

CHAPTER I INTRODUCTION

1.1 The Background

The era of globalization is an era of competition that demands to education especially in Indonesia be able to produce a cadre of qualified nation, intelligent, independent, critical, creative, and innovative. This of course meant that the nation's future can face all the problems of the times and be able to compete with the world. Therefore, education should be adapted to the culture in Indonesia so the education is embedded within the community that students can make them recognize, appreciate, and utilize existing resources as well as possible. It has been realized that the quality of a nation is determined by the quality of human resources available. Therefore, education is the most important aspect in improving the quality of human resources in Indonesia.

The effort made by the government was not a little to improve the quality of education in Indonesia. One of them with changes the curriculum's structure refers to the content standards and competency standards. In the old curriculum of learning tend in one direction from teacher to students (teacher centered), while students are less active role in learning. In this case students are required to play an active role in learning (student centered), while the teacher acts as a facilitator, motivator and evaluator. Thus, students are expected to be active, creative, critical, intelligent, and independent in search of information to build knowledge. Students are expected not only memorized and understanding of concepts and principles, knowing the facts, but it is expected that students can apply in daily life.

Problems often arose in the study was from the students themselves as a student. The absence of its own preparation of students before receiving the learning and understanding of the concepts are still less its cause the student only receives the information presented by teacher. This will cause the students quickly forget the lessons and thinking activity of students and seeking truth of

information that presented is very less. Activity of student as critical thinkers has not done well and students are less sensitive to incoming information.

Lack of preparation in students will make students less creative in dealing problems. Creative attitude of students who are lacking can be seen from how the students seek information on the subject those materials. This causes the students tend not produce a lot of ideas to solve the problem because lack of learning resources obtained by students.

Competence of student's outcome is very important to be considered by educators to face an era full of challenges. Students are required to always active in dealing the problems in the era of globalization that full of competition and the higher complexity of the problems in all aspects of life. The development of creativity abandoned in formal education, but more meaningful for the development of children's potential and for the advancement of knowledge, arts and culture (Dewey, John, 2006)

Chemistry as science subjects have characteristics based on practice and experimentation. Therefore, students are required not only to feel understood the material and concepts but can be practiced by answering questions, conduct experiments and solve problems in daily life. This of course requires students to be sensitive to the existing problems by actively searching for a lot of resources to get a solution or problem-solving ideas from various perspectives.

Chemistry teaching methodology in schools that have implemented the educational unit level is considered to be quite varied in addition, with the various facilities such as a chemical laboratory and an adequate library as a source of student learning allows students to learn by looking for as much information. This course will help students to be more active in dealing the problems that exist. With active the students are expected to solve problems with more open attitude, systematic, logical, and produce a lot of ideas. The process of thinking like this will make students more independent learning with developing them own knowledge (Arends, 2009).

Based on discussions with teachers of chemistry student issues still tend to solve problems using methods delivered by teachers, students often forget the subject matter, and the lack of preparation of the students before the lesson begins. This cause the students are less prepare in solving problems (especially chemical matters). Students are also less sensitive to their environment issues related to chemistry. For example, from waking up to going to bed back students certainly faced with chemicals, such as soap, toothpaste, detergent, food and fruits, cosmetics, fuel, clothing, and so forth. Surely this is a problem that must be followed and it was time held innovation in teaching chemistry to boost traffic critical and creative thinking.

To dealing these problems one of which is the teaching methodology presented by the teacher that the teacher should know the right step in the present study include the approaches, methods, strategies, media and student learning resources. Among them by using an instructional activities that provide opportunities for students to think freely, directing students seek information from various sources, guiding students to be sensitive to problems, critical in solving the problem in various ways and from different angles (Hamalik, 2008).

One approach to learning that is considered appropriate in learning problem through the CTL is a learning system based on the philosophy a learner will be able to absorb the subject matter if they are able to absorb the meaning of the lesson. CTL on learning approach will help students in making connections between the subject matter with real life, so that students will get the meaning of what they learned as Johnson said that contextual teaching and learning enables students to connect the content of academic subject with the immediate context of their daily lives to discover meaning. It enlarges their personal context furthermore, by providing students with fresh experiences that stimulate the brain to make new connection and consequently, to discover new meaning.

