammar; to encourage students' participation in discussing, arguing, developing the ability to think and draw conclusions; and to build an attitude of openness to give and receive opinions or ideas, enrich vocabulary, as well as developing social tolerance in gregarious. The activity using MALL are the teacher give opportunity to the students to discuss and ask questions about the video. The teacher gives 3 kind of questions there are synonyms, antonyms and fill in the blank questions.

c. Experimenting

In experimenting, the steps are preparation, working, and follow up. There are five activities that can be done in experimenting, (1) grouping students into several groups, (2) asking students to discuss, (3) recording the finding, (4) supervising the learning process to ensure that all learners are actively involved in the discussion, and (5) directing the group that need help. There are the example of experimenting using MALL, the students answer the questions and submit their task to the teacher through whatsApp and the teacher correcting the task

d. Associating

Associating is the ability to analyze and associate the information occurred within the group. Associating is the process of analyzing the information to find the relationship between one information to other information and to find the patterns of interrelationship of the information so that one can make conclusion from the patterns found. Start from experimenting the activity doing in class, the teacher and the students discuss about the answer of questions.

e. Communicating

Communicating is the ability to conclude the facts that have been observed and experimented. There are four activities that can be conducted in communicating steps, (1) asking the students to read their work to the class, (2) asking each group to listen well and provide additional input with regard to the work of each group, (3) giving explanation after the group discussion ended, and (5) structuring tasks and providing opportunities to the students to demonstrate attitude, skills, and understanding of the substance of learning given. In the last activity the teacher gives feedback to the students by asking them to read the answer of the task in front of the class.

2.4 Previous Study

The researcher related this study with the previous research in order to avoid replication. As the first previous study, Qin Wenfeng (2015) said that "Learning Chinese vocabulary through Mobile-assisted activities". This research is mainly aimed to know whether MALL can increase students' vocabulary in University. This research used quasi-experimental design: experimental group would participate seamless learning activity with their mobile devices, while control group only attended regular classroom leaning without mobile devices. The findings demonstrated that the designed mobile assisted seamless learning activities had a positive effect on enhancing Chinese vocabulary learning for the beginner level learners, in addition to the enhancement of students' perception of usefulness of mobile devices for language learning. The similarities of the researcher research that the study uses MALL to increase students' vocabulary. The different is that the researcher focuses on Junior High School in eighth grade and uses WhatsApp as a media.

As the second study, Derakhshan and kaivanpanah (2011) provided evidence for the effectiveness of SMS on university students' vocabulary learning. During the experiment which lasted for seven weeks, the participants were taught fifteen to

twenty words each session and were asked to work in groups to talk about the words. Then the experimental group's participants were told to send a sentence for each word taught in class to the researcher and to three of their classmates. The participants of the control group were asked to write sentences and bring them to the class. The practice of producing output helped to make input comprehensible for students. The similarities of the researcher is the study uses MALL to improve students' vocabulary by grouping and sending the sentence in every students of group. The different is that the researcher focuses on Junior High School in eighth grade by using WhatsApp as a media and send a task individually in researcher WhataApp and not in a group and using scientific Approach because the school use K13 curriculum.

Katemba (2019) also conducted research "Students' Vocabulary Enhancement at Grade 10: A Comparative Study Using CALL & MALL in Indonesia". This research was a quantitative research experiment with a comparative design. In this study the MALL used SMS as a media. The findings revealed that there was no significant difference in vocabulary enhancement between students using CALL and those using MALL. The post-test results showed significant improvement in both groups, as both methods increased the students' vocabulary. Therefore, it can be concluded that CALL and MALL are both effective methods for teaching vocabulary. The different is that the study compare CALL and MALL by SMS in Senior high school grade ten but the researcher just used MALL by WhatsApp in Junior high school eighth grade.