

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

This chapter presents the related literature review about Information and Communication Technology (ICT), review on the English language learning, media for teaching and the previous study. This review on related literature is aimed to create the framework about the issues of the research.

#### **A. Information and Communication Technology (ICT)**

##### **1. Definition of Information and Communication Technology (ICT)**

ICT stands for Information and Communication Technology. ICT as a part of science and technology in general is all technologies associated with capturing, collecting, processing, storing, distributing, and presenting information (Asmani, 2011: 100).

Information and Communication Technology (ICT) has three main aspect, there are information, communication and technology. Literally the term of ICT (Information and Communication Technology) based on Jupri (2011) can be described in some meaning as follow:

1. Information is knowledge that can be gained through learning, study, experience, or instruction.
2. Communication is a process to send information (message, idea, and suggestion) from one person to another person so they are affecting each other.

3. Information Technology (IT) literally is composed of the word “information” and “technology”. Simply, information technology is a human manipulation of the information distribution process from sender to receiver, so the distribution can be faster, a wider distribution, and for longer storage.

According to Florian & Hegarty (2004: 2), Information and Communication Technology (ICT) is a useful phrase for summarizing the myriad ways in which microchip technology has permeated many aspects of everyday life, in education, leisure, work and the home. In short, ICT is very useful for human everyday life and give many benefit which help people for doing everything in properly.

Sawyer and Williams (2005: 3) stated that Information Technology- ‘InfoTech’- technology that merges computing with high-speed communications links carrying data, sound, and video. Examples of information technology include personal computers, of course, but also new forms of telephone, televisions, and various handled devices. While Supriyanto (2005: 6) stated that Information Technology or IT is a technology that utilize computer as a primary device for processing data into useful information. Asmani (2011: 97) stated that Information Technology involve all things related to the process, using as a tool, manipulation, and management of information.

Furthermore, Asmani (2011: 100) stated that Information and Communication Technology (ICT) in general is all technologies related to the retrieval, collection, processing, storage, distribution and presentation of information. Regarding with it, Sawyer and Williams (2005: 3) stated that ICT consists of electromagnetic devices and systems for communicating over long distances. In line with Kennewel in Florian and Hegarty (2004: 129), that ICT refers to the set of tools used to process and communicate information. Then, Sannai in Asmani (2011: 100) say that Information and Communication Technology (ICT) is a media or tool in acquiring knowledge from a person to another. Moreover, Hidayat et al (2004: 43) stated that ICT is an inseparable combination containing broad understanding that is any activity related to the process, manipulation, management, and transfer of information among media. Then, Ningrum (2012: 117) stated that ICT-enhanced learning mobilizes tools for examination, calculation and analysis of information, thus providing a platform for student inquiry, analysis, and construction of new information.

Based on some explanation in literature above. It can be conclude that Information and Communication Technology (ICT) is the tool or device that use for transferring, collecting, processing, distributing the information or news that very useful for everyday human life to help them face the world with new knowledge and shared it to others.

## **2. Information and Communication Technology (ICT) in Education**

As technology offers new ways of communicating it is clear that schools must incorporate these ways into their social, communicative practice (Adams & Brindley, 2007: 2). To bring the innovation in education sector, technology stands for it. Then, teacher teach not merely used the textbook or with an old media, rather use technology to make the student also more interest with the materials of the lesson.

According to Assar et al (2010: 151) education involves transmission of knowledge, accurate thinking, skills, habits and shared value. Moreover, the adoption of ICT by education has often been seen as a way to contribute to educational change (enable reform or better management of education systems), better prepare students for the information age, improve learning outcomes and the skills of learners and prepare them for the information society (Assar et al, 2010: 151).

Teachers need to learn to use computer technology for constructing and implementing materials for teaching and assessing English, and they need to engage in innovative teaching and assessments through the use of technology (Chappel, 2003: 31). A lot of teacher may implementing ICT for teaching and learning process, because it all depend on the technology which supported and the ability in operating ICT.

Dudeney & Hockly (2007: 7) stated that although the use of ICT by language teachers is still not widespread, the use of technology in the classroom is becoming increasingly important, and it will become a normal

part of English Language Teaching practice in the coming years. There are many reasons for this:

- Internet access – either in private homes, or at **Internet cafes** – is becoming increasingly available to learners.
- Younger learners are growing up with technology, and it is natural and integrated part of their lives. For these learners the use of technology is a way to bring the outside world into the classroom. And some of these younger learners will in turn become teachers themselves.
- English, as an international language, is being used in technologically mediated contexts.
- Technology, especially the Internet, presents us with new opportunities for authentic tasks and materials, as well as access to a wealth of ready-made ELT materials.
- The Internet offers excellent opportunities for collaboration and communication between learners who are geographically dispersed.
- Technology is offered with published materials such as course books and resource books for teachers.
- Learners increasingly expect language schools to integrate technology into teaching.
- Technology offers new ways for practicing language and assessing performance.

