Improving student intelligences trough questioning identification

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Abstract. The aims of the research were to find out improving students intelligences trough questioning identification. For this purpose, data were analyzed by the prospective problem posing process. It was a descriptive research with a sample of elementary school. The entire of the research is in grade two. Qualitative data contains students intelligences from students questioning identification. Design of improving students intelligences trough questioning identification were measured by question type, suitability with the material, have an answer or not, a degree of difficulty, level of courage in asking, and why they ask that question. All variables were analyzed using Bloom’s Taxonomy. All students involved in this study have received permission from parents. The participants in this study were students in one of the elementary school in Indonesia. Participants totaled 29 students with an age range of 7-8 years. This research was conducted by researchers from several studies of student intelligence, observation with research instruments in the form of observation sheets, documentary, and video of activity classes. Students questioning identification category with a questioning medium, questioning low, and questioning high. In conclusion, it was concluded that the difficulties questioning skills determined as; lack of experience, lack of the content knowledge, not recognizing the cognitive levels of the students, and difficulties in understand problem texts. The solutions for the teacher which were suggested in the scope of this research were as the following; emphasizing problem-solving and posing studies, in-depth analysis of the curriculum, teaching special teaching methods in details and resorting to resources during problem posing process.

1. Introduction
Learning activities can’t be separated from question and answer activities, both between students and teachers or between students with other students. Questioning skills are an integral part in order to improve the quality of learning processes and outcomes [1]. It can be seen that the quality of processes and learning outcomes that are well implemented are indicators in improving students’ intelligence. Every student is sure that intelligence are very important because they are related to their beliefs and behaviors in other areas [2]. Beliefs about intelligence are especially important in educational settings [3]. Students who view intelligence as something that can be changed tend to be more academically motivated and perform at higher academic levels, although who believe that intelligence is changeable tend to have mastery goals and positive effort beliefs, which leads to fewer ability based, helpless attributions; they also rely on more positive strategies, which leads to improved grades.

Some of the studies that have been carried out previously have relevance to the research that will be carried out, these studies are among them Fordyce conducted a study entitled "Intelligence Tests in
Classifying Children in The Elementary School" [4]. In the study, tests were given to 1,078 elementary school students who were classified as follows, namely the basic level (I, II, and III) 602 students, middle class (VI) 476 students. The results of the study found that the ranking in mental tests of male students was higher than female students.

The problem of activeness in asking students in the learning process is still lacking. This matter was caused by difficulties questioning skills determined as; lack of experience, lack of the content knowledge, not recognizing the cognitive levels of the students, and difficulties in understand problem texts. As a result, student activities are only focused on listening to and recording the teacher's explanations. This condition occurs in the learning process in Indonesia. As in the elementary school studied, the average student is still passive to participate. Interactions that take place during the learning process are still one-way (teacher to students), so that their asking skills don’t increase.

Of all the studies outlined earlier, there are no studies that explicitly offer behavior to students to improve students' intelligence through questioning skills in the learning process. The purpose of this study is to train students to ask questions, so that students continue to practice it will improve their intelligence.

2. Method
All students involved in this study have received permission from parents. The participants in this study were students in one of the elementary school in Indonesia. Participants totaled 29 students with an age range of 7-8 years. This research was conducted by researchers from several studies of student intelligence, observation with research instruments in the form of observation sheets, documentary, and video of activity classes. Data were analyzed from the observation sheet, documentation observation and video activities of students.

3. Results and discussion
Students ability in questioning need to be developed. These are the identification of question from the student from low elementary school (2nd grade). From these questions, we can find 19 questions that have different type and the rest of them are the same things:

As shown in table 1 student questions are classified into 3 types as measured by the Taxonomy Bloom’s, including questions that have low think ability (C1-C2), medium think ability (C3-C4) and high think ability (C5-C6). And then, student questions are also classified according to the mathematics, social, mathematics-social and non-mathematic / non-social types, correct or incorrect, and answerable or un-answerable. Based on the 19 different types of questions students there are:
3.1. Type of question mathematics, social, mathematics-social and non-mathematic/non social

