The Importance of Guided Inquiry Learning Models to Train Communication Skills

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Abstract: In 21st century, communication skills are skill that must be developed in addition to cognitive abilities. Teachers must be able to use appropriate strategies in learning activities so that students can have good communication skills which will make thesituation more interactive and effective and have an impact on high intensity discussions and deep learning understanding.This study aims to describe the importance of guided inquiry learning models in training communication skills.Data in this study were obtained using a needs analysis questionnaire involving 180 junior high school students in six districts of Lampung Province. The method used in this research is descriptive qualitative method and data collection using questionnaires. Data analysis of student questionnaire results was categorized into five criteria: very high, high, medium, low, and very low.The results of the analysis had an average of 52.9% categorized as "moderate". The results of a survey of students in six districts in Lampung Province revealed that natural science learning with the guided inquiry learning model has not all been carried out optimally such as in making problem formulations, making provisional assumptions (hypotheses), and proving provisional conjectures (hypotheses).Furthermore, students' communication skills were not optimal in showing the truth of the data or opinions obtained from the results of the experiment and responding to statements from friends. The application of guided inquiry is not only to enhance students' ability to understand the material but also to train communication skills which are very important for students for more complex lives and to compete globally in 21st century.
Keywords: Guided inquiry learning model, communication skills

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I. Introduction

21st Century learning is learning that integrates literacy, knowledge, skills and attitudes, and mastery in technology [1]. Learning and innovation skills in the 21stcentury include critical thinking and problem solving, communication and collaboration, creativity and innovation [2]. Related to skills, Anagunsaid that skills here are focused on creativity, critical thinking, communication and collaboration which are widely known as 4C. Those skills are very important for students as a preparation for a more complex life and work environment in the future [3]. 21stcentury skills achievement can be done by updating the quality of learning, helping students to improve and develop participation, encourage collaboration and communication, and cultivate creative thinking skills so that learning can be centered on students' activities with guidance and supervision from the teacher [4].

Communication skills are skills that are very important in human life and must be achieved in 21stcentury learning [6]. In the world of education, communication takes place through teaching and learning process. Communication in learning is the process of exchanging information in the form of learning material between teacher and student [7], the teacher acts as the sender of the message (communicator) and the student acts as the recipient of the message (communicant). The teacher sends messages to students in the form of learning material. Communication in the learning process is the process of building relationships or interactions between teachers and students to share their thoughts, knowledge, and understanding[8]. Communication skills are very important. The teacher has a role in improving student communication skills, one of which is through the learning model applied. As an educator, the teacher must help students to develop themselves especially to communicate in accordance with the scientific ideas they have [9]. The learning model that can be applied to train communication skills is the guided inquiry learning model.

The guided inquiry learning model provides opportunities for students to find facts, concepts, and principles through direct experience, increased scientific literacy, and trains students to solve problems or questions [10]. The guided inquiry learning model involves students' ability to search and investigate systematically, critically, logical, and analytical, so that students can formulate their own findings with the help and guidance of teacher questions [11, 12]. Through various forms of learning activities that are based on the findings and experiments, students can get a positive impact on their individual and group communication skills

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[13]. Students through teachers' guidance will gain experience to discover concepts with the guided inquiry model. The involvement of students in teaching and learning activities will make them easier to develop scientific concepts that they have mastered by solving problems that require scientific thinkingand working [14]. Guided inquiry learning enables students to build knowledge independently and develops understanding of scientific concepts and literacy[15]. Implementation of guided inquiry learning models has a positive effect on students' problem solving and communication skills[16]. The application of guided inquiry learning models has a positive effect to solve problem related toPhysics and communication skills, especially for junior high school students [17]. This study aims to describe the importance of the stages of guided inquiry learning models in training communication skills.

II. Method

This study focuses on analyzing the importance of guided inquiry learning models to train communication skills in Junior High Schools in Lampung Province. Data was obtained using a needs analysis form from 2-20 December 2019 involving 180 junior high school students in six districts of Lampung Province. This study used a descriptive qualitative method based on the percentage of answers from questionnaires distributed to junior high school students in six districts of Lampung Province. Data analysis of student questionnaire results was categorized into five criteria: very high, high, medium, low, and very low. The criteria for categorizing can be seen in Table 1.

