



Effectiveness Analysis of Inquiry Learning Communications in Improving Students' Knowledge at SMPN 2 Makassar

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Abstract. In the world of education, communication is needed as an interaction bridge. Therefore, all of the learning materials conveyed by the teachers can be clearly understood by the students during the inquiry learning process. This study aims to analyze the form of communication used in inquiry learning for improving student learning outcomes in a science subject at state junior high school 2 Makassar. The method used in this research is descriptive qualitative. The research findings indicate that the form of inquiry learning communication used during the research can improve student learning outcomes. The forms of communication used are interpersonal communication and group communication.

Keywords: The Form Of Communication · Inquiry · Student Learning Outcomes

1 Introduction

In a country, education has a crucial role in the nation's development, so every human being needs education because it is the most urgent aspect of human life. Every country will always try to improve the quality of its education because of realizing the importance of education. The quality of education improvement will require the quality of learning improvement. Then, the quality of learning improvement requires educators to improve communication in the learning process.

According to Iriantara (2018:11), in education, communication will undoubtedly be related to the function of education, which maintains value and encourages change [1]. Scholarly communication is a communication process that contains an educative dimension to convey messages in learning materials. Communication can happen through learning activities such as speaking, listening, reading and writing. Learning is a process of interaction between students and teachers through various learning resources in a learning environment. Based on the explanation above, it can be said that the interaction will not occur without communication.

Learning is the centre of education. There will be intrapersonal communication, interpersonal communication, and group communication in the learning process. Intrapersonal communication is a process that uses messages to generate meaning within

oneself. Intrapersonal communication happens between oneself or in minds. Interpersonal communication is exchanging information between a person and another person or usually between two people who have the same idea. Group communication is a collection of several people who have the same foundation, philosophy and goals that have standard rules obeyed by all group members.

We are still in the Covid-19 pandemic situation, but the learning process has been carried out with offline learning. In the State Junior High School 2 Makassar, offline learning has divided the students into 50% of students who have a morning class and 50% who have an afternoon class by applying the health protocols. Students should wear masks during the learning process. Students need time to adapt to the situation in the learning process because of the transition process from online learning to offline learning. Therefore, learning innovation is needed, and teachers are expected to choose suitable learning models.

Based on the interview results conducted in the preliminary study, it can be concluded that student achievement decreases in science subjects. Many factors cause it; one of the factors is the online learning process during the COVID-19 pandemic. In online learning, the used method is lecturing and the questioning and answering method. Therefore, it makes students bored because they only listen and occasionally answer the questions asked by the teacher. In addition, the process of interaction between teachers and students is very lacking.

Learning science is not only about mastering a collection of knowledge in the form of facts, concepts, or principles but also a process of discovering something. Science learning is directed to use inquiry learning to help students find solutions to their problems to gain a deep understanding of the natural surroundings. In inquiry learning, in addition to students being able to master science concepts, they can also be trained to be researchers and solve problems supported by discovering the existing facts. Through inquiry learning, students can develop self-confidence, increase their creativity, and find alternatives in solving problems in the learning process.

The learning process is the most urgent activity in teaching and learning between teachers and students to achieve educational goals. The effectiveness of messages conveyed by teachers depends on how creative they are in the teaching process. Therefore, the teachers must be able to implement a form of communication in the learning process.

1.1 Form of Communication

The form of communication is divided into intrapersonal, interpersonal, and group communication.

1.1.1 Intrapersonal Communication

Intrapersonal communication is communication to oneself or students themselves as preparation for interpersonal communication. According to Effendy (2007), when a person engages in intrapersonal communication, they will experience three things; (1) Perception, according to Rakhmat (2019:50), perception is the experience of objects, events, or relationships obtained by collecting information and interpreting messages. Perception is giving meaning to sensory stimuli (sensory stimuli) [2]. (2) Ideation is an

advanced stage of perception characterized by the process of conceptualizing what is perceived. (3) Transmission is the result of a concept work of reasoning. Anything said by someone to communicate is the result of a solid concept [3].

1.1.2 Interpersonal Communication

According to Nofrion (2018:125), interpersonal communication is exchanging information between people, at least one to another person, or usually between two people with the same topic [4]. Interpersonal communication in learning communication is crucial because student learning outcomes are determined by the learning process in the classroom and will also be impacted by interpersonal communication between teachers and students outside the classroom.

Interpersonal communication between teachers and students can form a good learning environment and atmosphere, so the students' learning motivation will grow. Learning motivation is also the most crucial part of the learning process, and it can improve the quality of learning. According to Moke (2002:10), teachers need to be involved in interpersonal communication with their students to conduct assessments and evaluations of the students [5].

