**A DESCRIPTIVE STUDY ON TEACHING OF SCIENCE USING ENGLISH AT SD ZUMROTUS SALAMAH**

**TAWANGSARI TULUNGAGUNG**

**THESIS**



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**CHAPTER 1**

**INTRODUCTION**

In this chapter, the researcher will presents six topics related to this research. Those include Background of the Research, Statement of Research Problems, Objective of the Research, Significance of the Research, Scope and limitation of the Research, and Definitions of key term.

**A**. **BACKGROUND OF THE RESEARCH**

Education is the process with the certain method in which the people get the knowledge, comprehension and the way to behave according to what people want to do. Although education is not the same as teaching but it never leaves the activities. Teaching constitutes the activities to transfer the subject to the student so that they master it, or in other the students obtain the knowledge.

Language is very important for human life. A language is a system of signs (e.g., speech sound, hand gestures, letters) used to communicate message. Of all kinds of language, the most developed, used, and studied is undoubtedly human spoken language (Taylor :1990: 5). Some linguistic defined what is actually meant by language. According to Sapir at in Susanto (Susanto: 2002: 1). Language is as purely human and non instinctive method of communicating ideas, emotions, and desires by mean of system of voluntarily produced symbols Furthermore, hornsby states that language is a system of the sound and words used by humans to express their thoughts and feelings (Hornby: 1955: 662 ). Meanwhile Susanto (Susan to: 2007:1) define language as a signaling system which operates with symbolic vocal sounds, and which is used by a group of the purpose of communication.

Language has so many main functions, Language for communications. Communication is defined as the process of transferring information between an individual through an arbitrary system, sign or behavior in general (Webster, 1981: 8). Base on this definition, we know that in the communication as the process involves, a speaker or someone who communicates, the information that is communicated and the means of communication. There is no communication without three aspects above. Therefore, in this case language for communication is used by human all over the world.

English seems to be the most important language in the world civilization. English as one of international languages is used throughout the world. English becomes widely used in the world, some south Asian countries like Singapore and Malaysia, use English as their second language, but Indonesia uses English as a foreign language. It means that English constitutes of international communication. Because English is very important, it is taught in Indonesia and it also becomes medium of instruction in teaching and learning process.

Indonesia as developing country needs to have good relationship with other countries in the world, having good relationship need communication or socialization with other countries, in order to be able to communicate with others, we have to master and understand the language being used of communication. Although English is not as second language in Indonesia it has important roles in many aspects of life such as theories, business, and academic field.

English teaching in many schools is not something new. Although it has been taught for many years, the reality shows that the process of English teaching does not get good result. The English language teaching and learning often faces problems related to the teachers don’t not have effective method to teach and the students who get difficulty in learning English because it is unfamiliar in their social community.

Many countries in the world have spoken English and there are also many literatures written in English. Because English has a very important role, it is taught in Indonesia. It becomes the foreign language that is taught starting from Elementary school to university level. But, as we know there are many problems in our education not only for the student but also for the teachers as educators. Teaching English from elementary school come from the idea that adult tongue gets stiff when pronouncing one type of language and cannot cope with the new sound of another language.

The curriculum where it gives opportunity to the teacher to be creative and innovative. The curriculum emphasizes the student competence, it has some orientations, such as the students get meaningful experience in teaching and learning process and they can enjoy the process in some variations that are appropriate with their needs. It means that the student is expected to be creative and innovative with competence that they need in their life. School-base Curriculum emphasizes on identifying basic competence of English and the other competences that are significant with the human resources development. It is important to prepare the student to master the basic of English. The students demanded to master four English skills, such as speaking, reading, listening and writing.

Being successful according to the curriculum, the teacher must prepare the lesson plan, the technique for presenting and practicing new teaching method in teaching the four skills and the suitable information in regulating the advanced steps and giving feedbacks.

SD Zumrotus Salamah Tawangsari has good quality as elementary school in generally. Although this school still new and founded in 2008 years it’s can be seen that the all teachers who teach all lessons used English. The students always experience improvement every years, students who enroll up for this school is always increasing. This school also has an international class following the Cambridge programs.

Cambridge program is study process base on international concept that is used of English language as medium of instruction. And this program help student in mastery foreign language especially English lesson very well. Some competitions and local or regional Olympiads have been won joined by SD Zumrotus Salamah Tawangsari Tulungagung, such as the winner of language Olympiad in Tulungagung. Moreover, it provides them with the supporting facilities that help them learn better Such as: a language class and a library classroom, etc. In English and all subjects the teachers teach using English. International class program helps the students master foreign language especially English lesson very well. This school is characterized by Islamic religion and called”SD PLUS” because it has an integrated curriculum. The curriculum involves national education and Cambridge curriculum. Islamic Elementary school of Zumrotus Salamah Tawangsari Tulungagung is similar with the other elementary school in common, but all teachers, students and officers of this school use English language in communication, so interesting to study.

Based on the background above, the researcher is interested in researching about study on science teaching using English at SD Zumrotus Salamah Tawangsari Tulungagung will be studied focusing on teaching method, media applied, students achievement in science thought by using English process, On the basis of descriptive of those aspects, the researcher tries to conduct a study which is intended to describe study on science teaching by using English of international class at SD Zumrotus Salamah Tawang Sari Tulungagung .Will be investigated under the title “A DESCRIPTIVE STUDY ON TEACHING OF SCIENCE USING ENGLISH AT SD ZUMROTUS SALAMAH TAWANGSARI TULUNGAGUNG’.

**B**. **Statement of the Research Problem**

Based on the background of the study above, the problems to be investigated in this study about:

1. What teaching methods are used to teach science by using English?
2. What media are used to teach science by using English?
3. What is student’s achievement in science taught by using English?

**C**. **Objective of the Research**

Consciously, these problems of the study are studied to reach some purposed determined. It aims to get answer from the purposes organized problems. From the problems that stated above, the purpose of this study to describe the study on science teaching by using English at SD Zumrotus Salamah Tawangsari Tulungagung, with the focuses are :

1. To describe the methods of teaching science using English at SD Zumrotul Salamah Tawangsari Tulungagung.
2. To describe media used in the teaching of science using English at SD Zumrotus Salamah Tawangsari Tulungaung.
3. To know the students achievement in science taught by using English at SD Zumrotus Salamah Tawangsari Tulungagung.

