

CHAPTER I

INTRODUCTION

This chapter discusses about the introduction of the research. It consist of background of the problem, the setting of the problems, the limitation of the problems, the formulation of the problem, purposes of the research. This research also discusses about significance of the research and definition of key terms.

A. Background of The Research

Teaching is learning process between teacher and students in classroom to talking about learning subject. Teaching and learning is an important role in developing the quality of educations, especially at schools. Teacher is one of the components or main factor who many of influences the result of teaching learning process.

Now, the world society life in an era of knowledge based society. In addition, the world has been in the information and communication era. The information era is characterized by the rapid development of information and communication technology, especially radio, television, computer, and internet. According to Purwanto et al, (2005: 10), information technology is now undergoing tremendous developments, such as *electronic portfolios*, games and computer simulations, digital books (*e-books*), *wireless* technology, and *mobile computing*.

The rapid development of ICT has influenced various aspects of human life, including education. The world of education in Indonesia is very important,

because by using technology can get a variety of conveniences who wants to. Computer, internet, broadcasting technologies (radio and television), telephones, and wireless communication are examples of these technologies.

Now, indispensable and the importance of the use of ICT (Information and Communications Technologies) in learning activities. In Indonesia, especially in Rokan Hulu Regency many teachers use ICT in the school. For example, the teacher use ICT to teach English by using the projector, laptop or computer and many teacher searching source of learning in internet. Learning activities are the most basic activities in the entire educational process. This means that the achievement of educational goals depends largely on how the learning process is designed and executed professionally. Each learning activity always involves two active actors, there are teachers and students. Teachers are the creators of student learning conditions that are designed intentionally, systematically, and sustainably. While students as learners are those who enjoy the learning conditions that create by teacher. In other words for teacher education and development is very important for the successful implementation of ICT based curriculum. Use technology to teach English, it will make good response by students, because students will more understand and focus on learning English.

Based on observations with the English teacher of SMAN 1 Rambah Hilir on 9 may 2018, which the teacher states that all teacher of SMAN 1 Rambah Hilir, in general use ICT media in the implementation of learning. This is based on the curriculum used. Because the 2013 curriculum implies that a teacher should be able to use the ICT media creatively and innovatively. The

availability of learning support tools in SMAN 1 Rambah Hilir. However, in English lesson many activities that have relevance to ICT which especially computer application, computer as media used to assist learners in learning and using a computer either already connected to the internet network or not. Besides that there are many other things related to teaching based ICT in SMAN 1 Rambah Hilir.

Based on the explanation above, the researcher want to know more information about the implementation of ICT in teaching English. So, in this research, the researcher will do a research with the title is **“The Implementation of Information and communication technology (ICT) in teaching English at SMAN 1 Rambah Hilir”**.

B. Setting of The Research

Based on the explanation described in background of the research in implementation Information and Communication Technology in teaching English that had found, the researcher will analyse in implementation ICT in teaching English at SMAN 1 Rambah Hilir.

C. Limitation of The Research

Based on the setting of the research above, the researcher limits the research to analyzing the implementation Information and Communication Technology (ICT) in teaching English at SMAN 1 Rambah Hilir.

D. Formulation of The Research

Based on the limitation of the research above, The formulation of the research in this research can be formulated as follow:

1. How the implementation of information and communication technology (ICT) in teaching English at SMAN 1 Rambah Hilir?
2. What are Information and Communication Technology (ICT) tools used by teachers in teaching English at SMAN 1 Rambah Hilir?''.

E. Purpose of The Research

Based on the formulation of the research above, The purposes of this research are as follow :

1. To describe how The implementation of Information and Communication Technology (ICT) at SMAN 1 Rambah Hilir
2. To describe Information and Communication Technology (ICT) tools use in teaching English at SMAN 1 Rambah Hilir.

F. The Significance of The Research

The research about in implementation information and communication technology (ICT) in teaching English hopefully will be useful to give some contributions to implementation ICT.