- 26% of mathematics questions type, which includes 60% classified of the C1 domain, 40% of the C2 domain
- 37% of social question type, which includes 43% of the C2 domain, 43% of the C3 domain, and 14% of the C4 domain
- 5% of mathematics-social question type, which includes 100% of the C4 domain
- 32% of non-mathematic / non-social question type, which includes 17% of the C1 domain, 50% of the C2 domain, 33% of the C4 domain

3.2. Type of correct or incorrect question

- 95% of correct question type, which includes 28% of the C1 domain, 33% of the C2 domain, 17% of the C3 domain, and 22% of the C4 domain.
- 5% of incorrect question type, which includes 100% of the C2 domain.

3.3. Type of answerable or Un-Answerable question

- 89% of answerable question type, which includes 29% of the C1 domain, 35% of the C2 domain, 18% of the C3 domain, and 18% of the C4 domain.
- 11% of un-answerable question type, which includes 50% of the C2 domain and 50% of the C4 domain.

Based on the research, from the situation that the teacher gave to stimulate students to ask questions, it was found that only 19 questions approached the perfect question, while the rest were statements. On average students make questions that have not been directed. This is due to students who have not understood how to make a question from a situation, so that students only rewrite the situation that he described on the observation instrument sheet. Also found are some of the same questions among students, this indicates that the insights of low-grade elementary school students are still small. In addition, there were also many students who did not fill in the questions on the observation instrument sheet. Based on the results of observations and approaches to students, this occurs because there are many low grade elementary school students who do not yet have reading skills and writing skills so students are not able to follow the teacher's instructions properly and correctly.

From identifying the questions that have been done, there are several classifications including: first, the questions that are made are good, from the writing structure can be read and quite clear, the structure of the question sentence or question has been seen but not perfect. Second, the writing is less readable and the structure of the question is still less visible. Third, it has not been able to pour into writing so that the structure of the questions asked is completely invisible.

One way in which teachers can begin to improve the quality of their questions is to plan specific questions before their instructions. During quick lessons, teachers may consciously struggle to increase the level of questions they use in their teaching. However, making student questions an important aspect of lesson planning is very important to ensure that these questions are a priority during teaching. The teacher can also enter high-level questions into journal activities followed by student discussions about their ideas. Giving students the opportunity to utilize and strengthen written and oral expressions of their processes of reasoning and justification provide the basis for effective communication of scientific ideas [5,6].

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Intelligent student can be identified from students' ability to ask questions. Students who have low intelligence tend to feel afraid to do something, a lot of consideration, and doubt while students who have high intelligence, these students dare to argue without fear of making mistakes and there is no
doubt in him. Student intelligence exhibits a variety of behaviors, including studying, working hard, reading, performing well on exams and in class, answering and asking questions, paying attention, and demonstrating good behavior [7]. In stimulating students to ask questions, the teacher must provide a situation that is rich in information. From the delivery of the given situation, students are given the opportunity to change statements into questions to measure the level of intelligence in identifying questions. Teachers are not permitted to limit students from exploring the identification process to the given situation. Students are actively involved in identifying a situation, so that the situation given will stimulate student curiosity [8, 9]. Intelligent students put forth effort, engage in active learning, and complete assignments. Intelligence is not able to be formed in a short time, but needs to be trained continuously. Through the ability to ask questions, great curiosity students stimulate these students to find out more information. Students' curiosity leads students to increase their intelligence ability to accept new things. Posing problem pushes their mind to be more creative, increase their understanding, and also push them to solve their problem [10, 11].

4. Conclusion
Based on the results of the data analysis and discussion, it can be concluded that the questioning skills of the students we studied in one of the primary schools in Indonesia were categorized as low. This is caused by so many students who cannot read and write that they cannot follow the instructor from the teacher. In addition, the quality of student questions is still at a low cognitive level, where 19 questions that have approached the perfect question, while the rest are still a form of statement. Teachers have an important role to play in creating learning situations that make students like situations to ask questions and their effects make them more active and creative.

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