**D.** **Significance of the Research**

The results of the study are expected to give contribution for the headmaster, the teacher of science, the students, and the researcher.

a. Headmaster

The result of this study is expected to be useful as feedback to give suggestion and motivation to headmaster to motivate students in English teaching and learning science using English and to develop his or her students in improving their English ability.

b. The teacher

For the teacher of SD Zumrotus Salamah Tawangsari Tulungagung to guide and motivate the students to improve their ability in science by using English as the medium of interaction and also will be useful as of considerations for the teacher to teach.

c. Students

Hopefully, this study helps the students of SD Zumrotul Salamah Tawangsari in getting target language acquisition well, and to give contribution for the students as feedback to motivate them in learning and to inform them the better way in learning English.

d. The researcher

The results of this study are hoped as feedback to enrich understanding about science teaching process by using English as the medium of interaction. This also can be used as starting point to determine whether teaching science by using English to the student of SD Zumrotus Salamah Tawangsari Tulungagung.

**E.** **Scope and limitation of this study**

1. Scope

The scope of this research is a study on teaching of science using English at SD Zumrotus Salamah Tawang Sari Tulungagung.

2. Limitation

This study is limited in third class of SD Zumrutus Salamah Tawangsari Tulungagung that can be found in the teaching process. In this study the research focused only on the method, the media and the students achievement taught by using English.

**F. Definition of Key Terms**

To avoid misunderstanding about the terms in this study, the key term of this study are defined as follows:

a) Science teaching

The teaching process is a set activities or events in an educational interaction in order to transform knowledge from teacher to the student. In this research science teaching means a set activities transform knowledge from teacher to the student used of language English as medium of instruction in the classroom thought the oral and written language instruction, and thus proficiency in the language of instruction can reasonably be expected to have an effect on the acquisition of concept and skill (Usman: 2002: 6).

b) Teaching science using English

Teaching science using English in this case means a set activities of knowledge, transfer’s skill and value from teacher to the students used English as medium interaction at SD Zumrotus Salamah Tawangsari Tulungagung.

**CHAPTER II**

**REVIEW OF RELATED LITERATURE**

This chapter is presented to review some relevant theories of teaching, approaches, methods, techniques, and factor in teaching that cover teacher, student, and English language.

1. **Theory of Teaching**

**“**Theory is a hypothesis of concept that generalize; it may cover a set of practice; heterogeneous classes learn better open ended tasks than from closed-ended ones; or it can be described phenomena in general language is used for communication or it can express a personal belief language learning is of intrinsic value”(Penny: 1996: 3 ).

Base on the explanation, theory is approach to describe phenomena which is used in communication to express the idea. Teacher or everyone who teaches has a theory to be applied in his or her teaching. Everything what teachers do is colored by psychological theory they hold, a teacher who does not make use of a systematic body of theory in their day decisions are behaving blindly.

Teaching is guidance of learning activity. It is a purposive activity, means that the activity associated with the purpose. So, teaching is conducted to reach and directed to the goal of learning process. The concept of teaching is understood as a process that is intrinsically and inseparably bound up with learning. Teaching is done by teacher, telling and showing students how, complementing the learners when they did well, and scolding or punishing them when they do poorly. Teacher simply way that they had been taught as children, youth, or apprentices.

On the basis, teaching is exerted the creation of situational that possible to learning process persisted. This system of teaching consists of components which influence each other, such as the instructional purpose which would be reached. Teaching is an organized activity to help student in learning. The essence of teaching looked as a process, that is, the process which’s done by teachers in caused learning activity of student. Teachers have the first role in direct and creates situation for learning. In other word, teaching is a learning process and the result of the process is the change of behavior. It does not only influence the knowledge ownership, but also influence attitude, interest, appreciation and real behavior.

There are three theories of teaching, such as (Susanto: 2006: 12):

1. Totality Theory

This theory states that human comprehend something totality. The meaning of teaching based on this theory is to clarify and to specify the totality stimulus clearly on the parts and the bound of the parts. By giving the materials to the students, they are able to get understanding, intelligence, attitudes, skills, behavior and the improvement of psychology development because of experience.

b. Power Theory

According to this theory, human soul consists of various powers, such as power to know, to feel, imagine and so on. Teaching is giving any materials to the students by training their power of soul (any material).

c. Association Theory

Teaching based on this theory is giving materials to the students in order they posses they posses the knowledge or conception as wide as possible. The purpose of teaching is thinking, making relationship between conception and new knowledge.

Base on theory above, the researcher conclude this theory is very important in teaching learning process, because to stimulate students to active in the classroom.

**B. Approach, Method and Technique in Science Teaching**

Approach, method and technique are the three terms which are often overlapped in English teaching **(**Setiyadi: 2006: 7). People often mention one of them but they refer to another. Approach is the level of the theories; method is plan of language teaching which is consistent with the theories, and technique carries out a method. In other word, the arrangement of the three is that approach is axiomatic, method is procedural and technique is implementation.

1. Approach

The term approach refers to theories about the Pedagogic learning which provide the reasons for doing them. An approach describes how Science is used and how its constituent part interlock-it offers a model. The Strategies for Teaching Science that teaching science to LEP (limited English profiency) students is not much different from teaching these students any other academic subject matter. As with all teaching, science teachers must enter the classroom with three kinds of knowledge: content knowledge, or knowledge of the subject matter; curriculum knowledge, or knowledge of the way in which the subject matter is organized, and pedagogical knowledge, or knowledge of appropriate ways to guide students into an understanding of the subject matter. In addition, teachers must possess positive attitudes that foster learning and encourage students of diverse backgrounds to engage in the learning process.

Approach science with a sense of wonder, as almost magical. The science lesson plan with an intriguing idea or question to engage students. Approach is a question because questions arouse students' curiosity. In academic can make the students discipline, engagement is usually called the "anticipatory set."

The purpose for a brief discussion, focused on the learning behavior, and guide students in transfer the debriefing ideas to the lesson plan objective. The main purpose of this stage is to make sure that students' minds are ready for instruction. Students must be ready to learn before teachers can tap them into the learning process.