- a. For the teacher

They can contribute their suggestions and feedback to enhance the role teaching English in implementing the information and communication technology (ICT).

- b. For the researcher

This research can add information, insight and add knowledge of information and communication technology (ICT) development. Thus, as a English teacher candidates ready carry out in accordance with needs.

- c. For the readers

It can inform them about in implementation of ICT in teaching English.

G. The Definition of The Key Terms

- a. ICT

Daniel et.al (2004) defines that ICT is a technology used to communicate and create, manage and distribute information. It means, information and communication technologies is a very important tool to help us access various kinds of knowledge.

- b. Teaching English

According to N.L, Gage (1962): “ teaching is a form of interpersonal influences aimed at changing the behaviour potential of another person. In this research teaching English is the process learning between teacher and Students in classroom to talking about learning English.

- c. Implementation

According to Susilo (2007: 174) implementation is an application of ideas, concepts, policies, or innovations in a practical action so give impact, either in the form of knowledge change, skill as well as values, and attitudes. In this research, implementation is an action that leads to goals proposed by a person, group or government to realize the desired goals.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter discusses about review of related literatures. It consists of review of related theories, review of related findings, conceptual framework. In review of related theories, it discuss about ICT and Implementation.

2.1.Review of Related Theories

2.1.1. Nature of ICT

a. Definition of ICT

To get more details about the concept of Information and Communication Technology (ICT), the researcher tries to discuss some definition of Information and Communication Technology (ICT) from some expert.

According to Khirwadkar (2007), ICTs are a blend of modern technologies (computer, internet, digital video etc.) and traditional technologies (overhead projectors, blackboards and books). Improving students' absorption by using ICT technology through integration the curriculum has a significant positive impact, especially in the areas of Knowledge, Understanding, Practical Skills, Presentation skills in various subjects such as mathematics, science, English and social studies. UNESCO (2004) in Paryanti states that Information and Communication Technology (ICT) is the technology that used to communicate, manage and distributed information.

ICT is the all of form technology that supports the delivery of information and the implementation of unidirectional, two-way, or even more communications. The components of ICT as follows : radio, television, to the internet and even conferences via mobile phone screens (Teguh Santoso, 2007).

Shariful & nazmul islam (2006 : 810) states that ICT is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information. Based on the explanation of some theories above, some expert proposes the definition of ICT in same ways. They explain that ICT is technology that supports activities involving information.

b. Aspect of ICT

According to Warsita (2008:134) Information and Communication Technology (ICT) is combine of two aspect. The combine of two aspect there are information technology (IT) and communication technology (CT). as follows explain about information technology and communication technology :

1. Information technology (IT)

Information technology is a facilities and infrastructure (hardware, software, use ware) system and methods for obtaining, transmitting, processing, interpreting, storing, organizing and using data meaningfully. Therefore, information technology provides so much convenience in managing information in the sense of storing, retrieving, and updating information.

According to Wardiana (2002) in Warsita (2008:135) information technology is a technology used to process, obtain, compile, store, manipulate data in various ways to produce quality information. According to Indrajit (2004) in warsita (2008:136), there are 7 functions of information technology in

education, namely: 1) as a warehouse of knowledge, 2) as learning aids, 3) as an educational facility, 4) as a standard of competence, 5) as administrative support, 6) aids school management, and 7) as an educational infrastructure.

2. Communication technology

Communication technology is the facilities and infrastructure of institutional structures and social values that are collected, stored, processed and exchanged so as to allow for perceptual or action . According to Miarso (2005) in warsita (2008:112) the definition of communication technology is a process includes the following: 1) the process must be rational and efficient, 2) must be system, because everything will have impact and influenced by other things in the environment, 3) should take into account the variables that may be influential in determining the procedure of action to make the process effective, efficient and harmonious, 4) engage stakeholders, 5) lead to joint problem solving, 6) integrate principles, concepts and ideas , 7) consider various environments (local, national, and international) to achieve the objectives.

