

CHAPTER I

INTRODUCTION

1.1. Background

Learning activity is a process containing a series the activities of teachers and students on the basis of reciprocal relationships that take place in an educational situation to achieve certain goals. To be Able to achieve a good mutual relationship, the teachers are required to create a meaningful and effective learning process so that the learning process can run smoothly and learning objectives was achieved.

Education is a forum for educating the nation, because through education to create well-educated human resources capable of facing the development of increasingly faster times. However, if the quality of education is still low, then that is created are human resources low until now the quality of education in Indonesia has not shown a satisfactory result. This condition also occurs in chemical education at this time. One indicator of the quality of education is the acquisition of student learning outcomes. Student learning outcomes can be seen from the success of teachers deliver the subject matter that the results meet the specific instructional objectives of the lesson material, absorptive capacity and the level of students' understanding of the lessons delivered. (Djamarah and Zain, 2002).

Chemistry including, one branch of science, because investigations of chemistry using scientific procedures. Chemistry is the science that studies the composition or structure of matter, changes in shape, as well as the Accompanying energy (Keenan, 1986).

Chemistry as one of specialization in science subjects in class XI. Classroom XI is a science that is rich of abstract concepts. Chemistry is not a new subject for students, but Often found a high school student who considers chemical materials complicated and difficult, to learn, so students have first felt less Able to study the learning outcomes even under the KKM. Purwaningtyas

(2012) states that the causes of low student achievement are caused by several factors, both factors of teachers, students, environmental and other factors that can't be controlled. Teacher of factors is not possible using a tool that can be integrated in all teaching and learning activities and require teachers to be more creative in the implementation process so that teaching and learning activities to teach still lead to a conventional method. To improve the quality of student learning outcomes, teacher required in order to create a good learning. Learning can be done by developing a model of learning and instructional media. The learning model is as a design that describes the details of the process and the creation of environmental situations that allow students to interact so that changes or developments to the students. While the media is a means of communication and complementary means that it contains elements that build on the communication. (Arsyad, 2011)

In accordance with the results of observations and interviews with one of the teachers who teach in high school, there are various factors that Affect the poor quality of the learning that students Considered that the subject matter, especially its chemical acids, bases and salts that difficult. This Affects students 'attitudes were less enthusiastic in taking into account the lessons so that students Easily bored and talking to himself when the teacher was teaching, as well as the lack of students' understanding of the concepts being taught. In addition, the lack of interaction between students resulted in the lack of cooperation among the students when completing about chemistry, visible when the teacher Gives homework, students prefer working individually rather than discuss or work together so that the students' ability to solve problems is limited. Other factors, roommates Affect the poor quality of teaching chemistry in the materials acids, bases and salts items, namely congestion of communication, students feel less confident in asking questions, argue and Actively Participate in the learning process. Due to the lack of activity of students during the learning process which makes the lack of understanding of the students' learning results Obtained by the students can be said to be unfavorable.

To solve this problem, it requires a paradigm shift in learning. Some paradigms are Necessary adaptation of Arnyana (Ida, 2010) items, namely: (1) of the teacher's role as a source of knowledge Became friends learning, (2) of learning based on facts towards problem-based or project, (3) of the habit of repeating and rehearsal towards the planning and investigation, then the application is developed in learning problem-based learning, learning model of *Problem Based Learning* (Ida, 2010). Also in this case required innovation in the application of models and associated methods of teaching chemistry in everyday life. Innovation is in addition carried out by the teacher in the learning process in the classroom, and also can be done by developing students' worksheets used in chemistry learning. One medium that is used to supplement the learning models using *Problem Based Learning* is a media student worksheet (LKS). Media LKS is a type of handout is intended to help students learn directionally. This media is expected to increase of students' understanding of the study material with PBL methods, so that students have a sense of curiosity and Able to motivate and encourage the student activity in learning (Fadlana, 2013).

