Journal Corner of Education, Linguistics, and Literature
Vol. 3 No. 1 (August, 2023), pp. 1-9
https://doi.org/10.54012/jcell.v3i1.154

Analysis of Questioning Skills of Grade V Students at SDN 101835 Bangkawan in Science Learning

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Received:
March 19, 2023

Revised:
April 2, 2023

Accepted:
April 6, 2023

Published:
August 1, 2023

ABSTRACT

Questioning skills is a skill that needs to be mastered by students at the elementary school level. Asking skills will encourage students to think in learning. Through asking questions can help students to master the concepts and facts in science learning. The focus of this research is to map students' questioning skills in science learning for heat material. The mapping of students' questioning skills is a form of analysis which is a form of preliminary study. The results of the analysis obtained 19 students who were less skilled in asking questions, 4 students who were quite skilled in asking questions, and 2 students who were skilled in asking questions. Thus, the teacher's efforts are still needed to facilitate students' questioning skills, for example by using the inquiry approach and contextual approach, applying the snowball throwing learning model and the debate learning model. The results of this study become an analysis of students' learning readiness for teachers to design learning according to children's learning styles.

Keywords: *questioning skills; analysis; elementary school students*

INTRODUCTION

Natural Sciences (IPA) is one of the subjects taught in elementary school education units (SD). Science is a subject that is expected to be an accurate source of facts for students to learn about nature and its relation to students' lives through a scientific attitude (Bukit, 2022a). Similarly, as expressed by Sarinai, et al (2018) that science learning consists of a collection of concepts, principles, laws, and theories, as well as an attitude of determination, curiosity, and perseverance, so that students learn meaningfully. So that in learning science, curiosity is needed in students to learn about nature related to concepts, principles, laws and theories. Curiosity is related to the desire to ask questions. This is because by asking questions, students can show how the attitudes, skills, and understanding students have of the learning material provided by the teacher (Pratiwi et al., 2019).

Asking activity is an effort shown by someone to fulfill their curiosity about something. By asking the teacher, students can find out and even master the subject matter being studied. So that students can build their knowledge from situations of asking. Asking activity is one of the components in the contextual learning approach (contextual teaching learning). For students asking questions is an important part of doing inquiry, namely gathering information, confirming what is already known, and

directing attention to aspects that are not yet known (Komalasari, 2015, p. 12). In science learning, asking activities can be a solution for students to find their knowledge related to facts and concepts of learning material. Asking activities help students to construct cognitive structures from their initial knowledge with their daily life experiences. So that in the end the knowledge gained will last longer in the memory of the child's brain.

Yuberti revealed that asking questions would hone and open students' minds (2014, p. 12). Thus asking is an effective stimulus to encourage children's thinking skills (Sunarto & Rohita, 2021). So far, learning science, students have memorized more of the subject matter without understanding the concepts of the material content. So that in learning science I only think about memorizing the material without mastering the concept. As stated by Jihan & Agustiani (2009) in his analysis that so far students tend to memorize learning material only. Thus the teacher needs to create a learning process that supports students to ask questions related to mastery of learning content. So that students can grow their questioning skills during learning. Because one of the skills that must appear in the learning process in the classroom is the skill of asking (Sunarto & Rohita, 2021).

Taufik stated that questioning skills are the ability to use various types of questions as a form of student thinking (Sukerni, 2018). Students who have the skills to ask will show behavior as expressed by Nurlitasari, et al (2019) that is, students dare to raise their hands, ask questions in a loud voice and ask questions using standard language. Hafizo (2022) explained that asking questions would increase students' interest in learning and curiosity. While Husain describes several indicators or behaviors that show questioning skills, namely: 1) content; 2) nonverbal performance; 3) sound; 4) verbal disclosure or sentence redaction; 5) question categories; and 6) attitude (Pratiwi et al., 2019). As with Hosnan's statement, he concluded the indicators of asking skills as follows: 1) short and clear questions; 2) have a focus; 3) are probing or Divergent; 4) have clear intonation and volume (Hafizo et al., 2022). Based on the indicators described above, the researcher breaks down into five indicators or behaviors that show students' questioning skills based on, among others: 1) asking questions using question words; 2) show confidence in asking teachers and friends; 3) ask questions yourself without the help of others; 4) ask questions according to the subject matter; and 5) answer questions from teachers or friends according to the subject matter. The five indicators will be compiled into an observation sheet of observations on students' learning readiness in terms of asking questions.