In connection with the use of communication technology for education, Ashby (1972) in warsita (2008:112) states that the world of education has entered its fifth revolution. The *first* revolution, occurs when people give up their children's education to a teacher. The *second* revolution, occurs when the use of writing for learning purposes. The *third* revolution occurred along with the invention of the printing press so that learning materials can be presented through print media. The *fourth* revolution occurred when the use of electronic devices such as radio and television for the equalization and improvement of education

quality. The *fifth* revolution, as it is today, with the use of cutting-edge information and communication technology, especially computers and the Internet for education.

c. ICT Tools

According to shariful and nazmul (2006 : 810) The tools of Information and Communication Technology based on categorized the component information and communication technology which frequently use in information center are as follows:

1. Computer technologies

the dramatic development in the information transmission process in every field of human endeavor has been made by the widespread use of computer technology that can further be divided into following categories: workstations, mainframe computer, super computer, mini computers, e-book, CD-ROM technology.

2. Communication technologies

communication or communication technologies are used to transmit information in the form of signals between remote locations, using electrical or electromagnetic comprise the following: audio technology, audio-visual technology, motion picture, TV, CATV, videodisc, videotext, teletext, telephone, cell phone or mobile phonefax, e-mail, voice mail, teleconference, satellite technology, internet, and network technology (shariful nazmul : 2006 811).

d. Using ICT in teaching English

According to Samuel & pulizala (2014:282) Modern technology allows the teacher to do the role of a facilitator and a guide, while students take responsibility of learning on their own. A teacher can use technological sources such as videos, PPT's and interactive virtual labs etc in a classroom. The teacher should also learn to make best use of the modern tools.

For example : PowerPoint Presentation can be use to teach new ideas and concept to students. It also helps students in enhancing their speaking and listening skill. And use of LCD Projector in a classroom is beneficial for both teachers and students, it enables teachers to create bulleted PPT's notes for the class. It is also helpful in teaching language through images. And then the World Wide Web has become inevitable in the modern era of technology, there are a number of websites on English language teaching and learning which may be used in a classroom. They help in improving one's speaking and listening skills at the click of a mouse. Articles, journals and newsletters are available on these websites (Samuel & pulizala : 2014 : 283). So, in English lesson many activities that have relevance to ICT which especially computer application. Computer as media used to assist learners in learning. Skills in English like will be more interesting when using ICT, especially using a computer either already connected to the internet network or not.

e. Advantages of ICT in Language Learning

Create opportunities for people to communicate world-wide and allows for a learner-centred approach in the teaching, in the English language classroom ICT address key outcomes of the syllables, and allows students to become competent users as well as consumers in English. ICT gives students the opportunity to easily share response, compositions and publication as well as the language avenue to explore the language of texts more creatively and to develop as efficient and fluent speakers, great writers and focused readers for an ever widening range of purposes and audiences (Ntongieh 2006 : 27).

According to Ntongieh (2006 : 29) the advantages that can be highlighted there were 12 advantages:

1) Novelty and creativity: Integrating information and communication technology in teaching, the teacher can deal with each topic using different material in a novel and creative manner unlike teaching with textbooks. For example, teaching through slide shows, pictures or movies adds innovation to the traditional lecture method.

2) Appropriacy and reliability is another feature of ICT tools. One such tool is the World Wide Web. It is a virtual resource bank and library. The only thing the user needs to do is evaluate the material found in terms of how useful it is.

3) One of the advantages of using ICT tools in ELT is the increased motivation that the learners experience. Working through online learning sources, CD-ROM along with course book offers variety and a change from working through the same old exercise book. Working through a mouse and keyboard is motivating than writing. Language games are appealing to both young learners as well as to

teenagers. Further motivating factor is that the learners can work at own pace. This definitely motivates the students for language learning making it interesting.