2. Method

A method is a generalized of classroom specification for accomplishing linguistic objectives. Methods tend to be concerned primarily with teacher and student roles and behavior and secondarily with such features as linguistics subject matter objectives, sequencing, and materials (Shofia: 2007: 9). Therefore method is always related with approach and technique. They always support each other as a unity in the teaching process. Method selected relates to the efforts of teacher in presenting subject matter that appropriate with situation and condition, therefore the achievement of teaching objective can be optimal

Here are some methods of teaching-learning that were used to implement the learning strategies in the teaching process here are some method that were popular used by the teacher. According to Wina Sanjaya those are (2006: 147: 162):

1. Lecturing

This method can be defined as the way of subject’s presenting through expression orally or direct explanation to the student. In this explanation the teacher must be active teacher while the student just listens and follows what teacher said even write down what teacher said.

As the traditional method, lecturing has the weakness and strengths; such as:

The strengths

a. It is an easy and a cheep’s method to do, because it just uses the voice of teacher.

b. It can present the materials widely. It means that the whole materials can be summarize or explained by teacher in the short term.

c. Its can give the main materials that are needed to be stuck out. It means that teacher can organize the materials.

d. Teacher can control the class’ condition.

e. The organization of the class can be managed simply.

f. Give the opportunity to the student to listen and make note.

g. It can minimize the time, because the teacher can prepare the material systematically.

The weaknesses are:

a. The students only master on the materials that are given by the teacher.

b. The lecturing without modeling can cause verbalism. It is the process of teacher’s presentation that depends on oral language and the students depend on their audio ability.

c. It is monotonous.

d. It is quite difficult to know the student’s achievement through this method.

2. Demonstration

Demonstration method is subject presenting method by demonstration and displaying materials to the student about a process, situation or something, either real or unreal. It is educative interaction method in help the student to know the process of something, what are essences of those things and an appropriate way through inductive sense.

Base on the theory above, simulation is teaching method where the teacher or another person intentionally shows to the whole of the class about the process or the way doing some things.

The strengths of these methods are:

1. It can reduce verbalism because the students are asked to observe the materials directly.
2. The process of learning more interesting because the student is not only listening but also observing the event that happened.
3. By observing something directly, the student will have the opportunity to compare between theory and reality.

The weaknesses of these methods are:

1. This method needs more preparation because without it, this method can be failed, therefore this method can not run well.
2. This method need tools, matters, and appropriate place, therefore it needs more budget.
3. This method needs the ability and skills of the teacher, there for they are asserted to be professional.

3. Discussion

Discussion can be defined as responsive conversation that is connected by certain problems for gaining problem solving. Discussion method basically is to change information and opinion (Muhibbin: 2000: 48). The aim of discussion is to solve the problems, answer the question, increase and understand student’s ability, and make decision (Sanjaya: 2006: 165).

The strengths of discussion are:

a. This method can stimulate the student to be more creative especially in giving argument and ideas.

b. This method can practice the student to share their ideas in problem solving.

c. This method can help the student to propose argument or ideas verbally; even practice the student to respect with another person’s ideas.

The weaknesses of these methods are:

1. In the discussion often controlled by 2 or 3 students that have skills in the oral.

b. Some times the discussion enlarges and out off the topics, therefore the conclusion to be blurred.

1. Need more times.
2. In the discussion often happen different argument that cause the emotional uncontrolled.
3. Simulation

The word simulation is derived from “simulate” that means pretending or acting to be. As the teaching method simulations can be defined as the way of presenting learning experience by using an imitation of situation to understand the concepts, principal, or certain skills (Sanjaya: 2006: 159 ).

The strangers of these methods are:

a. Simulation can be a virtual for the student to face the real situation in the future, even in the family life. Society or job activity.

b. It can improve student’s creativity because through simulation the student is given the opportunity to act as the topics presented.

c. It can improve student’s confidence and brave.

d. Enriching knowledge, attitudes, and skills that were need in facing social situation.

e. It can improve student’s desire in the teaching learning process.

The weaknesses of simulation are:

1. Experience that is gained in the simulation not always appropriate with the real condition.
2. The uncontrolled management can caused teaching objective ignorance.
3. Psychologist’s factors as like shy and afraid often influence students in doing simulation.

3. Technique

Technique is implementation that actually takes places in the classroom. It is particular tricks, strategies, or contrivance used to accomplish an immediate objectives. Technique must be consist with a method, and therefore in harmony with an approach as well. The technique used in Science Teaching is communicative approach, by creating a close relationship between teacher and students, among students, and applying oral interaction in the classroom, the students have much opportunity to their mind, opinions, and idea without any fear or threat of failure so the students enjoy their learning activity in Science teaching.

Some technique combine in the teaching learning process are: discussion by making small group, presentation about the topic material (debate with other group), singing and investigative imagination process. Teachers must allow students time to explore the things they are going to be working with in the lesson. Students should explore both prior and new knowledge discovers new ideas. Whatever in their language level, most students are enthusiastic about exploring new things through observing, classifying, communicating, measuring, predicting, and interpreting.

C. **Teaching of science using English**

Teaching is derived from the word “to teach” that means, “works of teacher earn living by teaching” (Manser: 199: 412). The definition of teaching of science using English as follows: can use two languages alternatively, can produce meaningful sentences in second language, can engage in communication in more than one language, possesses at least one language skill in second language and to a minimal degree, speaks only one language but uses different language variety, registers, and style of that language.

The definition above, we simply note that teaching of science using English is some one who able to use English language as the medium of interaction in sciences teaching process of international class.

According to teaching science using English, she or he has the following characteristic (ovando: 2003: 6)

1. The continued development of the student’s primary language.
2. Acquisition of the second language which for many language minority students in English.
3. Instruction in the content areas utilizing both first language and second language.

When the English is implemented as the medium of instruction ion in math and science, some experts suggest that it can take anywhere from 5-10 years or more for English language learners to reach the necessary levels of academic language profiency to compete on with native English speaker in content areas such as Math and Science. Collier and Thomas (1997) also indicate that in order for English science learner to do well academically through instruction in a second language, their first language oral and literacy skills ideally must be develop at least to threshold levels commensurate to a sixth grade education. Because scientific and mathematical skills and knowledge acquired thought first language transfer across language, instruction in such subjects in the first language is an efficient and culturally appropriate way of developing math and science literacy for language minority students while they are learning English (Ovando: 2003: 246).

