

CHAPTER I

INTRODUCTION

1.1 Research Background

Learning is an activity in order to acquire knowledge, skills, and positive values by utilizing a variety of sources for learning. Activity of student's in the learning process not only to listening and writing. Learning involves two parties namely the students as learner and teacher as facilitator. The most important activity in learning is a learning process. The learning process has several features the following: (1) learning to realize its nature, in this case the students feels that he is learning, arise in him the motivation to have a knowledge of the expected. (2) results obtained with the process of learning; in this case knowledge is not acquired spontaneously and instantly, but gradually (Slameto, 2010).

Learning chemistry is closely associated with experiments suitable with the characteristic of chemistry as an experimental science. There are 2 important things that must be noticed in studying the chemistry that is chemistry as a result of the finding of experts such as principles, laws, theories, and the chemistry as process that is scientific work such as laboratory experiment method. One effort to improve student's achievement is to use laboratory experiment method. By laboratory experiments method, activities students will be more focused attention on the learning process and not on other things as well students have the opportunity to develop the ability to observe all things that are involve in the process and can take the expected conclusions (Nurasiyah, 2010).

For those of us are active in education, especially learning in the classroom, a lot of questions unanswered to this day. These questions revolve around the issues of learning and the questions are quite reasonable, because the facts on the ground indicate that the phenomenon was quite apprehensive. First, most students in the school can not make the connection between what they learn and how this knowledge will be applied. Second, students have difficulty understanding the concept of academic (such as math concepts) when they were taught with traditional methods, but they are very necessary to understand the concepts as they relate to the world of work in which they will live. *Third,*

students have been expected to blindly follow those relationships, outside the classroom activities.

The empirical evidence can be strengthened by some research results that show problems in class lessons: First, most students are more interested and their achievements in mathematics, science, and language increased dramatically when helped to make connections between new information and knowledge/experience they have. Second, most students learn efficiently when they are allowed to work cooperatively with students in a group.

Unit Level Curriculum, that KTSP signaling in implementation strategy use with emphasis on student performance (contextual teaching and learning). So in this, the function and role of the teacher as a mediator only more students to formulate their own proactive about phenomena related to the focus of study is contextually not textually.

According to contextual learning theory, that learning only occurs when students process new information or knowledge so that information or knowledge get or understand them up three interms of reference (memory, experience and responsiveness of their own). Contextual learning is not a new concept. The application of contextual learning in American class rooms was first proposed by John Dewey. In 1916, Dewey proposed a curriculum and teaching methodologies associated with students' interests and experiences.

Development of the understanding gained during the conduct literature review it became clear that CTL is a combination of many "good practice" and several education reform approaches that are meant to enhance the relevance and use of functional education for all students. Contextual teaching is teaching that allows student's kindergarten through high school to strengthen, expand, and apply their knowledge and academic skills in a variety of challenges in school and outside of school in order to solve real-world problems or issues that are simulated (University of Washington, 2001).

In improve the quality of learning in school, among other done with an approach to contextual teaching and learning (CTL) (<http://dahliahmad.blogspot.com/2009/01/peran-pembelajaran-vtl-dalam.html>). Blanchard (in Trianto, 2008) asserted: Contextual Teaching Learning (CTL) is a concept helps

teachers connect of teaching materials with the real-world situations and motivates students to make connections between knowledge and its application to their lives as family members, citizens, and works. In others words CTL is learning that occurs in close relationship with actual experience. Learning process took place naturally in the form of student's activities and has their own work, not a transfer of knowledge from teacher to students (Trianto, 2008).

Based on the result of research that done by Zulfadhilah (2013) through Contextual Teaching Learning (CTL) approach in using media based on computer on colloid in class XI IPA SMAN 1 BatangKuis have the influences of increasing student's chemistry learning outcomes is 48,13%. In addition, research has been conducted by Nina Astuti(2012) concluded in her research that also used Contextual Teaching Learning (CTL) models in colligative properties of solution in class XII odd semester Academic Year 2012/2013 have the influences of increasing student's chemistry learning outcomes in class experiment is average $73,33 \pm 8,71$ and average gain of learning autcomes is 0,708 with effectivity 10,88% (SMA N 1 Binjai), $73,42 \pm 8,72$ and average gain learning autcomes 0,675 with effectivity 9,78% (SMA N 5 Binjai), and $75,64 \pm 8,27$ 71 and average gain of learning autcomes is 0,711 with effectivity 9,28% (SMA N 6 Binjai) and result of research that done by SantiUtari (2010) through Contextual Teaching Learning (CTL) in SMP N 15 Medan about topic acid, base, and salt have the influences of increasing student,s chemistry learning autcomes pretest average $26,032 \pm 9,229$ and posttest average $83,258 \pm 10,254$ in class experiment and class control is pretest average $21,645 \pm 11,509$ and posttest $68,129 \pm 10,544$ so based on average difference pretest and posttest is 23,109% and effectivity gain is 30,348%.