4) The electronic materials can be used flexibly in terms of level. Different sources for example CD-ROMs can be used considering different levels of the learners. Another way in which these materials can be made flexible is that they can be combined with paper based materials in order to meet the language needs of a particular group of learners.

Further the teacher can create their own interactive material presenting varied opportunities for the learners. Different exercises can be created with great ease using vocabulary and also giving feedback on learners' mistakes.

5) ICTs can control presentations in the class which is not the case while using the book, materials, text with graphics and pictures. That means changes can be made then and there in the classroom; for example while using IWB, changes can be made in the class itself.

6) Through ICTs a teacher can provide the students rich sources of authentic materials with attractive and friendly interface; vivid pictures and pleasant sounds which arouse students' interest in learning English.

7) One can get pictures, images and films on different software and sites like Google or Yahoo. Viewing films and videos of plays, sketches of the characters or incidents that we can find on Google images or Yahoo helps the teacher to initiate a lesson on poems or novels which gives the students a clear and realistic idea of the text.

8) Asynchronous learning is possible with ICT sources; for instance, ICTs such as teleconferencing, emailing, video lectures and such virtual platform enable learners to receive lectures of teachers and experts those are geographically dispersed.

9) Different tools that are computer-based, skill-based or communicative in nature help learners to work on basic language skills and communication skills.

10) Computer programs like word processor, web browsers, and page layouts can be adapted by teachers to suit the needs of the students and level of language understanding. These programs are learner friendly.

a. Word processors provide fast feedback to students' answers. It not only spots mistakes but also corrects them, even giving the appropriate explanation.

b. Word processors and desktop publishing help learners develop their skills in drafting and editing their written documents.

c. Word processors develop in the learners writing skills and help in creative writing. For example the learners can be encouraged to write class newsletters, reports and other academic papers.

d. The principal use of presentation software is making presentations. Diagrams or exponents that are usually drawn or written on board can be replaced by electronic slides. Presentation software can be used to deal with various topics in teaching the language but can be used to create presentations such as those about the business world. The presentations

created by the learners can develop the presentations skills in them, which is a real world task.

e. Getting connected through Email and MOOs helps in students and teachers' collaboration and learning activities.

f. Web browsers act as source of data definition, searching, gathering and organizing.

11) ICTs are also applicable for assessment and evaluative purpose. Using different computer programs, the teacher can conduct multiple choice questions, alternatives and essay type questions. Along with this, the grades of each student can be sent to him or her through tools like Email. Not only this but language concerns like speaking, listening, reading or writing skills can also be evaluated through ICT tools like podcasts, blogs, audio recorders, lingua phones, dictaphones, etc.

12) The Internet offers the best ways to learn the language. The internet has become a popular source of communication and teaching- learning because of the following factors:

a. Access: The internet offers the best ways of language learning, the experience of language learning anywhere, anytime without feeling a need to leave the home.

b. Flexibility: It allows the learners to work using any material, any source which is not possible always in the traditional sources of teaching-learning.

c. Durability: The internet can accompany you with its services 24*7.

d. Modality: Being a multimodal learning tool, the internet stimulates rich sensory and cognitive aspects of learning.

e. Cost: The internet serves the learners' purpose and offer services at very low cost. The data or information found through the internet or other specialized software can be accessed rapidly and cheaply.

f. Indicator of ICT

based on the modification of Firdaus,et.al (2004:3) the indicator of information and communication technology (ICT) there are learning sources, media of learning and tools of learning. The effectiveness of the use of learning resources based ICT on learning. Evaluation focused on learning process like computer usage and LCD, use of tape recorder, use internet as alternative source of information, learning process do in computer laboratory, and learning process do in multi laboratory study.

2.2. Review of Related Findings

There had been some research about implementation information and communication technology. They did the research in implementation ICT, but every research was in different aspects.