- Technology is becoming increasingly mobile. It can be used not only in the classroom, lecture hall, computer room or self-access centre, it can also be used at home, on the way to school and in Internet cafes.
- Using a range of ICT tools can give learners exposure to and practice in all of the four main language skills – speaking, listening, writing and reading.

In contrary, Farr (2016: 60) stated that the use of technology should never be the goal in and of itself, but rather one tool for helping language learners to use the target language in culturally appropriate ways to accomplish authentic tasks. Technology give a good impact, both for teacher in giving materials and for learner who get the material by means of technology which can make the learner be more interest in it. But, the technology used here only be as the tool which give an aid for teacher and student to reach the purpose of learning.

## **B. Implementation of Information and Communication Technology (ICT) in Education as Learning Media**

Information and Communication Technology (ICT) consists of every technology that can be used for storing, processing, displaying, and distributing information for the process of communication. The technology based on the thesis written by Azis (2015: 33) are as follows:

1. Computer Technology, either in the form of hardware or software as the supporting tool. Inside of that is processor, hard disk, compact disk (CD), Digital Versatile Disc (DVD), flash disk, memory, memory card), recorder,

input (keyboard, mouse, scanner, camera, etc.) and output (monitor screen, printer, Liquid Crystal Display (LCD), speaker, etc.).

2. Multimedia Technology, consist of digital camera, video camera, sound player, video player, etc.
3. Telecommunication Technology, telephone, cellular phone, facsimile.
4. Computer Network Technology, either hardware (Local Area Network (LAN), internet, Wireless Fidelity (Wi-Fi), etc.), or software as supporting tools (application system) such as word electric browser (web), e-mail, Hyper Text Markup Language (HTML), java, Hypertext Preprocessor (PHP), etc.

**Table I**

**Information and Communication Technology for Learning Media**

	<b>Technology as a Media</b>	<b>Device</b>
<b>ICT</b>	Computer Technology	Hardware and Software: 1. Data storage media (Hard disk, CD, flash disk, memory card, etc.) 2. Recorder media 3. Input media (keyboard, mouse, scanner, camera, etc.) 4. Output media (monitor screen, printer, Liquid Crystal Display (LCD), speaker, OHP).
	Multimedia Technology	1. Digital camera 2. Video camera 3. Sound player 4. Video player, etc.
	Telecommunication Technology	1. Telephone 2. Cellular phone 3. Facsimile 4. Smartphone, etc.

	Computer Network Technology	<ol style="list-style-type: none"> <li>1. Hardware: <ol style="list-style-type: none"> <li>a. Local Area Network (LAN)</li> <li>b. Internet</li> <li>c. Wireless Fidelity (Wi-Fi)</li> <li>d. etc.</li> </ol> </li> <li>2. Software: <ol style="list-style-type: none"> <li>a. Network application</li> <li>b. World wide web browser (web)</li> <li>c. E-mail</li> <li>d. Hyper Text Markup Language (HTML)</li> <li>e. Java</li> <li>f. Hypertext Preprocessor (PHP).</li> </ol> </li> </ol>
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Table 2.1 : Information and Communication Technology as a learning media.

A medium (plural, media) is a channel of communication. The word derived from the Latin word meaning “between”, the term refers to anything that carries information between a sources and receiver. Moreover, the purpose of media is to facilitate communication (Smaldino et al, 2002: 9).

Furthermore, as the purpose of media that can serve many roles in learning, the instruction may be dependent on the presence of teacher, and there are several roles of media as stated by Smaldino (2002: 11):

### 1. **Instructor-Directed Media**

The most common use of media in an instructional situation is for supplemental support of the “live” instructor in the classroom. Certainly, properly designed instructional media can enhance and promote learning and support teacher-based instruction. Even though the effectiveness depends on the instructor.



## **2. Instructor-Independent Instructor**

Media can also be used effectively in formal education situations where a teacher is not available or is working with other students. Cooperative learning is closely related to self-instruction. As students work together in a small group the teacher can come and teach one by one student on that small group. The use of self-instructional materials allows teachers to spend more of their time diagnosing and correcting student problems, consulting with individual students, and teaching one on one and in small groups. Shortly, media only making a teacher more creative to teach, the process and the implementation depend on the teacher itself.

