CHAPTER I
INTRODUCTION

1.1. Background

Education is a process of improve student that to be able adapt as well as possible toward their environment, so there will be change in their behavior that make useful to this process, so the target of that change can be reach as expected. (Hamalik, 2009). In the teaching and learning process not all of the student have a same skill to understand of each of the matters. The ability of student is various, there is quick, medium and low. In general teaching, teacher still use conventional teaching and sometimes this method is not suitable for all situation, so student get bore and think difficult about the topic actually chemistry.

International school is a school that meets all National Education Standards and enriched curriculum OECD member countries and / or other countries that have excellence in education. So that the curriculum used in the SBI and RSBI is enriched by the curriculum and the curriculum developed countries, but the SBC is more dominant. Education Unit Level Curriculum (SBC) 2006 provides an opportunity for teachers to choose ways of delivering the material that best suits the characteristics of the material. Buffer Solution Based on the characteristics of matter that is abstract, conceptual, sequential, and contains elements of algorithmic, then one strategy that can be used in presenting the material is brain-based learning. (Ni'mah, anis.)

Many students think chemistry is the one of the most difficult subject to study at all level of schooling. Learning chemistry places many demands on students and teachers that can seem insurmountable. Instructors display mathematical formulas, chemical symbols, and scientific measurements simultaneously to describe phenomena that are not readily apparent to students. Moreover, the concepts of chemistry are often seen as abstractions confined to the chemistry classroom and not applicable outside of school (Stieff and Wilensky, 2003).

The students lack comprehension about chemistry's lesson because some factors. Those are teacher, students, method and available facilities do not support the teaching-learning process. Students' achievement will be increase if teacher uses a suitable teaching approach that will make students understand the lesson better. (Jumira, 2008). Based on the child's developmental level, cognitive processes involve a change of thought and intelligence of individuals. When you were being a little teenager, do you think the skills are as good as it is today? Can you solve issues are difficult and abstract reasoning logically about complex topics? Adolescence has many phases that affect the learning activities. One phase that must be understood is through a phase of pre-adolescent phase in which the adolescent operational i.e. not understand and appreciate the things that are abstract. Students will find it difficult to think of an abstract problem and have a high degree of difficulty. (Santrock, John W. 2004).

In the process of learning many factors that come into play. Broadly speaking, the factors that influence the learning process are grouped into two: Internal factors and External factors. Internal factor is the factor that originates from within the student as a physiological factor that includes the hearing, sight, and the physiological condition of the student seta psychological factors which include the need for learning, the intelligence of children, motivation, attention, thinking, memory and forgetting. And the external factor is the factor that comes from outside us such students, such as the learning environment factors include the natural environment, physical and social systems as well as factors that include the presentation of curriculum, learning materials and methods of presentation. (Mappa and Basleman, 1994).

The low recovery of student learning outcomes in the materials buffer solution is the use of appropriate teaching methods that have not been interesting or boring, and not students, so the effect on student learning outcomes. This is because the buffer solution of the material is often taught using the lecture method, so the activity of students are less involved. Would benefit from improvements in the teaching materials, among others, with the buffer solution

using one method of teaching that can enhance the activity so that students are expected student learning outcomes will also increase.(Sari, Eka Purnama. 2009)

Teaching and learning process must begin in an atmosphere of fun and not monotonous teacher-centered because it is basically the chemical is one of the subjects aimed at changing the mindset of cognitive, behavioral attitudes and develop students' analytical power in solving problems. Thus, students in the learning process should be more active and get a fun learning experience and students will be more motivated to learn. Motivation is clearly going to affect student learning outcomes.

With the facts above, it is necessary to take an action to increase the student activity which will affect student learning outcomes. One way to do to solve this problem is to apply the model of inquiry learning with video media in the learning materials Buffer Solution.

Designing inquiry learning university students develops problem-solving skills, logical reasoning as well as reflective thinking. It involves working as a member of a team, questioning, being creative, and shaping the skills for continued intellectual development. It is argued that inquiry-based group-work is one of the most important learning experiences because it enables the exploration of theoretical ideas and conceptual change. This paper presents results about the use of students' questions to shape these processes. In fact, student-generated-questions can be used as efficient guides in the preparation, focus, diagnosis, development, implementation and evaluation of group-work.

Learning model with inquiry learning model by using video demonstration is precisely to overcome the factors that affect learning so students will be more interested in the lessons that will be presented. Based on the problems above, the writer is interested to conduct a mini research titled "**Implementation of Inquiry Learning Model by Using Video Demonstration to Increase Students' Achievement in Buffer Solution**."

1.2. Problem Identification

Based on the background of this research, the problem statements in this research are as follows:

1. The chemistry subject for students is difficult to understand.
2. Students become more passive and can't develop their thinking way by using traditional learning method.
3. Inquiry Learning Model still rare to use in chemistry teaching and learning process.

1.3. Problem Limitation

In order to keep our research become more focused and directed, we limit our problems as the following:

1. This study was focused on the arrangement of inquiry learning model by using video demonstration.
2. This study was limited to the unit of Buffer Solution topic.
3. This study was limited to XI grade students in RSBI SMA Negeri 1 Berastagi.
4. This study was limited to 64 students in two classes.

1.4. Problem Statement

To give the direction of this research, the problem statements in this research are as follows:

1. Is the implementation inquiry learning model by using video demonstration to increase student's achievement significant higher than using Inquiry Learning Model video demonstration?

1.5. Research Objectives

The objective of this research is to increase the understanding of students in Buffer Solution as a topic in chemistry subject.

The specific objectives that will be achieved in this research are the following:

1. To increase student achievement in Buffer Solution by arranging the inquiry learning model by using video demonstration this can be develop the critical thinking of students.
2. To investigate the effectiveness of inquiry learning model by using video demonstration to increase the student achievement in Buffer Solution topic.
3. To get the data from implementation of inquiry learning model by using video demonstration.

1.6. Research Benefits

The benefits that will be gotten in this research are the following:

Student:

1. Making the teaching and learning process become more interest and the entire student involved in the learning process.
2. Inquiry learning model by using video demonstration developed in this research can develop the basic concept to connect between what students learn in the science classroom with real life.

Teacher:

1. Inquiry learning model by using video demonstration as a one alternative model to increase the students' achievement.

Researcher:

1. Inquiry learning model by using video demonstration as a matter of a reference to result research.
2. Knowing the effectiveness of developing the inquiry learning model by using video demonstration to increase the student's achievement in Buffer Solution concept.
3. Getting the learning models based on constructivism approach that can be increase students' achievement in Buffer Solution.