Tabel 1. Questionnaire criteria about the importance of guided inquiry learning models to train communication skills

Presentase	Kriteria
0,00 – 20,00	Very Low
20,10 – 40,00	Low
40,10 – 60,00	Medium
60,10 – 80,00	High
80,10 – 100,00	Very High

III. Research Result

The results of the questionnaire data analysis on the importance of the guided inquiry learning model for training communication skills can be seen in Table 2

Table 2. Questionnaire analysis results on the importance of guided inquiry learning models to traincommunication skills

No.	Questions	Percentage (%)	Criteria
1	Students learn to use orientation to problems that occur in their daily life	63,9	High
2	Students are given the opportunity to make a problem statement	32,8	Low
3	Students are given the opportunity to make a provisional assumption / hypothesis on the problem	31,7	Low
4	Students are given the opportunity to prove their provisional assumption / hypothesis	42,2	Medium
5	Students are given the opportunity to formulate conclusions	70,6	High
6	Students are given the opportunity to describe their observational data	51,1	Medium
7	Students are given the opportunity to show the truth of the data or opinions obtained from the results of the experiment	38,0	Low
8	Students are given the opportunity to respond questions from friends	38,9	Low
9	Students are given the opportunity to make general conclusions from discussions with groups	61,7	High
10	Students need guided inquiry learning to train their communication skills	98,2	Very High
	Average	**52,9**	**Medium**

The results of the questionnaire analysis on the needs of the guided inquiry learning model stated that in general the steps of guided inquiry learning were categorized as "moderate" with an average of 48.2%. The distribution of guided inquiry steps can be seen in Figure 1.
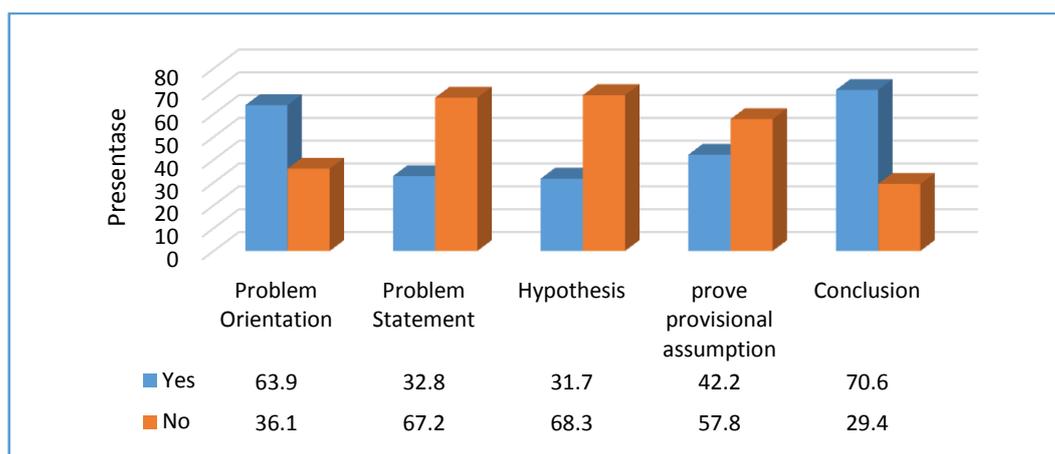
Figure 1. Steps percentage of the guided inquiry learning model

