

CHAPTER I

INTRODUCTION

1.1. Background

Globalization has changed the way people live as individuals, citizens and citizenship. No one can escape the flow of globalization. Each individual is faced with two choices, namely to place himself and act as a player in the current civilization of globalization or become a victim of the rapid flow of globalization. The flow of globalization also falls into the area of education with both positive and negative impacts. In this context the task and role of teachers as the spearhead of education is very influential.

The duties and roles of teachers from day to day are increasingly heavier along with the development of science and technology. Teachers as a major component in the world of education are required to balance the development of science and technology in society. This is because of teachers have an important role in shaping the intelligence of society in education environment. Teachers in schools are expected to produce competent learners and ready to face the challenges of life in the era of globalization with confidence and confidence. Education must create qualified human resources, both scientifically and mentally. Therefore, it takes a professional teacher in educating the students who are superior and qualified.

Professional teachers are teachers who have a number of competencies that can support their duties. Law Number 14 Year 2005 regarding Teachers and Lecturers article 10 paragraph 2 mentions, there are four competencies that must be owned by a teacher. These competencies include pedagogical competence, personality competence, social competence, and professional competence gained through professional education.

According to the Surruchi and Surrender S.R.(2014:56) achievement tests are one of the most important aspects of teaching – learning process and the two most important characteristics of an achievement test are its reliability and content validity. For a test to be reliable and valid, a systematic selection of items with regard to subject content and degree of difficulty is necessary. Moreover, the

reliability of the test also depends upon the grading consistency and discrimination between the students of different performance levels. Thus the quality and effectiveness of a test depends upon the individual item. To determine the quality of individual item, item analysis is done after the administration and scoring of the preliminary draft of the test on the selected sample. Item analysis measures the effectiveness of individual test item in terms of its difficulty level and power to distinguish between high and low scorers in test. Thus it helps in selecting and retaining the best test items in the final draft of the test rejecting poor items and also shows the need to review and modify the items.

In pedagogic competence, teachers are required to conduct learning evaluation activities. Evaluation required teachers to measure and assess the level of achievement of a program that has been implemented. Evaluation is also used to find out information about the strengths and weaknesses of the program, so that the existing information can be used as a basis in decision making. This is in accordance with the Regulation of the Minister of National Education (Permendiknas) No. 41 of 2007 on Standards Process which states that "Evaluation done educators on learning outcomes to measure the level of achievement of competence learners, and used as material preparation progress report learning outcomes and improve the learning process ".

Assessment of learning outcomes is an activity for obtaining information about student learning outcomes that have followed learning activities. Assessment activities need to be done to measure the extent to which a student's success as learners and educators, educational units and government as education providers. So the assessment results should be a reference for all related parties for mutual introspection and to do improvement and improvement better. Regulation of the Minister of Education and Culture (PERMENDIKBUD) No 66 of 2013 on the standard of educational assessment explains that the assessment activity aims to ensure the implementation of learning to conform to the competencies that have been planned, then the implementation of professional assessment and reporting of the results of the assessment objectively and accountably. Good assessment of learning outcomes should also take into account

the standards of good, noble assessment of the mechanisms, procedures and valuation instruments used.

Based on Government Regulation no. 19 of 2005 on National Standards of Education, evaluation of learning outcomes conducted with the assessment of learning outcomes that aim to observe process, progress and improvement of learning outcomes and to assess the achievement of competence learners, as a material preparation progress report learning outcomes and to improve the learning process. Assessment of learning outcomes is done in the form of daily repetition, mid-term repetition, repeat the end of the semester and repeat class increase. One of the tools used as a means for assessment of learning outcomes is the test.

According to Azwar (2012: 8), the test is a set of questions that can reveal one's success in learning. Tests are generally used to assess and measure student learning outcomes, especially cognitive learning outcomes regarding the mastery of teaching materials or students' mastery of the lessons that have been taught. The success of an education can be seen from the pattern of assessment of learning outcomes that have been determined according to applicable curriculum standards. Assessment is an important part of the learning process in education. So it can be said that whether or not educational activities, one of which is determined by the assessment of learning outcomes. The accuracy of assessment of learning outcomes has a very significant impact on efforts to improve the quality of education in schools.