Teachers can also open interpersonal communication by being welcomed by their students. The greater the teacher opens up, the more communication can be done with students. In addition, the student's interest in communicating with the teacher is greater. According to Cayanus and Martin (2009), there are three dimensions of self-disclosure in the interpersonal communication of teachers in the classroom: (1) number, indicating how often teachers open themselves in class, (2) relevance, showing self-disclosure related to the topics discussed in the classroom, and (3) negative things, expressing bad things in the classroom [6].

1.1.3 Group Communication

Group communication involves several people who have the same basic philosophy, goals and standard rules that all group members obey. Students are usually divided into groups of 3 to 9 people in the learning process. However, the distribution of the number depends on the needs. Learning practices through group communication are carried out with the aim that students can work together to understand the topics discussed in groups and familiarize themselves with productive interactions. According to Nurdin (2014:8), group communication is divided into two types:

1.1.3.1 Small Group Communication

Small group communication is a communication group that allows us to respond verbally or in group communication. The communicator can perform interpersonal communication with one of the group members, as occurred in the study group.

1.1.3.2 Large Group Communication

Effective group communication occurs with a vast group of people, and interpersonal communication (personal contact) is less common because too many people are gathered, such as in Tabligh Akbar, campaigns, etc. [7].

1.2 Inquiry Learning Model

The inquiry learning model is one of the learning models that can be implemented in the teaching and learning process. Inquiry learning emphasizes the process of research and discovery. The thinking process happens through questions and answers between the teacher and students [8]. Students can think critically and analytically to seek and find answers to the problems in the question. Students are the learning subject in the inquiry learning process and place the teachers as facilitators and motivators.

According to Sanjaya (2008:306), generally, the steps of inquiry learning are (1). Orientation is a crucial step where the teacher stimulates and invites students to think about problems solving; (2) formulating problems; which leads the students to a problem that contains a puzzle; and (3) formulating a hypothesis, which is a quick answer to a problem that is being studied. Quick answers, in this case, will be tested for truth; (4) collecting data is an activity to collect the information needed to test hypotheses that have been proposed previously. This data collection process is critical in developing students' thinking potential, (5) testing hypotheses determine the answer that is considered acceptable by the data/information obtained based on data collection. Testing hypotheses can develop students' analytical thinking skills and find the level of confidence in the answers given previously, and (6) formulating conclusions is a process to describe the findings obtained based on the results of hypothesis testing [9].

2 Method

The research design in this study is qualitative research. This study uses a descriptive qualitative approach. In this study, researchers will describe the form of communication used in inquiry learning for improving student learning outcomes in science learning at SMP Negeri 2 Makassar. Researchers will describe the phenomena that occur in the field. Therefore, they can obtain conclusions from the conducted research.

The researcher's data collection techniques in this study were observation, interviews, and documentation. Observations were made directly on the object of research, namely state junior high school 2 Makassar, where researchers wanted to know the form of communication used during the learning process. In-depth interviews were conducted to obtain information from all informants. Documentation is taken from documents that are undoubtedly related to the research that focused on strengthening and increasing the reliability of the primary data collection techniques.

Sources of data in this study were obtained from primary data and secondary data. The primary data are observations, in-depth interviews, and documentation obtained in state junior high school 2 Makassar. Then, secondary data are obtained by researchers from books, journals, the internet, and several other documents that are considered relevant to the focus of the problem. The researcher performs data analysis techniques such as data reduction, data presentation, and verification/concluding in this study. The researcher checked the validity of the data by using the findings/conclusion validity technique, which was divided into two parts, namely triangulation and member checking.

3 Result and Discussion

3.1 Form of Communication

The form of communication used in the inquiry learning process in science subjects at state junior high school 2 Makassar is interpersonal communication and group communication.

3.1.1 Interpersonal Communication

The interpersonal communication process happens because of the relationships, information, and mutual giving and receiving of information. In the school environment, there is a good relationship between teachers and students, so exchanging information in the form of questions and answers occurs well.

Interpersonal communication between teachers and students occurs inside and outside classroom communication. Before starting the lesson, the teacher asked how the condition of the students was. It was framed by talking in a relaxed atmosphere and constantly reminding them to maintain health and continue to apply the health protocol.

Through interpersonal communication, the teacher builds student motivation to be more enthusiastic in learning and shows nonverbal support, such as deliberately approaching students who ask questions, making eye contact, and smiling at students while nodding their heads.