Firstly, nezafet rrudhani (2015) conducted a research entitled *the use of information and communication technologies (ICT) in teaching English as a second language in secondary school "ANDREA DURRSAKU" in Kemenice*. The result of the survey and interviews in the context of theoretical background about the use of ICT in teaching English as a second language. A questionnaire and

interview questions used to collect data from English language teachers and ESL students as well.

Second, Ruxana Hossain Parvin (2015) conducted a research entitled *The effectiveness of using technology in English language classrooms in government primary schools in Bangladesh*. The result showed that the use of audio-visual content has strong potential for enhancing and promoting interactive language classes.

Thirdly, Allan .K. et.al, (2003) conducted a research entitled *ICT Implementation and school Leadersip in hongkong*. The results of their research were the analysis on models of change in 18 schools striving to integrate the use of ICT in teaching and learning across the school curriculum. The study showed that the strategy adopted by a school in instituting such change and the resulted variation of pedagogical practices using ICT is strongly dependent on the school leaders' vision and understanding of the role and impact of ICT in the curriculum.

Fourthly, Muhammad iqbal majoka et.al, (2013) conducted a research entitled *implementation of information and communication technologies (ICTs) in education institutions in Pakistan*. The result of their research are : The total sample was 40 teacher educators and 200 students from seven institutions. Mixed method research design was adopted to conduct this study. The data was drawn from the surveys for heads and prospective teachers, and semi-structured interviews with teacher educators. Analysis revealed that only in a few classrooms, different activities/ experiences as suggested in the unit were properly implemented, while in most that was not the case due to issues such as shortage of

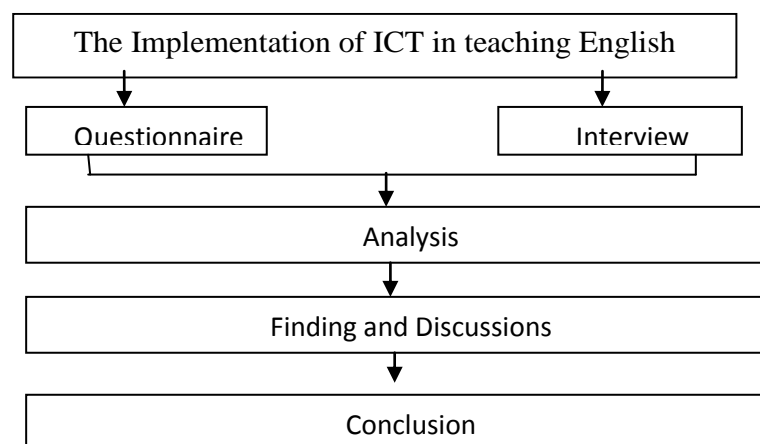
electric power supply, scarcity of ICTs tools and lack of training and skills in ICTs application. The extent to which teachers followed the course guide was another factor contributing to the implementation process.

Based on the explanation study above, the researcher considered positive contribution of that conducted research. However, none of them conduct the research in the implementation of information and communication technology (ICT) in teaching English at SMAN 1 Rambah Hilir. Furthermore, the basic component of ICT was important in era globalization right now. Because it was easier for teachers to teach. In this research, the researcher described about the implementation of information and communicative technology (ICT) in teaching English at SMAN 1 Rambah Hilir.

2.3. Conceptual Framework

Conceptual framework is the concept that the writer use to the research. A conceptual framework is an analytical tool with several variation and context. It used to make conceptual distinction and organized ideas. The researcher conducted the research based on this conceptual framework.

**Figure 1:
Conceptual Framework of the Research**



The researcher focused on implementation of ICT in teaching English. As the topic of this research indicates, it attempted to reveal whether or not there was the use ICT in teaching and ICT Tools in teaching. The instrumentation of this research are questionnaire and interview to get the data. Based on the explanation above, the researcher wants to conduct a research to find out how are the implementation in teaching English and what ICT tools use in teaching.

CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses about methodology of research. It consists of research design, time and location of the research, population and sample, instrument, technique of collecting the data and technique of analyzing the data. This chapter explained about who, where, when and how this research happened. In this chapter the researcher also explained how the researcher getting the data and what kind of tools that are used.

