

CHAPTER I

INTRODUCTION

1.1 Research Background

Based on Undang Undang of Republic of Indonesia, number 20 in 2003 about National Education System, Learning is a process of interaction with teacher and student and learning resources in a learning environment. And in Undang Undang about education system defined that National education serves to develop skills and form the character and civilization of dignity in the context of the intellectual life of the nation, aimed at developing students' potentials in order to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and accountable. Therefore, the national education should function optimally as a key vehicle in nation-building and character. Because if citizen of Indonesia has good character, future of Indonesia will be more good. character is related strength to character moral, so if student has good character they will be good moral. Character education in applying in school for improvement character of student.

Curriculum 2013 focused on the goal to encourage learners or students, better able to make observations, ask questions, reasoning, and communicating (present) what they learn after receiving the subject matter. The curriculum has also objects more emphasis on natural phenomena, social, cultural and arts. National education serves to develop and form the character and civilization of dignity in the context of the intellectual life of the nation (Republic law number 20 of 2003 on National Education System). Based on the functions and objectives of the national education curriculum development must be rooted in the national culture, national life today, and the life of the nation in the foreseeable future. From above explanation, educational system goals and curriculum 2013 education character is need applying in education. Character education for student is basic

for improvement character, improvement moral for build good citizenship. Character and moral is related.

Chemistry is a difficult subject. That is the assumption of chemistry, that is two factor that influence to difficulty chemistry on school. First factor is assume of student that chemistry is difficult, second factor is strategy learning using of teacher is not suitable or make student difficult for understanding the subject matter. Learning strategy involve about model, method and media. Some school have difficult for preparing media learning and make teacher difficult for doing variation in learning. Exactly its make student's interest and help student for studying about chemistry.

The impact of less learning media create monoton learning and not interest for student and make student not have motivation for studying chemistry. This problem make writer interest for applying one variation of strategy learning, that is learning model and computer media . Contextual Teaching and Learning (CTL) that help teacher relate the content to be studied and encourage student to make connection between the knowledge possessed by the application in everyday life. CTL model is a type of learning model that better applying to student. Because with this model student will understand nature phenomena related to chemistry subject to help students see meaning in the academic material they are learning by linking academic subjects in the context of their daily lives.

In this type of learning model students will be motivated and want to know why that phenomena's occurs. this model will make curiosity of student more higher to chemistry matter, will learn about what occurs in around of them. Contextual teaching and learning (CTL) applying chemistry to real thing in around of us. Student will can conduct chemistry to their real life, so it will more understand because not just imagine, not assume that all chemistry is abstract matter.

Now, we are in technologically era. Computer technology or internet is worldwide and commonly in our life. our life cant separated from technology

especially computer/ laptop or internet. Computer technology can we use for a lot of activity like make easy to doing a job. If we connect to internet, we can know anything in the world. Can searching about what we want. Student can studying in internet and internet also make people more nearly with social network. Based on the function of computer, computer also can use for make teaching process more easy. Computer-based instructional media that is able to present real subject, as we know Chemistry is abstract matter. We learning about knowledge in around of us that cant we see directly. Chemistry learning science in more little aspect like atom, substance and compound and its cant we see with our eyes .With computer we can presenting that subject with real picture or real video. Student not just imagine what they learning but they can see in media computer what they will learning. And with computer make learning process is more effectively time, slide ppt in computer will make learning process is more interest and make time of learning process is effective than in blackboard/ whiteboard. Searching learning material that support our permoncance in class and present in the class. Teaching process not monoton, because presenting video, slide or another one make student more interest than just listening teacher in front of class.

Hydrocarbon is chemistry topic in even semester taught in X grade. Hydrocarbon is about alkanes, alkenes and alkynes, grouping of hydrocarbon based on aromatic and aliphatic, saturated and unsaturated, isomer and reaction, and uses of hydrocarbon in daily life. Many application of Hydrocarbon in our daily life. With contextual learning conduct chemistry to real life, so student required to memorize and understand many concept because student know directly in real world.

Based on above explain Researcher will do modification appropriate with chemistry subject. In senior high school class XI found standard competence appropriate with contextual teaching learning (CTL) model that is understanding about hydrocarbon . Much student not understanding and not know chemical substance make researcher interest to choose materi about acid base as sub materi which development in CTL model. Because it researcher make this research.