Base on the explanation theory from ovando, Collier and Thomas has similarity theory in teaching science using English that student which habitual use English is easier to get high score in academic sciencetivic skill, because they are usually use English as first language.

1. **The Media to teach Science using English**

Media is any person, material or event that establishes condition which enable the learner to acquire knowledge, skill and attitude (Sanjaya: 2005: 162). Based on the Gerlach and Ely (1971) media is something that characteristic delivering messaging and able to stimuli the thought, feel and audience (students) desire so it can support them in, in the process of studying (Azhar: 2006: 3).

Base on the explanation above, we can conclusion media is something to transfer message and be able to stimulate idea, feeling and student’s desire to support the learning process on them selves. The media creatively stimulate able to stimulate the learners learning better and is able to develop their performance according to the instructional goal.

1. **Characteristic of Media**
2. Visual media

Visual media is media that just can be seen and have not sound (Sanjaya: 2005: 170). So visual media or graphic media have function to send message from sender to receiver in order to interesting, to clear, and to illustrate the fact, simply and easy.

In this study, the examples of media are:

1. Real object

Real object is 3 dimension things which can to show in the class as teaching media. It is useful the children learning to describe something. And it can help the teachers to explain the lesson clearly on the students. Therefore the students more understand the explanation. For example: Vegetables, dishes, box, bottle, doll, and so on (Suyanto: 2008: 109-110).

1. Pictures

Pictures are commonly media used by teacher to teaching media in their teaching media in their teaching learning process. There are many advantages of pictures:

1. Pictures is concrete
2. Pictures can be used every time and every where
3. Pictures can make teacher explain the problem clearly
4. Pictures are easy to find.
5. Blackboard

Blackboard is the media which very important in every school and class. Its can help the teacher to explain and describe the lesson clearly. So it can help the students easy to understanding.

There are some advantages of blackboard:

1). It can help the teachers explain the lesson step by step systematically.

2). If any mistakes, the teacher can improve so on.

3). It can to support the learning motivation.

1. Textbook

Textbook are written for general audiences and thus cannot, in them selves, meet the need of a particular L2 class. That is, a collection of written or oral text selected and sequenced for the learner with accompanying explanations and activities. Teachers are the ones who make materials work; they make them work for their students and for them selves in te context in which they teach. Most common in classroom material is the textbook that combines language samples, explanation, and activities into a single volume (sauvignon: 1983: 138).

And then, textbook also call books that means written matter consist of science (Majid: 2007: 175). So, the textbooks are kinds of presentation in the printed form which presented with a branch of specific science that used by the teacher a guideline in the teaching.

1. Audio media

Audio media is also called by listening media usually it is used to listen and understand the passage. The characteristic for this media is that they show one way communicate (Kasihin:2007). Usually they are used to teach listening. This kind of media include: radio, tape recorder, cassettes, and language laboratory (Sadiman:2007).

Base on theory above, we can conclusion audio media is used to listen and just voice.

1. Audio Visual media

Audio Visual media are kinds of media not only include voice but also include the picture. So they are can be seen and be heard by the students. This media was better and more interesting than other media. Because it is includes audio media and visual media. For example: video, film, TV and so on (Sanjaya, 2005:170).

1. **Review of Previous Researches**

The previous research about the study teaching math and science using English language has been written by Moch. yahaya (2009) in his thesis. He has studied about teaching science using math and science in English language. He intended has research in English for teaching of math and science from bahasa melayu (malay language to English). In his thesis he stated that teachers of math and science are generally perspective of the change in the medium of instruction but needing some sustainable measure to not only improve the student language ability. And the teaching mathematics and science in English provides a rich context for genuine language use and as such serves as a focal point around which oral language and literacy in English can develop (Kesseler & Quinn, 1987). Whilst this move may be seen as desirable and progressive, it is one that changes the dynamics of teaching and learning mathematics and science in the Malaysian classroom.

Base on the previous research above, the writer of the research wants to discuss about study teaching of Science using English as medium of interaction. In this research she wants to specify her research on the application teaching of science using English as medium interaction. It is same theory used Moch.yahaya in the previous research, but this research is differently. In this research, the research specifies her research on teaching science using English. So, the researcher asserts that this research is different with the previous research.

**CHAPTER III**

**RESEARCH METHOD**

This chapter describes research design, data and data source, place and time of research, data collecting method and instrument, data analysis method, validity of the study.

1. **Research Design**

There are some methods that can be used to do research. In this study the writer uses the research design of descriptive approach. Descriptive research is a research which is conducted to describe and interpret existing condition or relation, growing opinion existing process, existing effect and growing tendency (Syafi’i: 2002: 18 ).

In descriptive research, the main points are to accumulate the basic data in descriptive way (Ary: 1985: 322). This research of study is designed to obtain information about status of the phenomena.

Based on this opinion, it is concluded that descriptive research is used to describe some events that happened when the research is done.

The writer uses this research design to describe method, media and students achievement in teaching of Science using English at SD Zumrotus Salamah Tawangsari Tulungagung.

1. **Subject of the Study**

According to Sugiono (2007) population is generalization which includes of objects and subject which has definite quality and characteristic that determined by researcher to be learned and then taken conclusion. In this research the researcher does not take population theory, but take subject of the research as source of research information those are 17 students and a science teacher in the third class at SD Zumrotus Salamah Tawangsari Tulungagung in teaching of science using English and purposive sampling is used in this study.

**C. Data and data source**

**1. Data**

Arikunto (2001:107) states that sources of data is subject who gives the data or information where is data is getting from. In this research, researcher uses qualitative data because the data is in form of fact. In this case, the researcher uses interview, transcript, observation, field note, official documentation as data.

**2. Data Sources**

The sources of data are very significant in the research. The researcher will not be able get information without knowing sources of data. Arikunto (1998:120) states that sources of data are subject who give the data or information where the data is gotten from. The researcher will not be able information without knowing sources of data. Information or data can be divided in two, based on the source of data or where the information or data from. They are primary data and secondary data.

1. Primary data

The data which is collected directly from the subject of this study is called primary data or basic data. The primary data is collected directly from the first sources, behavior, through the research. In this research the primary of data are the headmaster, the science teacher and students at SD Zumrotus Salamah Tawangsari Tulungagung.

1. Secondary Data

The data which is collected from literature is a secondary data. Secondary data take from documentation, books; archives include the condition of the school, infrastructure, vision and mission and the result of other result.