1.1. Research Design

This research is a qualitative descriptive research. According to Sugiyono (2014:1-3) descriptive research is research method used to research on natural object condition, where researcher is as key of instrument. He adds that Qualitative methods is used to obtain in depth data or contain the true meaning, the exact data behind the data that looks, what it is and not manipulated.

1.2. Setting of The Research

This research was conducted at SMAN 1 Rambah Hilir, Rokan Hulu regency in academic year 2017/2018. This research conducted in may 2018.

1.3. Population and Sample

1.3.1. Population

Population is a set or collection of all elements processing one or more attributes of interest (Arikunto, 2010:173). The population of this research was explained on this table. 3.1.

Table 3.1. Population

| No. | Name | Education | Graduation |
|-----|-----------------|-----------|----------------|
| 1. | JORAID,SS | S1 | UNILAK |
| 2. | MASNIAR S.Pd | S1 | UIN SUSKA Riau |

1.3.2. Sample

According to Arikunto (2010:174) states that “sample is partially or represent the populations are going to be researched”. Therefore, the total number of sample is two persons. Because this research about ICT in teaching English, so the researcher use purposive sampling. Purposive sampling is a sampling technique with a certain considerations (Sugiyono, 2011:60).

1.4. Instrumentation

According to Widoyoko (2012:51) the instrumentation is a tool used by the researcher to collect the data in doing a research. The Instrumentation used in this research was questionnaire and interview, questionnaire and interview used to explore the application of information and communication technology used by English teachers.

1. Questionnaire

Questionnaire is technique of collecting the data with give some question or written statement to respondent for answer (Sugiyono, 2010:199). In this research, there were indicators of questionnaire, it explained on the following table 3.2. the questionnaire which consists of 12 items, considering that there are 45 minutes to answer. After that, to analyze the result of ICT in teaching

questionnaire score. The answer of the questionnaire hopefully can help the researcher to describe the ICT in teaching English at SMAN 1 Rambah Hilir.

Table 3.2. Latticework research questionnaire

| Indicator | No.Item |
|---------------------|---------|
| 1.Learning sources | 1-4 |
| 2.Media of learning | 5-8 |
| 3.Tools of learning | 9-14 |

Sources : modification from Firdaus et.al (2014:3)

In research questionnaire, every number item have alternative answer with categories (A) always, (O) often, (ST) sometimes, (N) never. To see item positive and negative answer of item above is as follow:

Table .3.3. Score Item positive and negative answer

| No. | Alternative Answer | Score | |
|-----|--------------------|--------------|--------------|
| | | Positive (+) | Negative (-) |
| 1. | Always | 4 | 1 |
| 2. | Often | 3 | 2 |
| 3. | rarely | 2 | 3 |
| 4. | Never | 1 | 4 |

Sources : modification from Nurhikmah (2011:47)

Analyzed of observation data with accounting of category high percentage is 100% and low is 0%. So, part of percentage score is $100\% - 0\% = 100\%$. Many of category is 4, so interval percentage class $100\% : 4 = 25\%$. That interval can see on table descriptive percentage criteria below :

| No. | Interval | Criteria |
|-----|-----------|-----------|
| 1 | 76%-100% | Very Good |
| 2 | 51%- 76% | Good |
| 3 | 25% - 50% | Enough |
| | 0% - 24% | Bad |

Sources : Modification from Arikunto (2006:356)

1. Interview

The researcher used the interview to collect the data to get more information. In conducting interview the researcher gave 15 questions, it explained on table 3.4..