Implementation of the assessment using a tool or instrument called the item. The item is a set of questions about the subject matter to be measured or tested, the items are of several types but generally the items that are often used are multiple choice items and descriptions. The item is one of the instruments to perform the assessment, especially the evaluation of Final Exam Semester (UAS). So that an item must really have a good quality first so that the assessment is really measurable. Good items have at least five quality tests: validity, reliability, distinguishing, level difficulty, and effectiveness. But in fact some educators still do not care about the quality of a point of question there are some teachers in conducting the assessment tool is only derived examples of problems

that exist in textbooks, collection of questions and items that come from the internet. Some of these educators think that what is important to them is the availability of assessment tools to be used in assessment activities without regard to the procedures and mechanisms for the preparation of the correct items, a professional teacher should set up a scoring tool based on procedures and mechanisms for the preparation of the correct item so that the quality of the tool and the results of these assessments can be accounted for.

In order to obtain information in the form of problems that will be raised to the background of research problems, observations were made in January 2018 in SMA Negeri 1 Berastagi, the method used in the observation activity is the interview to obtain information on the assessment and assessment instruments in SMA. Direct interviews to chemistry subject teachers. From the interview, the researcher can find out that the final repetition of the odd semester of chemistry class XI which is tested in SMA Negeri 1 Berastagi Academic Year of 2017/2018 as one of the evaluation made by the teacher of the previous subjects was not tested first quality is known qualitatively and quantitatively. Problem test as a tool of evaluation of learning outcomes that have been tested need to know the quality in terms of achievement terms of validity, reliability, distinguishing power, the level of difficulty, and distracter effectiveness . According to Arikunto (2008: 57) the problem is said to have a good quality when in accordance with the curriculum, qualified aspects of the material, construction and language, has the validity, reliability, and distinguishing high, difficulty level and can measure student achievement. Based on the above description of the researchers will conduct a study with the title “*Item Analysis of Chemistry Odd Semester Examination of Class XI SMA Negeri 1 Berastagi Academic Year 2017/2018*”.

1.2. Identification of Problem

From the description of the above background can be identified problems that arise as follows:

1. Is it a matter of repeat the end of the odd semester of chemistry class XI SMA Negeri 1 Berastagi in accordance with the indicators to be achieved?
2. How is the level of validity, reliability, difficulty level, distinguishing power and distracter effectiveness of the final odd semester examination

of chemistry class XI SMA Negeri 1 Berastagi Academic Year 2017/2018?

3. Is the question of the final of the odd semester of chemistry subjects given to the students of class XI SMA Negeri 1 Berastagi Academic Year 2017/2018 can measure the achievement of the competencies in the set?
4. Not yet measured of cognitive domain level in odd semester examination of chemistry class XI of Academic Year 2017/2018?
5. The odd semester exam of the chemistry subjects of class XI Academic Year 2017/2018 are tested without going through the stages of empirical analysis?

1.3. Scope of Problem

Based on the identification of the problem, the limits of the researcher focus on:

1. Item analysis of the final exam of the odd semester of chemistry class XI SMA Negeri 1 Berastagi Academic Year 2017/2018. Analysis of the matter of this license is intended to know the quality of exam questions in terms of validity, reliability, difficulty level, distinguishing power and distracter effectiveness.
2. This analysis will be done on the item of multiple choice exam of the final semester odd of chemistry class XI SMA Negeri 1 Berastagi Academic Year 2017/2018.
3. Learning outcomes of students in the analysis is the achievement of students to the competencies that have been set.

1.4. Formulation of The Problem

Based on the limitations of the problems that has been described above,

1. Then the formulation of the problem in this study is how the quality of the item of final exam odd semester chemistry class XI SMA Negeri 1 Berastagi Academic Year 2017/2018 in terms of validity, reliability, difficulty level, distinguishing power and distracter effectiveness?

2. How is the distribution of levels of the measured cognitive domain in the item double choice odd semester exam subjects chemistry grade XI SMA Negeri 1 Berastagi 2017/2018?

1.5. Purpose of Research

Based on the formulation of the above problems, the purpose of this study is to determine the quality of the item of the final exam of the odd semester of chemistry class XI SMA Negeri 1 Berastagi Academic Year 2017/2018 base on qualitative analysis and quantitative analysis.

1.6. Benefit of Research

The results of this study are expected to have benefit, among others, as follows:

1. Theoretically

The results of this study are expected to contribute in the form of a reference to the analysis of grain quality problems that are good for science and education. In addition, as a reference for material considerations for further researchers.

2. Practically

- a. For Researcher

This research is expected to increase the knowledge and insight of researchers so that researchers can apply the knowledge gained when entering the world of work.

- b. For Teacher

This study provides input to the teachers of chemistry subjects in particular, on the analysis of items on the subject of chemistry to improve the quality of tests done next.