

CHAPTER I INTRODUCTION

1.1. Background

In teaching and learning activities, mutual interaction between teacher and students, the most important thing to do by students is to actively participate in the learning process. This is in accordance with the application of the curriculum used today, namely learning is centered on students and not on teachers. The curriculum is the 2013 curriculum whose learning includes the development of the domain of attitudes, knowledge and skills using a scientific approach that includes five learning experiences namely observing, asking, gathering information, associating and communicating. Of the five scientific stages, only the "questioning" stage cannot be deliberately raised by the teacher, the teacher must give encouragement to students and develop it (Kemendikbud, 2014).

When a student asks, then the student has seen a problem or problem from something he is learning. The emergence of these problems shows that students begin to think to find answers to problems found. Asking is one indication of people thinking. Thinking is considered a cognitive process, a mental action to gain knowledge. Asking can be done in 2 ways, namely, asking directly (asking verbally) and asking with alternative writing. The opportunity to ask in writing can also be an alternative for students who lack confidence in asking questions. In addition, asking questions through writing can foster students' creative thinking by expressing each of their questions through the writing that they do (Rizkianingsih, 2013).

One way to measure students' questioning skills is by looking at the frequency of students who ask and answer, and the quality of the questions (Ramadhan, et.al., 2017). The quality of student questions is measured in reference to Bloom's Taxonomy (Smith & Szymanski, 2013). The quality and type of questions in learning need attention to improve students' thinking skills

(Hasruddin, 2011). Level of thinking based on Bloom's Taxonomy includes remember (C1), understand (C2), apply (C3), analyze (C4), evaluate (C5), and create (C6) on dimensions of facts, concepts, procedural, and metacognition (Anderson & Krathwohl, 2001).

Based on observation result in SMA Negeri 11 Medan is one of the schools that uses the 2013 curriculum in all classes X and XI as a reference for the implementation of learning. Biology is one of the compulsory subjects for high school students in the Department of Mathematics and Natural Sciences. Biology really needs to be studied because it deals with everyday life. From the three of school is one school that has varied learning achievements for students, this is due to the ability of students who are different in understanding the subject matter.

Observation results of teaching and learning activities indicates that the teacher uses active learning methods (*active learning*) like a presentation in the learning process. This is in accordance with the application of the 2013 curriculum which aims to make students active in learning. Student Centered Learning (SCL) learning has dominated the learning process in class because this learning makes students active and provides opportunities for students to explore their abilities.

From the results of interviews with biology teachers, it was shown that the low presentations made by each student in the group were required to ask questions both verbally and in writing, which later the questions were collected and answered by the presenter or answered by the teacher himself. The learning process results in two-way interactions and it can be seen that the ability to ask students in biology learning is said to be quite high. And based on the results of interviews, the value of completeness (KKM) on biology subjects is 70. Most students can reach the specified KKM value. Students who actively ask will increase their knowledge, so that when learning is achieved the values can meet the KKM, so asking is very important in learning.

Based on the research that about the factors causing student difficulties in expressing questions conducted by Cholifah it was found that the difficulties of students in expressing questions in the class included in the high difficulty category one of which was the indicator of the relationship between students and

teachers having a percentage of 61.66% including the difficulty too high. The results of the study prove that students are unable to communicate with the teacher so that the fear arises from the teacher. This causes the difficulty of students asking questions in the classroom is a high difficulty. Though the question is one of the important elements in a learning process. Students ask questions that are still at a low cognitive level (C1 to C3), this has also been revealed by previous researchers by (Ramadhan, 2017) in the study stating that students still dominate low-level cognitive questions where 23,30% of students get results ask questions with 100% quality classified as Low Order Thinking Skills (LOTS), so there are no questions that lead to High Order Thinking Skill (HOTS). Therefore, the importance of student questions in learning encourages researchers to find out how well the level of students' ability to ask, especially on biology subjects.

Based on the description above, the author is interested in conducting a research entitled "**Analysis of Students' Questioning Ability Based on Bloom's Taxonomy at Biology Subject of Grade X and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019**".

1.2 Problem Identification

Based on the background that has been stated, some of the problems that can be identified are as follows :

1. The quality of student questions is still low
2. Most students are only silent when given the opportunity to ask questions.
3. Students are less trained and do not have the courage to be able to ask questions.

1.3 Problem Scope

In this research, the research problem identification is:

1. The questioning ability of the students studied was limited to the number of students asking and questions asked, categorization of questions in cognitive dimensions based on Bloom's Taxonomy revisions Anderson and Krathwohl, 2001.

2. Questions include verbal and non verbally questions.
3. The question that will be used in learning is the biology subjects.

1.4 Research Question

Based on the problem identification and research scope, research question can be formulated as follow:

1. What is percentage question's quantity based on Bloom's Taxonomy at Biology Subject of GradeX and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019?
2. What is question's category based on Bloom's Taxonomy at Biology Subject of GradeX and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019?
3. How is the question's quality based on Bloom's Taxonomy at Biology Subject of Grade X and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019?

1.5 Reasearch Objective

The objective of this research is:

1. To know the amount of question's quantity at Biology Subject of Grade X and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019.
2. To determine question's category Based on Bloom's Taxonomy at BiologySubject of Grade X and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019.
3. To know the question's quality based on Bloom's Taxonomy at Biology Subject of GradeX and XI IPA in SMA Negeri 11 Medan Academic Year 2018/2019.

1.6 Research Benefit

The results of this study are expected to provide the following benefits:

1. This research is useful as a development material to improve the quality of learning and the ability to ask students.
2. The results of the study can be used as scientific documentation for students who need references regarding the ability to ask students.

3. This research can be used as a reference for comparison material regarding the results of student's questioning abilities based on Bloom's Taxonomy.

1.7 Operational Definition

To clarify the terms used in research, an operational definition is made as follows:

1. Analysis is a review and decomposition of data in the form of students' ability to ask to produce conclusions.
2. The ability to ask is one measure to determine the level of understanding of students' concepts after the implementation of learning which includes the quantity and quality of student questions.
3. Bloom's Taxonomy is grouping cognitive dimensions into 6 categories, namely C1 (Remembering), C2 (Understanding), C3 (Applying), C4 (Analyzing), C5 (Evaluating) and C6 (Creating).

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