Given how important questioning skills need to be developed by students in supporting students' oral communication in achieving learning objectives (Fatimah, 2016). So it is clear that in learning students need to be active in asking questions. Because if no questions arise from students it indicates hampered learning activities. As revealed by Trianto that if there are no students who ask or answer questions, it can be said that these students have not carried out learning activities (Pratiwi et al., 2019). However, before implementing a learning model, the teacher needs to do an initial mapping regarding students' questioning skills. The initial mapping is intended as a preliminary study by the teacher to prepare a lesson plan that supports the improvement of children's questioning skills. So the results of this initial mapping will support the process differentiation approach according to students' learning readiness (Purba et al., 2021, p. 79).

Moving on from the explanation above, the researcher is very interested in mapping the questioning skills of class V students at SDN 101835 Bangkawan in science learning in the even semester of Academic Year 2022/2023 as a preliminary study. Saputro explained the results of the preliminary study to analyze needs (need assessment) to capture respondents' wishes (Saputro, 2017, p. 10). It is hoped that the results of this mapping can assist teachers in designing the science learning process according to students' learning readiness. So that teachers can create science learning that favors students to maximize their potential. This means that teachers must be sensitive to the learning needs of students to achieve good learning outcomes (Bukit, 2022b).

METHOD

Shidiq & Choiri explained the research method is a scientific method for researchers to obtain data (2019, p. 87). The research method applied is a qualitative method as a way to understand the phenomena experienced by research subjects (Shidiq & Choiri, 2019, p. 5). This qualitative research applies case or multi-case studies related to students' questioning skills. Patton stated that a case study is a study of the specificity and complexity of a single case and attempts to understand the case in a particular context, situation and time (Raco, 2010, p. 49). The case analyzed in this study is related to the mapping of the questioning skills of class V students at SDN 101835 Sibolangit, which total 25 children, with details of 13 boys and 12 girls. Data collection techniques using observation sheets of students' questioning skills. The table below is an observation sheet and guidelines for assessing students' questioning skills:

Table 1. Student Asking Skills Observation Sheet

Student Name	Observed behavior					Score	Category
	Ask questions using question words	Shows confidence in asking teachers & friends	Ask your own questions without the help of others	Ask questions according to the subject matter	Answer questions from the teacher or friends according to the subject matter		
…..							
Etc.							

Table 2. Guidelines for Assessment of Students' Asking Skills

Value	Information
0	Not Visible
1	Start Visible
2	Clearly Visible

The data obtained were analyzed using descriptive analysis (Saputro, 2017, p. 47). The results of data analysis are then compared with the table of categories for the development of students' questioning skills according to table 3 as follows:

Table 3. Categories of Student Asking Skills Development

Score	Category
0 – 4	Less Skilled
5 – 6	Skilled Enough
7 – 8	Skilled
9 – 10	Very Skilled

FINDINGS AND DISCUSSION

The following is table 4 of the observations of the questioning skills of class V students at SDN 101835 Sibolangit which were conducted in February for the 2022/2023 school year:

Table 4. Observation Results of Students' Questioning Skills

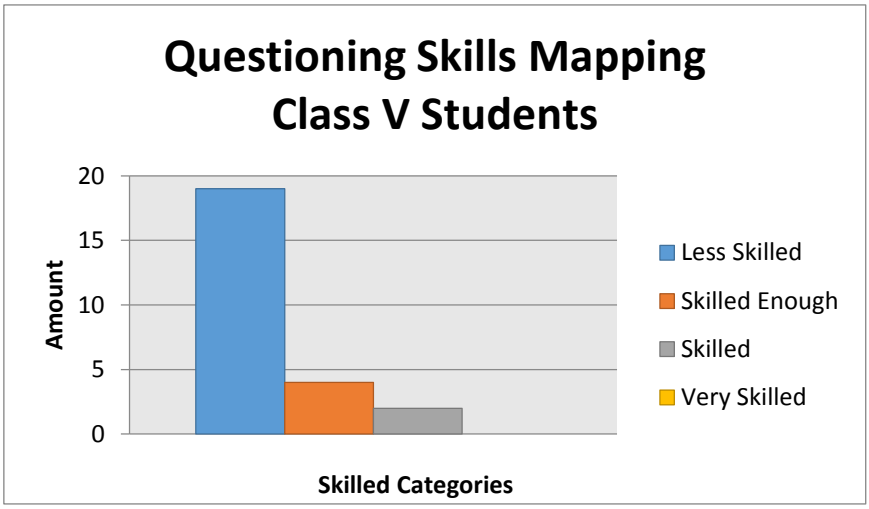
Respondent	Observed behavior					Total Score	Category
	Ask questions using question words	Shows confidence in asking teachers & friends	Ask your own questions without the help of others	Ask questions according to the subject matter	Answer questions from the teacher or friends according to the subject matter		
01	0	0	1	1	1	3	Less Skilled
02	0	1	1	1	1	4	Less Skilled
03	0	1	0	1	1	3	Less Skilled
04	1	1	0	0	1	3	Less Skilled
05	1	1	1	0	1	4	Less Skilled
06	0	1	1	0	1	3	Less Skilled
07	0	0	1	0	1	2	Less Skilled
08	1	0	0	0	1	2	Less Skilled
09	1	0	0	1	2	4	Less Skilled
10	1	2	1	1	2	7	Skilled
11	2	0	2	1	0	5	Skilled Enough
12	0	0	0	2	0	2	Less Skilled
13	1	2	1	1	0	5	Skilled Enough
14	1	1	2	1	2	7	Skilled
15	1	0	1	1	2	5	Skilled Enough
16	2	0	2	0	0	4	Less Skilled
17	1	0	0	1	0	2	Less Skilled
18	2	1	2	1	0	6	Skilled Enough
19	1	1	1	1	0	4	Less Skilled
20	0	1	1	0	1	3	Less Skilled
21	0	1	1	1	1	4	Less Skilled
22	0	1	1	1	1	4	Less Skilled
23	0	0	0	1	1	2	Less Skilled
24	0	1	1	0	0	2	Less Skilled
25	1	1	0	0	0	2	Less Skilled

Discussion

Students with questioning skills who are categorized as skilled are needed in learning, especially in terms of obtaining information. In asking, students need to pay attention to the sentence the question asked must use the question word. This is as

stated by Bukit, et al (2023) that A good question sentence is to include a question word in it. This means that a good question sentence is to use question words, including: what, who, when, where, why, and how. So by including a question word in each question asked, the answer to the question will be more directed according to the meaning of the question. So that questions that require information will be answered with the presentation of information. Questions that ask for causal answers will offer reasons. And questions that require a process will be given answers in the form of stages.

Before mapping students' questioning skills, the teacher must first make sure students have studied the material in compiling question sentences with question words. So that each student already has initial knowledge related to making questions. This initial knowledge becomes a strong capital for students to construct their cognitive structure in honing their questioning skills. So this questioning activity is very relevant to contextual learning. Because it gives children the opportunity to construct their initial knowledge in understanding the next learning material. As expressed by Nursikin (2016) that students need to interpret and construct an experience, prior knowledge and interaction with the environment in order to solve existing problems. Based on the results of observations of fifth grade students at SDN 101835 Bangkawan in science learning for Calor material, student skills are mapped as shown in the diagram below:



Picture. 1 Mapping the Skills of Class V Elementary School Students

In asking questions using question words there are still 11 students who have not been seen. This needs to be the teacher's important concern, because the number is very large. So so far it seems that learning has not sided with students. It could be that students who haven't been seen expressing the question, don't understand clearly how to use question words properly. Well, in this case the teacher also needs to pay attention to the learning styles of students. The learning styles of students greatly influence the formation of their learning skills. Learning style is one that is owned by each individual in absorbing, organizing, and processing the information received (SUCI et al., 2020, p. 7). So by recognizing students' learning styles, the teacher can confirm the appropriate learning model to build students' willingness to ask questions regarding the subject matter. Students with a visual learning style support willingness

to ask questions because they are good spellers and can speak quickly (Widiasworo, 2018, p. 48).