**D. Place and Time of Research**

**1. Place of Research**

In this study, the researcher chooses SD Zumrotus Salamah Tawangsari Tulungagung as the place of the study, because SD Zumrotus Salamah Tawangsari Tulungagung has good quality as elementary school to be school base on international standard, which one of its characteristic is the science teaching learning using English as medium of interaction.

**2 .Time of Research**

The study which focuses on Teaching of science using English was conducted on 25th April up to 14th july 2011.

1. **Data Collecting Method and instrument**

The important step in conducting research is collecting data. The data contains the necessary information of the research problems. In collecting data, it needs one or more kinds of methods that are chosen and used. The use of data collecting method should be appropriate with the characteristic of research. In this research, the researcher uses some instruments with the techniques as follows:

1. Observation method

‘’Observation is described as monitoring and making notes on searching phenomenon systematically (Mardalis: 1989: 24)’’ Observation is done get information about human behavior as like in reality .By observation we can get more information about social life . In this case the researcher observes on teaching of science using English during the teaching process in the classroom, method applied in giving material, the media, the teaching technique that used by teacher and the condition of the location or school at SD Zumrotus Salamah Tawangsari Tulungagung (05 April,2011).

2. Interview

Interview is a dialogue with a special purpose (Meleong: 2000:186). It is a kind of method in collecting the data which requires direct communication between researchers with the subject. It is to obtain construction are happening right now about events, activities, organization, feelings, motivation and recognition. In this study, the interview is used to obtain the information about teaching of sciences using English including the method, media and students achievement. It is done to get information from the headmaster, a science teacher, 17 students third grade and other respondents.

3. Documentation

Documentation is derived from the word “document” that means written something. In doing documentation method researcher investigates written things like books, magazines, documents, rules, meeting’s note daily notes and soon (Arikunto, 2002;135). The researcher use documentation method. It is used to get information about personal data, the list of the magazine, and minutes of meeting with headmaster, documents, archives and internet. This method is done to get information about teaching materials, lesson plan, and the evaluation form, used by the teacher at SD Zumrotus Salamah Tawangsari Tulungagung .

1. **Data Analysis Method**

The data analysis method used in this research is analysis technique of qualitative data. This technique is used to collect and to give interpretation toward the result of the research. The data are analyzed by using inductive method.

Inductive thinking is begun from the specific factual concrete event, which will be taken as general conclusion (Sudjana: 2004: 7) and other word, conclusion is started from specify statement or specific real into general conclusion. It means that the researcher presents the problem specifically, then makes conclusion generally. Inductive method is applied to the data taken from field research in the activities of teaching process in the third class.

The researcher categorizes or classifies the data based on the problems of the research. In this research inductive method is used to analyze chapter IV (research finding and conclusion). It means the research presents the data gotten from field about the method, media and students achievement.

1. **Validy of the Study**

In qualitative research, there are some techniques that can be used to increase the research data validity. They are triangulation and informant review (Sutopo: 2002:78).

1. **Triangulation**

Triangulation is the most common technique to increase the validity in qualitative research. In this case, potton (1974) stated that there are four triangulation techniques: (1) Data Triangulation, (2) Investigator Triangulation, (3) Methodologi Triangulation, and (4) Theoretical Triangulation (Sutupo: 2002: 78).

Triangulation is a technique which is based by phenomenological way of thinking which is multi perspective, means that to get good conclusion need more then just one point of view. For example, when we use one perspective in viewing something, we will get only one picture from different perspective.

1. **Data Triangulation**

According to Potton (1974), data triangulation is also called as source triangulation. Data triangulation or source triangulation uses different sources of data to get the same data collecting method or others.

Informant 1

Data interview informant 2

Informant 3

In this research, interview method to complete the data the person who is interviewed by the researcher is:

1. The headmaster

In This case the researcher interview uses the hesdmaster to know about his story of SD Zumrotus Salamah Tawangsari Tulungagung, geographical location, Infrastructure, and the organization.

1. The Science Teacher

In this case the researcher interviews the Science teacher to ask some questions dealing with science teaching using English.

1. Students

In this case, the researcher interviews the students to know what they are understand uses English in Science teaching.

1. **Methodological Triangulation**

This triangulation can be done by researcher by collecting the same data but by using different technique or method of collecting data. The emphasizes is on the use of different data collecting method and moreover to be pointed to the same data source to test the data validity. Foe example, to increase the data validity about someone’s skill in a certain case, the researcher can use questioner, then conducting an interview to the same informant and then the result is tested by observing the informant skill in the real activity.

Questioner

Data Interview source data

Observation

1. **Investigator Triangulation**

Investigator triangulation means that the validity of the research result (data or conclusion) in some part or all can be tested from some researcher. From some researcher’ point of view and interpretation to the all information that have got and collected in the note, and it is hoped there will be the same interpretation that can increase the research validity.

Researcher 1

Data Interpretation Researcher 2 Data

Researcher 3

1. **Theoretical Triangulation**

This triangulation is held by researcher that use perspective more then just one theory to discuss the research problem

. Theory 1

Interpretation Theory 2 a Phenomena

Theory 3

Based on the kind of triangulation above, the researcher uses the data triangulation technique, because the researcher easy to get information by the headmaster, (informant 1), science teacher (informant 2) and the students (informant 3).

**CHAPTER IV**

**RESEARCH FINDING AND DISCUSSION**

1. **DATA PRESENTATION**

**1. Description of SD Zumrotus Salamah Tawangsari Tulunagung**

**a) Geographical Location of SD Zumrotus Salamah Tawangsari Tulunagagung**

SD Zumrotus Salamah Tawangsari Tulungagung is located in KH. Abu Manshur street number III/21 Tawangsari village, Kedungwaru subdistrict, Tulungagung district and post code 66251 phone number (0335) 7731830. It is built on the area of 2000 m2. It is also conductive for education because its location is among much other school and it is urban area.