Chemistry is abstract matter will understand by student will use modern technology that are computer, with computer we can see materi of chemistry by picture, video or slide which we cant see with our eyes directly. Chemistry as difficult subject matter will understand by student with use learning model (CTL), with CTL student will understand nature phenomena or daily incident connected to knowledge and be democraton because they working together in their group for solve problem.

Based on above research, the researcher is interested to conduct research with title **“The Implementation of Contextual Teaching and Learning (CTL) with Multimedia Based on Computer to Grow Communicative and Increase Student’s Achievement in Hydrocarbon Topic .”**

1.2 Problem Identification

Based on above background, problem identification of this research as follow :

- 1) Chemistry is difficult subject for student.
- 2) Hydrocarbon is subject matter which learning about concept and memo rising that bored for student.
- 3) Learning model and learning media are still less aplication in school
- 4) Student achievement influence by learning model and learning media
- 5) So far, learning proces centered on teacher so student’s character not grow because student just listening.

1.3 Scope of Research

Based on the identification of problem above, this study is limited only see student’s learning outcomes in hydrocarbon chemistry topic. That taught in class X grade senior high school in even semester at academic year 2013/2014 in SMAN 1 Sunggal, SMAN 16 Medan and MAS PAB 1. Learning will doing by Contextual teaching and learning (CTL) with multimedia based on computer.

1.4 Problem Statement

Using make contextual teaching learning (CTL) model have some problem such as:

- 1) Is student achievement taught with contextual teaching and learning (CTL) is better than student achievement taught with direct instruction in hydrocarbon?
- 2) Is growth character of communicative in learning with contextual teaching and learning (CTL) is better than learning with direct instruction?
- 3) How many effectivity of student's achievement taught by Contextual Teaching and Learning (CTL) compare than student's achievement taught by Direct Instruction?

1.5 Research Objective

Objective of this research are :

- 1) To increase student achievement taught with contextual teaching and learning (CTL) is better than student achievement taught with direct instruction in hydrocarbon topic
- 2) To growth characteric of communicative in learning with contextual teaching and learning (CTL) is better than learning with direct instruction.
- 3) To know the effectivity of student achievement taught by contextual teaching and learning (CTL) compare than student's achievement taught by direct instruction.

1.6 Benefit of Research

The benefit of this research:

- 1) For student, learning model with model in research hopefully can help student understanding about chemistry subject specially in hydrocarbon and with use this media and learning model can increase student achievement in this materi include cognitive, psicomotoric and affective domain.
- 2) For teacher, the result of this research can give information about the effectiveness of using media and learning model that can use as alternatif learning for help student to increase student achievement.
- 3) For other reseracher, the result of this research can give contribution to same problem or as references in same research with different topic.

1.7. Operational Defenition

- 1) CTL is a cornerstone philosophy is a philosophy of learning constructivism emphasize that learning is not just memorize, but recontruction or build new knowledge and skills through the facts or propositions which they experience in life. Contextual learning or contextual teaching and learning (CTL) is a concept which helps teachers learn to associate the learning material with real-world situations students and encourage students to make connections between the knowledge possessed by its application in daily life. students' knowledge and skills obtained from the students construct their own knowledge and new skills when he studied.
- 2) Multimedia technology is one of the new technologies in the world of computers that have excess to make a more complete study media . multimedia contains various media in one making it easier for teachers to present material. students feel involved in the learning process is interactive multimedia technology you indulge. Furht (High 1996) from

Atlantic University , Florida defines multimedia as combination of various media ; texts , graphics , animation , images and video .

- 3) Character education consists of two words, namely education and character. Education is a lifelong process and the embodiment of self-formation intact in terms of the development of all potential in order to meet all mankind as a commitment individual, social, and as being God (Siswoyo, 2007). From the definition it can be concluded that education is forming themselves fully conducted by educators to learners. According to the language, the characters are nature or habit, while according to psychologists, the character is a belief systems and habits directing the actions of an individual (Alicia, 2008). According Soemarno, character is the actualization of the potential and internalization of moral values from outside be a part of his personality. of two definition of a character can be interpreted as a reflection of one's actions .

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