In terms of confidence to ask both friends and teachers there are still 10 students who have not shown such behavior during learning. Confidence is closely related to the reflection of human life attitudes (Abbas, 2014, p. 35). With self-confidence, each student can reflect on his abilities, especially in asking questions. So confidence is needed in asking. Without any fear of being wrong or having the courage to express ideas is a form of enthusiasm for learning that must be present in every student. Usually an attitude of insecurity will be seen in students who are passive in learning. So that it often leads to indifference and in the end you really don't understand the subject matter which results in low learning outcomes (Rizki et al., 2019).

The behavior of asking questions alone without the help of others is a form of independence in learning that students need to show. The existence of learning independence in students can build curiosity about learning material and be more confident in asking questions (Bukit et al., 2022). So when students start to ask questions that they make themselves it is evidence that the child is starting to be independent in learning. There is a willingness to continue to master the learning material. Especially in science learning which requires students to master concepts and facts related to natural events. Teachers need to train the willingness of students to ask their own questions through the snowball throwing learning model. With this learning model, children will be motivated to convey their knowledge in a real context (Setyaningsih & Rezkita, 2019). Likewise the statement from Bukit, et al (2023) that the snowball throwing learning model, students studying in groups do not only ask questions but encourage students to provide answers and explanations of the material. So this learning model can build students' willingness to ask questions while demonstrating students' ability to master learning content.

In asking questions, students must also pay attention to the content of learning materials. So that the questions that are conveyed do not come out of the learning material environment. In learning science, teachers need to hone students' abilities to understand the concepts and facts taught in science. So in the observations made by the teacher regarding the initial mapping of students' ability to ask questions, it can be seen that 9 students have not been able to make questions according to the context of the material. Well, in this case the teacher seems to need to invite students to first ask students to master the material with an inquiry approach (Kenedi, 2017). With inquiry, students can make observations and carry out the process of discovering knowledge independently (Abbas, 2014, p. 151). This means that learning material learning activities can build students' knowledge to generate questions that are appropriate to the context of learning material.

Yuliana revealed that asking questions is an effective stimulus to encourage thinking skills (2010). So it is necessary to observe the behavior of students when answering questions from either the teacher or friends. There were 12 students who

began to appear able to answer the questions asked to them. As well as 4 students who were clearly seen to be able to answer questions well. Meanwhile, 9 students did not show a willingness to answer questions. So the teacher needs to provide the right stimulus to stimulate the 9 students to want to give answers to the questions given. Skinner stated that students always need a stimulus so that they can give a positive response in speaking, especially in giving answers (Sarbaini, 2017, p. 99).

CONCLUSIONS

In the introduction it has been revealed that the focus of this research is to map the questioning skills of class V students at SDN 101835 Bangkawan in learning science. So it can be concluded that there were 19 students who were less skilled in asking questions, 4 students who were quite skilled in asking questions, and 2 students who were skilled in asking questions. From the results of the analysis related to the questioning skills of students in science learning on heat material, extra effort is still needed from the teacher to facilitate students to be skilled in asking questions. From the results of the discussion of this study it was also found that learning approaches can facilitate students to be skilled in asking questions such as the contextual approach and the inquiry approach. Both of these approaches are able to provide a stimulus for students to find concepts and facts in heat events and their changes. Even students can practice events of heat changes on objects. The findings can be constructed by students to build their knowledge through questioning activities. So that students will understand more about the material heat.

In addition, in the discussion of this study, a snowball throwing learning model was offered to facilitate students' questioning skills. Through this learning model, students will get experience making questions that will be asked to their friends. The results of this study are expected to contribute to teachers and other research in an effort to improve students' questioning skills in elementary schools. Not only that, the results of this study encourage teachers to look more at the differences in the characteristics of each student from the type of learning style. So that teachers can design learning in favor of students according to their respective learning styles. In the end, learning will be more communicative.

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