Base on researcher observation at 14rd July 2010, the boarder lines are:

1. The east limited with Sumbergempol sub district
2. The west limited with Kauman sub district
3. The north limited with Karangrejo sub district
4. The south limited with Tulungagung sub district

Location of SD Zomrotus Salamah Tagungungsari Tulungagung



**b) The Brief History of SD Zumrotus Salamah Tawangsari**

SD Zumrotus Salamah Tawangsari Tulungagung has built in 2008 with SK number 02.197/LPI.25/SD/S.IP/A.2/1/10.2008. This school is still new but get is good response from society. The first academic year of education, SD Zumrotus Salamah Tawangsari had only had 2 classes with about 19 students. Now, SD Zumrotus Salamah Tawangsari Tulungagung has 72 students, and has 4 new classes. SD Zumrotus Salamah Tawangsari Tulungagung is leaded by Mrs.Drs.Hj, Zulfa Prastiani as a headmaster.

SD Zumrotus Salamah Tawangsari Tulungagung has more infrastructures to support teaching-learning process. Those facilities are:

**TABLE 4.1 INFRACTRUCTURE OF SD ZUMROTUS SALAMAH TAWANGSARI**

|  |  |  |
| --- | --- | --- |
| **No.** | **Infrastructure** | **Total** |
| 1. | Office | 1 |
| 2. | Classroom | 6 |
| 3. | Library | 3 |
| 4. | Computer Laboratory | 1 |
| 5. | Field | 1 |
| 6. | Mosque | 1 |
| 7. | Toilet | 2 |
| 8 | Canteen | 1 |

Source: Document of SD Zumrotus Salamah Tawangsari Tulungagung 2010/2011

Related to condition of infrastructure of SD Zumrotus Salamah Tawangsari Tulungagung, there is one office and 6 classrooms. All of teachers can gather when they are taking a rest in the office. They can share about their problem and give solution at each other. In library the students can read some kinds of book in the library are in the classroom each other.

Mrs. Siti Jelita Kumala Sari is as informatics teacher. He teaches how to operate computer and shows to the students about the improving technology in this world. The students are very enthusiastic receiving the lesson from him. He applies “Learning by doing” method. The students can play when they take a rest in the sport field. Mr. Khasbullah, S.pd teaches them in the sport field too.

In the school area have one mosque for student and teacher. In the mosque student and teacher can pray together, usually the mosque used together by teacher and student when their dhuha, dhuhur, ashar pray and they uses the mosque when there ceremony. There are also two bathrooms near the parking area. The students and also the teacher can use those facilities if they want to wash their hand, one for the students and one for teachers. There is one canteen in the school area, all of students always buy snack in the there when they take a rest.

**c) The Purpose of education institutional SD Zumrotus Salamah Tawang Sari Tulungagung**

SD Zumrotus Salamah Tawangsari Tulunagung is Elementary school with Islamic characteristic with purpose are:

1. To increase the student knowledge to continue their study to the higher level.

2. To increase the students knowledge in compliance with the development of knowledge and technology.

3. To increase the students ability as part of society in holding a mutual relationship with social environment, culture and universe inspired by Islamic doctrine.

**d)** **Vision and Mission of SD Zumrotus Salamah Tawangsari Tulungagung**

1. The vision of SD Zumrotus Salamah Tawangsari Tulungagung

To create a learning community as transformative laboratory school of state university of Malang with international standards, active, creative, interactive and independence by enjoyable learning, prestige’s having personality principles for reaching graduations that have Islamic religious smartness (Islamic educated human being) for the importance of next educational and its life either in the global multicultural community at present and the future time.

1. The mission of SD Zumrotus Salamah Tawangsari Tulunagung

The existing of school as education center Islamic criteria such as: 1). Education center logic 2). Education center ethics 3). Education center aestetika 4) Education center humanika 5). Education center live environment 6). Education center practice.

TABLE 4.2

STRUCTURE ORGANIZATION OF SD ZUMROTUS SALAMAH TAWANGSARI TULUNGAGUNG

Dra.Hj.Zulfa Prastiani

Kepala Sekolah

Komite Madrasah

M. Khafi

Waka. Madrasah

Nahrowi, S.Ag

Anis Azimah, S.Pd

Kesiswaan

Khomari, S.Pd

Kurikulum

Moh. Anam ,S.Pd

Sarana Prasarana

Dian M. H,S.Pd.I

Humas

Dian M. H,S.Pd.I

Wali Kelas I

**h) The list of students of third class at SD Zumrotus Salamah Tawangsari Tulungagung taken from interview and documentation**

The researcher provides the data taken from conducting an interview proposed to the teacher in bilingual class and documentation. The names of the teacher and students who responded the interviews are presented as follow:

**TABLE 4.3 THE LIST OF STUDENTS OF THIRT CLASS AT SD ZUMROTUS SALAMAH TAWANGSARI TULUNGAGUNG**

|  |  |  |  |
| --- | --- | --- | --- |
| **NO.** | **NUMBER INDUK** | | **NAME** |
| 01 | 001 | Abdul Harits Firdaus | |
| 02 | 002 | Akasyah Satyarendra | |
| 03 | 003 | Azzaria Ariffadila | |
| 04 | 004 | Balya Izzunda | |
| 05 | 005 | Calcio Wiyono Putra | |
| 06 | 006 | Dewi Sekar Ambarwati | |
| 07 | 007 | Elicya Luahyuningtias | |
| 08 | 008 | Hiqmatul Malinda | |
| 09 | 009 | Louise Aditya Santoso | |
| 10 | 010 | Mohammad Haidar Alfawaza | |
| 11 | 011 | Mohammad Maftuh Arsyad | |
| 12 | 012 | Nur Uza Faridatul Khusna | |
| 13 | 013 | Prasetyo Adhi Nugraha | |
| 14 | 014 | Qanitah Nurrahma Fauziah | |
| 15 | 015 | Sekar Mayang Prasanti | |
| 16 | 016 | Sofia Putri Amalia | |
| 17 | 017 | Zaed Muzaqi | |

(Source: Document of SD ZS of Tawangsari Tulungagung 2010-2011)

TABLE **4.4 THE LIST OF TEACHERS OF ENGLISH CLASS OR INTERNATIONAL CLASS**

|  |  |  |
| --- | --- | --- |
| **No** | **NAME** | **POSITION** |
| 1 | Anis Azimah S.pd | Science Teacher |
| 2 | Khumaidi,S.pd | Math’s Teacher |
| 3 | Budoyo,S.pd | English Teacher |
| 4 | Dian Muhammad Hakim,S.pd.I | Indonesia Teacher |

(Source: Document of SD ZS Of Tawangsari Tulungagung 2010-2011)

**2. Data Presentation of Teaching using English**

In this section, the researcher presents the data taken from conducting an interview and searching documentation needed.