## **3. Media portfolios**

A portfolio is a collection of students' work that illustrates growth over a period of time. Portfolio often include such artifacts as student-produces illustrated books, videos, and audiovisual presentation. Students' abilities to use multimedia research sources and to prepare mediated presentations that summarize their own understanding of a thematic topic are central to the schooling experience under the concept of media portfolio.

## **4. Thematic instruction**

It all begin the unit with a "shared experience" by having all students read the same book, view a videotape, participate in a simulation, visit a museum, or hear a guest speaker. Then moved to "shared expertise," through which students cooperate it gather data and information, analyze

their findings, draw conclusions, prepare a group report, and share their results in a mediated presentation.

#### **5. Distance education**

Distance education is rapidly developing approach to instruction worldwide. The media use for distance education may be primarily print (books and paper-and-pencil tests), as in traditional correspondence courses. Or it might involve a variety of media, including audio-cassettes, videotapes, videodiscs, and computer courseware sent to individual students. In addition, radio, broadcast television, and teleconferences are utilized for “live” distance education.

#### **6. Education for Exceptional Students**

Media play an important role in the education of students with exceptionalities. The students here means the students which need more treatment than others, or those who were disabilities. The media used has to be more special that make the student with such disabilities can explore themselves with an aid of ICT media.

As stated above, that media is anything that carries information between a sources and receiver. The media also play an important role for teaching and learning process in the class. Either used for teaching English with all four basic skill (speaking, listening, writing, reading) or for teaching component in English learning (grammar, vocabulary). The media give many benefit for teacher to teach their students, especially media used in here is ICT. The newer innovation for teaching and have many advantages for teacher itself.

Based on Adams et al (2007: 23), in writing skill teacher can use the interactive whiteboard in the classroom. Interactive whiteboard is touch-sensitive whiteboard connected to a digital projector and a computer. The screen of the computer is projected into this whiteboard and, either by using a special pen or even fingers, images and text can be manipulated without having to go the computer. Even so, interactive whiteboard should engage with teacher who have much confident to operate and the students need to be engaged with the task and forward planning needs to take place. Several activities can conduct using interactive whiteboard. For example, giving the students a series of headings, words, topics or phrases and then ask them to structure these ideas, through the use of the whiteboard, into a piece of writing.

In reading skill based on Adams (2007: 39) there are thinking skills and mind mapping. In thinking skill, ICT enables students to identify these features in 'text combing': the systematic identification of features for analysis. This is easily achieved by students representing the features on screen through changing font type or size, by changing color of text and so forth, and then examining in detail how these highlighted features allow you to understand how the poet has set out to make the poem work. Another is mind mapping, ICT can motivate the students to explore and present their reactions to texts through this exploratory, summarizing and concentration-enhancing approach.

Another opinion comes from Hockly & Dudeney (2008) there are several strategies that used to teach student by ICT as follows:

1. Word processor in the classroom

Microsoft word can be use for teacher to prepare teaching and learning process by creating something new. It can inserted several figure that provided to make the display of text in microsoft word be more innovative. For example, by inserting image and links. Image can be inserted in order to brighten up the worksheet also make students more interest with image that relate with text. Another is link, link here can be inserted in worksheet in order to get further information for students to learn more about the material given.

2. Using website

Website can be useful for teacher as a source for materials. There are many of website could be find and all of them can be used for teaching as a source. Before it, it should have several evaluation whether the web is good or not. The first is accuracy, about writer also content of website which is reliable and factually correct or not. The second is currency, about the newest information updated by website. The third is content, the content is interesting and stimulating or not. The last is functionality. About the site whether the site work well or not. All those evaluation just to make sure that students have best preparation even it came from internet.

3. Internet-based project work

Internet provide many kind of information. This could be one of the source for teachers to have a project with the main sources is internet. For

example is webquests. Webquest are mini-project in which a large percentage of the input and material is supplied from the internet. Webquests can be teacher-made or learner-made, depending on the learning activity the teacher decide on.

#### 4. E-mail

E-mail is one of the most used and useful Information and Communication and Technology (ICT) tools around today. Moreover, e-mail have many benefit for teacher. Some of them are, teacher can submit classwork as attachment by email, learner also can submit the assignment by email.