The use of *Problem Based Learning* teaching has proven models provide good results and improve student achievement. It can be seen from the results of research conducted by Ida (2010) in his study on the implementation of *Problem Based Learning* (PBL) on student learning outcomes Judging from the *Intelligence Quotient* (IQ) states that the implementation of *Problem Based Learning* effect on student learning outcomes in terms of IQ in students XI IPA SMAN 1 Ubud. The same is stated by Researchers Ulfah (2013) in his research on the application of the *Problem Based Learning* (PBL) with student worksheet media to improve the ability to think critically and logically. The results Showed that the application of the Model Learning Problem-based learning improve learning outcomes and the ability to think critically and logically students, evidenced from the first cycle of an average percentage of 68.33% with high criteria and the second cycle into 88.96% by very high criteria, In line with the research above, Fadlana (2013) Reported the results of research through a comparative study using PBL (*Problem Based Learning*) is equipped with

Macromedia Flash and Student Worksheet (LKS) on learning achievement in terms of student motivation on the material acids, bases and salts classes VII SMP Negeri 1 Jaten Karanganyar 2012/2013 school year shows the effect of PBL teaching models with Macromedia Flash and worksheets on student achievement.

Based on the above background, Researchers interested in conducting research with the title “**The Development of *Problem Based Learning (PBL)* with Innovative Student Worksheet to Increase Student’s Achievement on topic Acid and Base.**

1.2. Problem Identification

Based on the background can be identified the following issues:

1. Low students' understanding of the concepts being taught
2. Presentation of the material is complicated, less interesting, monotonous and boring
3. The lack of availability of worksheets that require students perform simple experiments and comes with practice questions that relate to experiments designed that because student worksheet focused on the usual practice questions.
4. The use of models with learning media, Instant confirmation has not been used in the learning process

1.3. Problem Formulation

In accordance with the background and limit the problems Mentioned above, the formulation of the problem in this study are:

1. Is the problem based Learning (PBL) with innovative student worksheet (LKS) has been prepared in compliance with the eligibility criteria of the standard presentation BSNP, Lecturer, through the perception of chemistry teacher and expert validation?
2. How student achievements improve problem based learning (PBL) with innovative student worksheet (LKS) on the topic of acid-base?

1.4. Problem Limitation

A restriction on the problem needs to be done so that the research is well done. Limitations of problem in this research are as follows:

1. The study was conducted in SMA 2 Kisaran
2. The research material is acid-base
3. Research conducted by providing innovative student worksheet acid-base
4. The study was conducted by using model problem base learning (PBL)

1.5. Research Objectives

Based on the formula above problems, while the objectives of this study are:

1. Obtain problem based learning (PBL) with innovative Student Worksheet (LKS) which have been prepared in compliance with the eligibility criteria of the standard presentation BSNP, through trials against student learning outcomes, through the perception of chemistry teacher and expert validation.
2. Obtain data on increase student achievement taught using base on learning model of problem based learning (PBL) with innovative student worksheet on the topic of acid-base?

1.6. Research Benefit

As for the benefit of this research are:

1. For Researchers

Researchers gain a lot of knowledge about the use of student worksheets based innovative learning model of *Problem Based Learning* to student achievement of the learning process.

2. For student

Chemistry help improve student achievement of students in the learning process materials acids, bases.

3. For Teachers

Insightful thinking teachers in teaching so to as leave a way of learning that is less attractive and monotonous by developing innovative learning models.

4. For Schools

Improve the quality and the quality of schools through improving student learning student achievement and teacher performance in school.

5. For student or researcher Further

As information material for research to developed a better future research.

1.7. Operational Definition

- a. Model learning *Problem Based Learning* is a learning model that begins with giving problems to students where the problem is encountered or an everyday experience - the students. Furthermore, students solve the problem of finding new knowledge. (Rusman, 2013)
- b. Innovative student worksheet is someone's attempt to use reasoning, the ability of imagination, a variety of stimulant and individuals surrounding the new product both for themselves and the environment and student worksheet type of handout is intended to help students learn in a focused and Able to Enhance students 'understanding of the study material (Mulyasa, 2013).
- c. Student achievement is a student achievement in participating in the learning process at a level that Followed and is a manifestation of the ability of self-optimal after receiving lessons (Sudjana, 2004).