1. **Background of Teaching Science using English**

Related to the International class, the researcher got some information from headmaster (Drs.Hj, Zulfa Prastiani) and science teacher (Anis Azimah, S.pd). Mrs.Aniz said: to increase and to support the implementation of KTSP, SD Zumrotus Salamah Tawangsari Tulungagung in the academic year 2008-2009 built and to design by two International classes as the characteristic of RSBI .

She says that, Base on the law number 20 year 2003 about national educational system, on the chapter 50, it is state that.

1. Subsection (2): the government determines national’s policy and national educational standard to guarantee national quality.
2. Subsection (3): the government or local government minimally states one of the schools in all level to develop base on international standard.

In order to increase and to support the implementation of KTSP, SD Zumrotus Salamah Tawangsari Tulungagung in the year 2008/2009 design class using English as medium of interaction for the first time, where the teaching learning process on science subject uses English language and speak everyday in the area of school in English as medium of instruction, but if the students don’t understand about teacher’s explanation, the teacher explain with Indonesia language. With hope they have master English. Mrs. Zulfa Prastiani as the headmaster adds that implementing English language as the medium of interaction in the SD Zumrotus Salamah Tawangsari Tulungagung is divided into 2 stages, they are : planning and realizing.

1. Planning

The teacher has a duty and responsibility which is very significant in his role and function as the international base school’s educator. The duty, role and educator functions must be able to be shown in his competence and profession, either behavior competence, social, pedagogic, or professionally in planning and doing teaching process, evaluating the result of learning and doing guidance and training. In implementation bilingual the medium interaction, the teacher must fulfill the indicators of additional performance, such as:

a. All teachers can facilities learning based on ICT (International communication technology)

b. All teachers must be able to handle the learning process using English.

2. Realizing

The teaching learning process. The school designs and develops some learning models, such as: using the principles of CTL, totally learning. The International class is also facilitated with TV, VCD player, tape, OHP, LCD, computer and etc as the media of teaching and learning process in teaching of science. Moreover to support this program, the Elementary of School Zumrotus Salamah Tawangsari Tulugagung conduct a course for all teacher in the classrooms and outside in the classroom using language English as medium of interaction.

**b). Method applied in the English class teaching of science at grade 3**

The data about teaching methods in the English class are taken by conducting interview with Mrs. Anis Azimah, S.pd as the science teacher of the grade 3. Method in teaching of science at SD Zumrotus Salamah Tawangsari Tulungagung with the target English language without going through the process of translating into the students native language, She has unique method to improve her ability in English, such as: singing, watching Western movies about flora and fauna and practicing with other. After she used the method, she combined the method with lecturing, demonstrations, discussions, and simulations method. She states that in applying English as medium of interaction in International class, She applies enjoy full learning method such as:

The science teacher applied lecturing method. This method can be defined as the way of subject’s presenting through expression orally or direct explanation to the student. In this explanation the teacher must be active teacher while the student just listens and follows what teacher said even write down what teacher said. This method it is en easy and cheep’s, because it just uses the voice of teacher and the teacher can control the class’ condition.

After used lecturing method, the teacher used demonstration method and displaying material to the student about a process, situation or something, either real or unreal. It is educative interaction method in help the student to know the process of something. The process of learning more interesting because the students is not only listening but also observation the event that happened.

After the teacher using demonstration method, usually the teacher using discussion method. This method can be applied by giving prize for a certain student who can finish the exercise well and to make the students enjoy in the classroom. The main point is the student are able to understand well about the lesson explain by using English. Meanwhile she adds that after finished to presenting one topic of the materials he applied discussion by made small group technique in the classroom. The students are given a certain environments of learning in group to discuss the given materials. They are not directed to give definite opinion or argumentation about they can elaborate their opinion freely. He explains more, the teacher should be able to make a conductive create their teaching learning process as nice and enjoyable activity for students so the students enjoy in the classroom.

After that, for simulate the students the teacher of science using English used simulation method. As the teaching method simulation can be defined as the way of presenting learning experience by using an imitation of situation to understand the certain skill.

After use the method, the students more understanding about the lesson, although the teacher use the target English language without going through the process of translating into the student’s native language.

**C). Media in the English class teaching of science at grade 3**

Media is something to transfer messages and be able to stimulate idea, feeling and student’s desire to support the learning process on them selves. In teaching of science using English, the teacher at SD Zumrotus Salamah Tawangsari Tulungagung use media equipment such as:

First visual media, this media have function to send message from sender to receiver in order to interesting for example: the teacher show pictures in front of the class about the name of vegetables and function part of the body.

The second, the teacher use media Real object, it is useful the students learning to describe something. And it can help the teacher to explain the lesson clearly on the students. For example: the students more understand the explanation about vegetables, animals, colour and etc.

Third, pictures media this media used by teacher to teaching in the teaching learning process, commonly the teacher use this media with picture/ photo for example: map picture, the organ of body, part of tree and etc.

Fourth, the teacher use blackboard media, which very important in the classroom. Its can help the teachers to explain and describe the lesson clearly.

Fifth, textbooks media, the teacher give exercise to the students, like : fill in the blank, matching, essay, multiple, definition and group collection for the learner activities, if the teacher needs.

Not only used that media, but also she used workbook science using English for learner with accompanying explanations and activities. A Teacher is someone who makes materials work. Mrs. Anis Azimah, S.pd, a science teacher in the third class make media work for the students and for them selves in the context in which the teacher teaches and the media sources are not only from workbook, but also they can be from magazine or internet, etc.

The responses of students about the all media, the students are very enthusiasm because this media more understanding and more clarify. The media is very interesting for the students because the media could become the real object.

**d).The student’s achievement in science taught by using English at grade3.**

To find out the student’s achievement in teaching of science using English, the researcher get information’s from the teacher of science in the third grade at SD Zumrotus Salamah Tawansari Tulungagung. The researcher collects the data taken from interview and documentation of student’s achievement from Mrs. Anis Azimah, S.pd.

From her explanations, first she intended that student achievement by using English in teaching science the student more attractive to read and looking for material which use English language in other source because the student thing there are no problem in language again.