Laboratory experiment is an effort in process of teaching using laboratory equipment. Laboratory experiment give study experienced directly, so that higher meaningful rising. There are chances that students able to do observation, collecting data, make hyphothesis or making prediction based on collecting data till making conclusion. By experiment method in face all problems, so they aren't easy to believe that is not truth yet certain. Using laboratory experiment in process of chemistry teaching, very effective because the students is confronted with real

situation, so they will give their attention and interest in materials that are taught (Situmorang, 2010). In the research that was conducted by Hasibuan (2009), she got the increasing of students' achievement until 16,40% by applying laboratory experiments method in learning of elements, compounds and mixtures at junior high school.

Subject matter of abstract and concrete chemistry requires direct observation by the students towards the object and the material being discussed. Therefore, by using practical teaching methods are very effective delivery of teaching materials for students will be confronted with real situation. Practical methods of implementation in the laboratory is expected students will have the ability to think scientifically, is able to find scientific facts, identify, think critically and be able to accept criticism from fellow students owned a difference. Students are asked to experience for her/his, seek the truth and draw conclusions from what has been taught (Simanjuntak, 2010).

Students are often difficult to understand the subject matter of abstract chemical or chemical material which microscopic. This difficulty will bring adverse implications for students' understanding of chemical concept, because basically the facts that abstract or a microscopic is explanation for the facts and concept concrete, (Guru IT, 2009). Generally, teacher only emphasize the learning by using conventional method, are used in communicate the learning matter so that there is no interaction in learning (Yamin, 2004).

Chemistry is the study about the change of matter accompanied by energy change. Chemistry is the science to look for the answer of question what, why, and how the condition of nature involves the composition, structure, properties, changing, dynamic and energy of substances. Chemistry is an experimental science, can not be learned only by reading, writing or listening it. Chemical sciences not only learn to master a body of knowledge of facts, concepts, principles, but also is a process of discovery and mastery of the procedures or the scientific method. Therefore, in teaching chemistry there are two important issues that must be considered, namely the chemical as a product of the scientists in the form of facts, concepts, principles, laws, and theories of chemistry as a process of scientific work.

The chemistry topics of salt hydrolysis is categorized as a difficult subject to be taught to the students as the contents of the subject are difficult to understand. Salt hydrolysis is one of the subject matter in the even semester of Grade XI Sciences. From that learning activity so teacher has to combine the theory and practice when teaching of salt hydrolysis. So to make it easier for students to learn the salt hydrolysis, the author argues that CTL models with laboratory practicum method to be used to teaching salt hydrolysis.

From description above then the researcher interested in conducting research about practical method by the title: **“The Influence of Applied the Contextual Teaching Learning (CTL) approach Laboratory Experiment to Increase Student’s Achievement on Topic Salt Hydrolysis“**.

1.2 Problem Identification

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

1. The low of students learning result in chemistry lessons
2. Students had difficulty in studying chemistry
3. Students are rarely taught to solve the problem and to make connections between knowledge and its application to their lives.
4. In teaching and learning process not grow the enthusiasm from students, especially to do experiment for use nature material.

1.3 Scope of Research

Based on the identification on the problem above, this study is limited only to see student’s achievement in chemistry on topic of Salt Hydrolysis which taught in XI grade senior high school in even semester at academic year 2012/2013 in state SMA Negeri 3 Medan is taught by using Contextual Teaching Learning (CTL) approach laboratory experiment method.

1.4 Problem Formulation

1. Whether is student's achievement that taught with contextual teaching learning (CTL) approach laboratory experiment is higher than conventional method on topic of salt hydrolysis?
2. What cognitive aspect of the student's achievement that taught with contextual teaching learning (CTL) approach laboratory experiment on topic of salt hydrolysis?

1.5 Research Objective

The objectives of this research are:

1. To know the better method CTL on topic of salt hydrolysis to get the best students achievement.
2. To know whether the student's achievement that taught with contextual teaching learning (CTL) approach laboratory experiment is higher compared to conventional method on topic of salt hydrolysis.

1.6 Research Significance

The significances of the research are:

1. As an input for the teacher, especially chemistry teacher in teaching learning process must have learning strategy to getting the learning models that can increase student achievement in chemistry on topic of salt hydrolysis.
2. To make the student's learning be a meaningful by contextual teaching learning (CTL) in teaching learning process.
3. As a reference for the researcher for the researcher to apply the appropriate learning model in teaching and learning activities in school, especially by using the contextual teaching learning (CTL) models.

1.7 Operational Definition

1. 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. Contextual teaching and learning involves, namely: Constructivism, Inquiry, Questioning, Learning Community, Modeling, Reflections, Authentic Assessment, expected learning more meaningful for students (Rusman, 2011).
2. Laboratory in natural science is a place where teacher and student doing an experiment, observation, and research. Laboratory is place which support activity in class. Otherwise activity in class is support in laboratory's activity. By experiment method students have skill using science method in face of all problems, so they are not easy to believe something that is not truth yet certain. Using laboratory experiment in process of chemistry teaching, very effective because the students is confronted with real situation, so they will give their attention and inters in materials that learned. The laboratory experiment will give more oppurtunities to the student to train themselves that could improve their intellectual activities in practice, patience, and accuracy (Situmorang, 2011).