CTL using concept map are expected to help students in improving learning outcome of students. The Problem that is raised will challenge students to think critically in solving these problems. Students are also challenged to be

creative in finding resources, put forward good ideas, and solutions solving of various viewpoints.

CTL is a system that stimulates the brain to arrange the patterns from the meaning. CTL system learning that suitable with brain that produce meaning in relating academic charge with context from student's daily life. Through by CTL using concept map, students are expected to be trained to improve learning outcome. Concept in teaching-learning process also determine the influence how the protege easy to catch the material topic. So one way is concept map. Concept map give the keyword of topic, save keyword is easy to solve the problem. Keyword easy to remember than all the material. (Johnson, 2009).

Based on the above reasons, the researcher is interested to conduct research under the title **“The Implementation of Contextual Teaching and Learning Using Concept Map on The Teaching Acid Base Topic”**.

1.2 Problem Identification

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

1. Nothing self-preparation of students before receive the learning and understanding of the concepts are still less its cause the student only receives the information presented by teacher.
2. The lack of application the instructional media to support the classroom learning process.
3. Students assume that the chemistry is an abstrack lesson because only taught theoretically.
4. The lack of student's participation in learning process.
5. Learning models that are less varied as required by the subject matter.

1.3 Research Scope

Based on the scope of problems identification above, this research will be limited as follows:

1. Arranging the teaching materials in the form of syllabus and lesson plan systematically.
2. Preparing the discussion material that taught by CTL and concept map.
3. Instrument test will be reviewed and revised by the lecturer from the Department of Chemistry Education.

1.4 Problem Formulation

The problem formulations of this research are:

1. Is there difference of student's outcomes in acid base topic by CTL using concept map compared to conventional model?
2. Is there influence the student's outcome of CTL using concept map on student's outcomes in learning acid base topic?

1.5 Research Objective

The objectives of this research are:

1. To know the difference of student's outcomes in acid base topic by CTL using concept map compared to conventional model.
2. To know the influence the student's outcome of CTL using concept map in learning acid base topic.

1.6 Research Benefit

The benefits of this research are:

1. Provide the broad outlines of innovative learning to the science teachers, especially in using the CTL with concept map in learning process.
2. Provide the learning reference that can be used in high school on the material acid base.
3. Help students to learn through active learning to foster their interest and motivation to learn.
4. Provide input to the next researcher to conduct the same experiment later.

1.7 Operational Definition

The operational definitions in this research consist of:

1. Contextual Teaching and Learning

Contextual teaching and learning is a conception of teaching and learning that helps teachers relate subject matter content to real world situations; and motivates students to make connections between knowledge and its applications to their lives as family members, citizens, and workers; and engage in the hard work that learning requires (Hudson, 2000).

2. Concept Map

Concept Map is part of a concept or idea as a basic material that aims to build students' knowledge in a systematic study (Istarani, 2011).

3. Learning Outcomes

Student learning outcomes measured on cognitive realm by giving pretest as initial knowledge and posttest as end knowledge after treatment.

4. Media

Media education in general is a teaching and learning tool. Multimedia application design offers new insights into the learning process of the designer and forces him or her to represent information and knowledge in a new and innovative way (Agnew, Kellerman & Meyer, 1996).

5. Conventional Model

According Djamarah (1996), conventional teaching methods are traditional learning methods or collectively, the lecture method, because since the first of this method has been used as a means of oral communication between teachers and students in the learning process and learning. In the conventional method of teaching history is marked with lectures, accompanied by an explanation as well as the division of tasks and exercises. Learning the conventional method, learners are more listened to the teacher in front of class and perform tasks if teachers provide practice questions to students. Are often used on conventional teaching methods include lectures, question and answer method, discussion method, the assignment method.