Second, she implementation that the student can increase not only vocabulary in science material but also in English material. So, the student richest vocabulary which used in daily speaking.

Third, she uses speaking full English in daily activities in the classroom and outside classroom using English. The purpose in the case, they can speak very fluent, Especially in English lesson well.

Fourth, an understanding of science offers personal to fulfill and excite benefits that should be shared by everyone whenever and wherever without difficulties in communication using English.

1. **Data Analysis**

To analyze the data that has been collected. Base on the result of the interview, documentation and observation, the researcher focuses the analysis on teaching of science Using English in the International class held at SD Zumrotus Salamah Tawangsari Tulungagung. The analyzing is as follow:

1). The implementation of English as the medium of interaction in science teaching.

The teachers of English class or international class, the teacher use pedagogic approach. The focused on the expectation, engagement and exploration, because the goal in sciences teaching is to increase the student’s competences in Science class. The model of the teacher interaction with the students in the classroom is that the teacher as an initiator of the activities. The class the teacher always interacts with the students in the classroom, and the teacher has three main roles such as: as a facilitator, a participant, and as observes of interaction process.

As a facilitator, the teacher regulates the problem solving task in the classroom. The teacher gives some opinions to overcome misunderstanding in the explanation process, and as observer, the teacher gives analysis on some error made by the students to increase the student’s understanding.

Base on the methodological frame work above the researcher finds the pedagogic is the most appropriate method applied in science class or international class. It shows that in the classroom activity, the students are given many opportunities to express their mind, opinions, ideas, and their ability using English in science subjects. They are expected to share or explain everything related to the science using English. Beside, they are expected to be able to comprehend the materials. Moreover, they are expected to be high level of sciences and English.

1. The problem faced by teachers of International Class.

Even though some teachers have some problems in conducting English class but they do their best. If we look at the criteria of teacher of English Class, we can mention that only Mrs. Anis Azimah that no problem with English class.

SD Zumrotus Salamh Tawangsari Tulungagung does some treatments to maintenance the problems face by some teachers of English class, the efforts done by the school as follow:

1. Doing English training.
2. Doing workshop of curriculum development, lesson plan, syllabus, which has international standard.
3. Doing workshop learning strategy base on international standard.
4. Workshop management ISO 9001 (2008) which has relationship with teacher’ duty.
5. Doing workshop of International standard of learning process.

**CHAPTER V**

**CONCLUSION AND SUGGESTION**

This chapter presents about the conclusion and suggestion. The conclusion review what have been described in previous chapter. It consists of theoretical conclusion and empirical conclusion. Theoretical conclusion is conclusion of related literature and empirical conclusion is conclusion data finding and data analysis. And then the suggestions are given to the institution of SD Zumrotus Salamah Tawangsari Tulungagung and the science teacher. Moreover, it can be used to improve the teaching process.

* + 1. **Conclusion**

Based on what have been described in previous chapter, here the researcher wants to give conclusion. The conclusions are consisting of:

* 1. Science teaching is a set of activities or events in an educational interaction in order to transform knowledge from teacher to the students. In this research science teaching means set activities transform knowledge from teacher to the student used of language English as medium of interaction.
  2. Teaching of science using English

Teaching science using English in this case means a set activities of knowledge, transfer’s skill and value from teacher to the students used English as medium interaction at SD Zumrotus Salamah Tawangsari Tulungagung.

* 1. The Method in science teaching using English used pedagogic method An approach describes how Science is used and how its constituent part interlock-it offers a model. In other word, the classroom activities and procedure derived from an application of the principles.
  2. Many kinds of teaching science using English some method that was popular used by teacher in teaching of science process such are: Lecturing, demonstration, discussion and simulation, etc.
  3. The media in teaching science using English such as : visual media like real object, pictures, blackboard, textbook, audio media and audio visual media.
  4. There are many factors that influence science teaching and learning process such as: the teacher, the learner/students, the methods are applied, the curriculum of school, the environment and facilities and the classroom management.

g. The method applied in teaching of science in the classroom is unique method for understanding the student. Teaching method of science at SD Zumrotus Salamah Tawang sari Tulungagung with the target English language without going through the process of translating into the students native language, the teacher have unique technique to improve her ability in English, such as: like singing, watching western movie flora and fauna and practicing with another. The teacher of science applying English has medium of interaction in international class, She applies enjoy full learning method. This method can be applied by giving prize for a certain student who can finish the exercise.

h. The media provided in teaching of science are based on the situations and condition in the teaching process in the international class grade 3 that the teacher used media equipment such as: Visual media, real object, pictures, blackboard, textbooks, if the teacher need, but sometimes the teacher used workbook for learner with accompanying explanations and activities, and the teacher also taken from magazine or internet.etc.

1. The student’s achievement in science taught by using English.

The student achievement in science taught by using English such as:

First, the students more attractive to read and looking for material which use English language in other source because the student thing there is no problem in language again. Second, the students can richest vocabulary which used in daily speaking English in the classroom and the school area. Third, the students get speaking fluent, Especially in English lesson well. Fourth, an understanding of science offers personal to fulfill and excite benefits that should be shared by everyone whenever and wherever without difficulties in communication using English.

* + 1. **Suggestion**

The suggestions which are able to give in this thesis are as follows:

**1. For Institution at SD Zumrotus Salamah Tawangsari Tulungagung**

Considering to the implementation of English language as medium of interaction in the classroom of SD Zumrotus Salamah Tawangsari Tulungagung, it is expected that the institution should pay a great attention on improving and developing the professionalism of the teacher in order that teaching and learning run as good as possible. The rule that force the teachers and the students to practice English in certain day with reward and punishment. It is important to increase and develop the professionalism of teacher, so they are to manage English teaching and learning well. The policy can be taken is to delegate the teacher to join English trainer or to delegate the teacher to attend seminar, workshop, English training, etc.

**2. For the teacher**

It is expected for the teachers to increase and develop their ability in science teaching using English, so they can provide conducive and innovative classroom activities by using more interesting media and variation of teaching method. It is also expected for the teacher to simulate and support the students to study and practice English in daily activities to support sciences learning in the classroom.

**3. Suggestion for next researcher.**

Because of many trouble found field and limitation of the research capability in the clarifying out of this research, the research is still far from perfect for the next research suggest to make a good preparation before, have enough time and fund and be sure that you can do that.

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