#### 5. Chat

The use of chat more about using chat as a media for practice. For example, teacher want to give a speaking practice. Teacher can use chat to practice with students in the weekend (in the form of voice chat). Chat can be classified as synchronous (in real time). So, even teacher and students not in the same place, students still have a time for learning together with teacher by development of technology used here is chat.

#### 6. Blogs, wikis and podcasts

As stated by Hockly & Dudeney (2008: 86), a blog is essentially a web page with regular diary or journal entries. A wiki is a collaborative web space, consisting of a number of pages that can be edited by any users. While a podcast is an audio and/or video file that is 'broadcast' via the Internet and can be downloaded to a computer or mobile device such as an MP3 player for listening/viewing. All those social software can be used to

connect learners to other communities of learner, for example to a class in another country.

#### 7. Online reference tools

There are several online reference tools we could find which is dictionaries and thesauruses, concordancers and corpuses for language analysis, translator for language analysis, and encyclopedia for research and project work. It can take an example for dictionary and thesauruses. Dictionary is very useful for every level of english learner. Moreover online dictionaries here have several features that can be use and make students be more understand, such translation features and audio recordings (sounds of the words). While, thesauruses are more suited for intermediate and advanced levels. Because, thesauruses can help for writing project and help much for creative writing.

#### 8. Technology base Courseware

The technology are CD-ROMs and DVDs, computer based testing, electronic portfolios and interactive whiteboard. All those are the technology that can be used and very useful for both teacher and learner. For example, electronic portfolios. Portfolio can described as a collection of a learner's work, usually in the form of paper. While electronic portfolios can simply define as the work of students presented in electronic format. Thus, it can included in the form of electronic media such as video, audio, blogs or website, as well as documents. This way could give more opportunity for students to have variation on students work, not only

about the content but also the features students inserted inside the portfolio.

#### 9. E-learning

E-learning can simply define as the teaching and learning process that can be held synchronous or asynchronous, also with the help of technology.

Teacher can use the help of technology by making an online class.

### **C. The Nature of English Language Teaching (ELT)**

#### **1. The Meaning of Language Learning**

According to Widdowson (1978: 1) the aims of a language teaching course are very often defined with reference to the four “language skills”: understanding speech, speaking, reading, and writing. Moreover, Haycraft (1978:18) stated that it is important to distinguish between them as they demand varied abilities, particularly as English pronunciation is so different from its written form. Thus giving a talk requires different abilities to understanding a talk given by someone else, to presenting the same information in written form – or to reading what someone else has written on the subject. Furthermore, Widdowson (1978: 74) say that foreign language learning not as the acquisition of abilities which are new but as the transference of the abilities that have already been acquired into a different means of expression.

Furthermore, the definition of learning as stated by Smaldino et al (2002: 6) is the development of new knowledge, skills, or attitudes as an

individual interacts with information and the environment. The process of learning include many aspect that must be prepared in a proper way. Because, the learning process involves the selection, arrangement, and delivery of information in an appropriate environment and the way learners interact with that information.

Learning has their own theory both from psychological perspective or philosophical. The theory that had been familiar about is theory behaviorism, cognitive, and constructivist. Skinner is probably the best known psychologist in the behaviorist tradition. The definition of behaviorism as stated by Pritchard (2009: 6) is a theory of learning focusing on observable behaviors and discounting any mental activity. Learning is defined simply as the acquisition of new behavior.

While cognitive, as stated by Pritchard (2009:17) is about how people learn, remember and interact, often with a strong emphasis on mental process and often with an emphasis on modern technologies. Also can be defined as a mental processes such as learning, perceiving, remembering, using languages, reasoning and solving problem. The theory of cognitivist emphasized on the process of learners gain the information and the course in order to organize, storing, and then finding the relation between new knowledge and the knowledge that had been existed.

Theory of constructivism as stated by Pritchard (2009: 17) is learning takes place when new information is built into and added onto an individual's current structure of knowledge, understanding and skills. We learn best when



we actively construct our own understanding. Jean Piaget is well-known person who is considered as the psychologist whose introduces constructivism theory.

## **2. The Meaning of Language Teaching**

According to Brown (2000: 7), teaching is showing or helping someone to learn how to do something, giving instructions, guiding in the study of something, providing with knowledge, causing to know or understand. Then, because teaching cannot be defined apart from learning the meaning of teaching also can be defined as guiding and facilitating learning, enabling the learner to learn, setting the conditions for learning. Regarding with it, Widdowson (1978: 2) stated that the aims of a language teaching course are very often defined with reference to the four ‘language skills’: understanding speech, speaking, reading and writing.