The teacher did it because of the teacher's interest in what was stated by the students. After listening to the questions from the students, the teacher explained, based on their question, followed the steps of the inquiry learning. In the learning process, the teacher asked the students to communicate their thoughts and ideas by putting them on the student activity sheet (LKPD) point two, namely formulating hypotheses.

The teacher uses interpersonal communication to encourage the students to understand the language used by the teacher. The language used was modified, namely formal and informal language. Therefore, students feel happy because there is a closer relationship between teachers and students. Sometimes the teacher inserts humour into the lesson. Humour is beneficial for attracting students' interest in learning, avoiding boredom, increasing students' attention, and increasing learning motivation.

3.1.2 Group Communication

According to Iriantara (2014:128), group communication is one of the subsystems of the classroom communication system that plays a vital role in the learning process. Group communication is done not only to form a group or only for communication and interaction between fellow group members but also to determine how learning can be communicated and interacted within the group.

In this inquiry learning, the implementation of group study was by the teacher divided the students into several groups consisting of 4 to work together in solving problems and exploring topics that have been distributed in the form of student activity sheets (LKPD). Each group member contributes to conveying what is known and what he understands to the group; this is done to equalize perceptions.

Students' activeness in groups is also needed to complete the given task by following the inquiry learning steps. In the student activity sheet (LKPD), each group member conveys what they know and understand about the orientation of the problem, and then they formulate problems based on the orientation of the existing problems.

The next step is to formulate a hypothesis (quick answer) following the focus of the problem on problem orientation; each group member provides a quick answer according to what is on his mind. After that, they collect data by conducting experiments to test the hypotheses and determine the tentative answers that the data have proposed. In this case, the truth of the answers given is not only based on arguments but needs to be supported by the data found and then enters the process of formulating conclusions by describing the findings based on the results of hypothesis testing.

3.2 Impact of Using Interpersonal Communication and Group Communication

In the learning process, there are many learning models used by teachers who aim to facilitate the transformation of knowledge to students. One of the models used by the teacher is the inquiry learning model.

The use of interpersonal communication and group communication during the inquiry learning process in science subjects can improve student learning outcomes in public junior high school 2 Makassar because of changes in the value of the results of the previous daily test. In addition, there is a relationship between teachers and students both outside and inside the classroom. Students can work together with their friends on group assignments.

3.3 Obstacles During Learning

3.3.1 Some Students Are Active and Dominating

One of the components in the learning process in the classroom is the occurrence of social interaction and communicative interaction between teachers and students and fellow students. The classroom is not just a place to learn but can function as a forum for students to interact, communicate, influence, and exchange knowledge and understanding.

The teacher builds a learning atmosphere so that students can work together and share knowledge and understanding through group communication. After being divided into several groups, the teacher distributes student activity sheets (LKPD) so that students can work together in completing the LKPD.

Learning in groups does not always run as it should; some students are very active and dominate in class VIII-1. Students who dominate certainly know and have information about the topic of the problem being discussed in the group.

3.3.2 Some Students Are Passive

Learning activities of group communication occurred in the school are not only a group of students but the formation of the group is hoped increase students willingness to communicate.

In group division, students who are passive in group learning are shy, patient in class, and do not have knowledge and information about the topic of problems being discussed in the group.

4 Conclusion

Based on the results of research and discussion, the researcher can conclude that in inquiry learning, the forms of communication used are interpersonal communication and group communication. In interpersonal communication, the teacher builds student motivation to be enthusiastic in learning and shows nonverbal support. In this case, the teacher deliberately approaches students who ask questions and then makes eye contact smiles at the students while nodding his head. The teacher does that because of the teacher's interest in what is stated by the students. The teacher asks students to communicate their thoughts and ideas orally in the learning process. In group communication that uses inquiry learning, the teacher divides students into several groups consisting of 4 people to work together in solving problems and exploring topics that have been distributed by the teacher in the form of student worksheets (LKPD). Each group member contributes to conveying what is known and what he understands to the group; this is done to equalize perceptions. Interpersonal communication and group communication improve student learning outcomes in science subjects at state junior high school 2 Makassar. The imbalance between active and passive students was the obstacle in applying inquiry learning. This is because active students have knowledge and information about the topic discussed in groups. In contrast, passive students are students who are shy, patient, and lack knowledge and information about the topic.

Authors' Contributions

The following authors are responsible for the research process.

- Concept and Research Question: A. Evi Nurfawali Asbar and Tuti Bahfiarti.
- Conducting Research and Report Writing: A. Evi Nurfawali Asbar.
- Reviewer Draft: Tuti Bahfiarti.

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