Table .3.4. Interview Question

| No. | Questions | Answer |
|-----|---|--------|
| 1. | Apakah bahan ajar guru berasal dari buku? | |
| 2. | Sumber belajar apakah yang banyak digunakan guru dalam pembelajaran bahasa inggris? | |
| 3. | Apakah ia pernah mengalami masalah dalam menerapkan TIK ketika pembelajaran bahasa inggris? | |
| 4. | Bagaimana menurut anda dengan ia menggunakan TIK , apakah pelajaran menjadi mudah dipahami? | |
| 5. | Apakah ada kesulitannya dalam menggunakan teknologi pada saat pembelajaran berlangsung? | |
| 6. | Apakah dia selalu menggunakan powerpoint ketika mengajar bahasa inggris? | |
| 7. | Apakah media yang digunakannya menarik? jelaskan! | |
| 8. | Media pembelajaran seperti apa yang sering digunakannya? | |
| 9. | Bagaimana tanggapanmu tentang media pembelajaran yang digunakannya? | |
| 10. | Apakah perbedaan yang anda dapat ketika ia mengajar dengan menggunakan media dan tidak menggunakan media? | |
| 11. | Apa saja alat bantu yang sering digunakannya? | |
| 12. | Apakah alat bantu pembelajaran yang digunakannya dengan baik? | |
| 13. | Bagaimana menurutmu tentang alat bantu pembelajaran yang | |

| | | |
|-----|--|--|
| | digunakannya? | |
| 14. | Apakah dia sangat menguasai teknologi yang digunakannya? Jelaskan! | |
| 15. | Apakah dia tahu menggunakan teknologi dalam proses pembelajaran? | |

1.5. Procedure of the Research

The procedure of collecting data in this research as follows:

1. Introduction

The first thing was an introducing, preparing all the thing tha researcher needed to conduct a research.

2. Collecting the data

The researchers came to office to interview for an English teacher after the learning process is done by teacher. Than, the researcher asked to answer the questionnaire to get the accurate data.

3. Analyzing the data

After collecting the data the researcher analyzed the data.

4. Conclusions

Finally, the researcher made the conclusion.

1.6. Technique of Collecting the Data

According to Widoyoko (2012:33) collecting the data of the research is intended to get the data, explain facts and accurate information. Techniques of collecting the data to be used in this research are as follows:

1. Questionnaire

Questionnaire is a technique of data collection by giving a set of questions or written statement to the respondent to answer (Sugiyono, 2010: 199). The researcher collected the data by using questionnaire. It was used to describe the teachers and the students respond's and evaluation based on using ICT were applied in teaching English.

2. Interview

The researcher collected the data by using interview. Interviews conducted to find out deeply about information and communication technology (ICT) in teaching English. In interview, the researcher asked fiveteen questions.

1.7. Technique of Analyzing the Data

Technique of analyzing the data used in this research is qualitative descriptive analysis, descriptive analysis included many percentage. In this research, the researcher used formula by Sudijono (2009:43):

$$P = \frac{F}{N} \times 100\%$$

Information :

P = Large percentage of respondent answer

F = Frequency of alternative answer

N = Sum of sample

Analyze the questionnaire data to qualitatively answer of statement item with given score level of each answer. Score for each answer on questionnaire as follows:

Table 5 : score of each answer on questionnaire

| No | Answer | Score | |
|----|--------|----------|----------|
| | | Positive | Negative |
| 1 | Always | 4 | 1 |
| 2 | Often | 3 | 2 |
| 3 | Rarely | 2 | 3 |
| 4 | Never | 1 | 4 |

Sources : modification from Nurhikmah (2011:47)

Analysis of observation data with accounting of category high percentage is 100% and low is 0%, so, a distance of percentage score is $100\% - 0\% = 100\%$. Many of category is 4, so interval percentage class $100\% : 4 = 25\%$. That interval can see on table descriptive percentage criteria below :

Table 6 : criteria of assessment in used technology

| No. | Interval | Criteria |
|-----|------------|----------|
| 1. | 76% - 100% | Always |
| 2. | 51% - 75% | Often |
| 3. | 25% - 50% | Rarely |
| 4. | 0% - 24% | Never |

Sources : modification from Arikunto (2006:356)