Moreover, in English teaching, there are several method that can be used in teaching and learning process in the class. According to Patel & Jain (2008: 71), methodology is systematic and scientific way of teaching any subject. It guides teacher “How to teach” and “How his teaching may be effective”. Method also be defined as: “The process of planning, selection and grading language materials and items, technique of teaching, etc.” Anthony (1963) as cited by Patel and Jain (2008: 71) defines the term ‘Method’ as: “It is a particular trick, strategy or contrivance used to accomplish an immediate objective. The types of method that must be popular are grammar translation

method, direct method, silent way, suggestopedia, audio lingual method, Community Language Learning, Communicative Language Teaching, natural approach, Cooperative Language Learning, Content Based Instruction and Task based Language Teaching.

### **3. Approaches in English Language Teaching (ELT)**

Approach refer to theories about the nature of language and language learning that serve as the source of practices and principles in language teaching (Richards & Rodgers, 1986: 16). Moreover, an approach describes how language is used and how its constituent part interlock – in other words it offers a model of language competence. An approach describes how people acquire their knowledge of the language and makes statements about the conditions which will promote successful language learning (Harmer: 78).

According to Patel & Jain (2008: 89), there are two approach used in English Language Teaching (ELT) as follows:

#### **a. Structural Approach**

The structural approach means the arrangement of words in such a way as to form a suitable pattern of sentence. This approach tells about the structure of language. It is based on behaviorist theory, which is have to understand the pattern and structure of the language.

#### **b. Communicative Approach**

The communicative approach is a learner centered approach. This approach gives the learner not only grammatical competence but also a

social skill as to what to say. The goal of communicative approach is to make learners communicatively competency. In this approach, the learner be more active and curious with the material of the lesson, while the teacher only as facilitator of the learner who guide the learner when they need an aid. There are several competences that the learner should have it, which is grammatical competences, speech competences, technical competences and socio-linguistic competences.

#### **D. Previous Study**

Studies under the same topic are conducted by some researchers.

1. The first, the study about ICT written by students of English Department from State Islamic Institute of Tulungagung, entitled "*ICT Based English Teaching in SMPN 1 Trenggalek*" by Hanik Anwariana (2013). The research design of this study was descriptive design by using qualitative approach. The result showed that there are three kinds of preparations done by English teacher before teaching English by using ICT. The first is pre-teaching by preparing lesson plan. The second is whilst teaching preparation, such as preparing the materials and tools use for learning process. The last preparation is post teaching preparation such as giving a test and for assessment. The implementation of teaching English by using ICT is divided into three section activities. Those are opening activity, main activity and closing activity.

2. Another study was written by students of English Department from State Islamic Institute of Tulungagung, entitled "*Using ICT in English Instruction at MTs Negeri Tulungagung*" by Yerri Alfiah (2013). The research conducted by using descriptive qualitative research. The results of this research were, (1) The ICT used can be classified into two groups; ICT as a learning media and ICT as a learning source. (2) There are four focuses for the students' responses, those are the ease and the difficulty in the using of ICT in English instruction, can or cannot the teachers use the ICT in English instruction, also students' suggestion for the teachers in using ICT in English instruction.
3. The other research about ICT conducted again by the students of English Department from State Islamic Institute of Tulungagung, entitled "*The Implementation of ICT in English Instruction by Exemplary Teachers*" by Onisia Melda Yuana (2016). The research design of this study was descriptive design by using qualitative approach. The result showed that is the exemplary teachers use of ICT in English instruction at MTsN Aryojeding, SMPN 1 Ngantru and SMPN 2 Sumbergempol, the conclusion is that ICT used by exemplary teachers here are laptop, LCD digital projector, flash disk, CDs, audio sound system, software like Microsoft Office Power Point and Microsoft Word, the internet, also digital dictionary in the laptop, are conditional.
4. The next research was written by students of English Department from Sebelas Maret University, entitled "*The Implementation of ICT Based*

*Learning in English Teaching and Learning Process at SMP RSBI*” by Dinar Marfu’ah (2012). The method used in this research is qualitative method. The result showed that the school that have been observed applied ICT based learning in its learning design, especially in the English teaching and learning process which covers the planning, implementation and evaluation stages.

In addition, this research is conducted based on the researcher’s interest about the use of ICT for teaching and learning proces at State Senior High School 1 Ngunut. Citation used for some particular term is a must to write this research study. But all those are used to support the framework of the issues. This research is purely design and made by the researcher without any kind of plagiarism inside.