The questionnaires results analysis on the need for skills in general 47.4% have been implemented in the category of "medium". The distribution of communication skills can be seen in Figure 2.
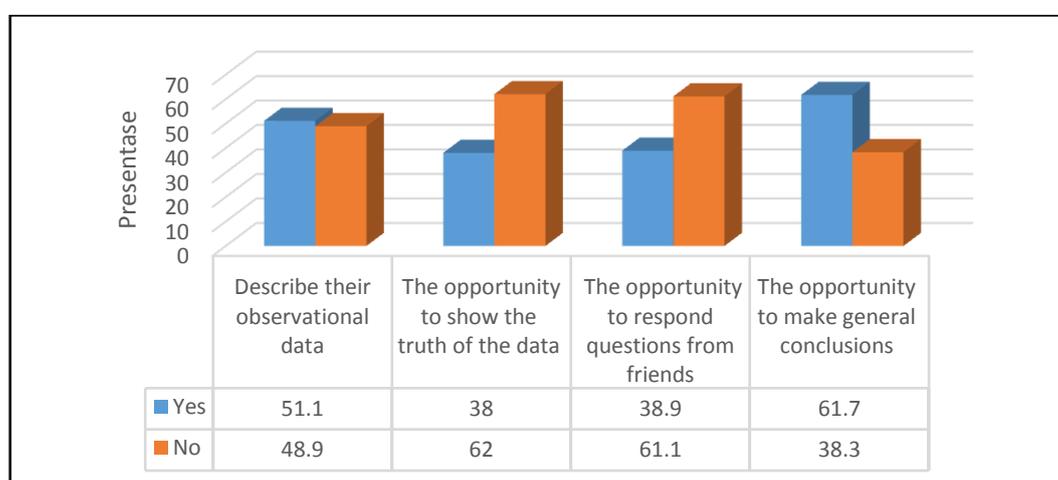

Figure 2. Percentage of Communication Skills Indicators

IV. Discussion

There are some steps on guided inquiry learning model, starting with the teacher gives material orientation to students. Then, they make problem formulations, proposing hypotheses, testing hypotheses, and drawing conclusions. All those steps carried out by students, whereas the teacher just acts as a motivator and facilitator.

Based on Figure 1, we can see that from the 180 respondents, the percentage of guided inquiry measures in the material of the human digestive system was 48.2%, it is categorized as moderate. Learning uses orientation to problems that occur in daily life get a high category (63.9%). Students are given the opportunity to make a problem statementis in low category (32.8%). Students are given the opportunity to make a provisional assumption / hypothesis on the problems is in low category (31.7%).Students are given the opportunity to prove their provisional assumption / hypothesisiscategorized as moderate (42.2%). And the last, students are given the opportunity to formulate conclusions is in the high category (70.6%). The orientation displays phenomena that support students in formulating problems. It demonstrates initial knowledge related to phenomena in daily life.

The guided inquiry learning model trains students to build answers and think intelligently in finding various alternative solutions to problems raised by the teacher, develop concept of understanding, build a sense of responsibility, and train the process of deliveringconcept that they discovered [18]. Based on the results of respondents' needs analysis, the guided inquiry model steps have not been carried out optimally. The steps in formulating the problem and making a provisional conjecture / hypothesis are in low category. This is because the teacher has not yet accustomed students to make problem formulations by making questions that lead to the inquiry process and interrelated things according to the material as well as making statements about temporary answers (hypotheses) correspond the investigated problem with clear and logical reasons in accordance with the information collected at the stage of applying concept.

Students will optimize their initial knowledge by recalling concepts related to their observation in formulating the problem. Presentation of the problem to students covers the method used in the study in which theymust formulate the problem presented by the teacher so that they can identify difficulties in the studyand get a deep understanding of the concepts [19]. The learning process begins with formulating the problem (questions), then searching, investigating and finding answers to the problem themselves, will bring more meaningful learning for students. Thus the knowledge and skills acquired by students are not from memorizing a set of facts, concepts, or theories, but by discovering and constructing knowledge through real experiences.

At the stage of formulating a hypothesis that is in accordance with the phenomenon and is a temporary answer to the existing problems before the truth is proven.After that, it is continued with proving of the temporary assumptions / hypotheses that have been made. Based on the results, the respondents' analysis of the needs is in the medium category. The teacher has not familiarized and invited students to conduct experiments to prove hypotheses. The procedure of guided inquiry activities is done by involving students to find some ways to solve problems they found through experiments [20]. Abungu, Okere, &Wachanga stated that when students conduct experiments, they will also train their skills and process abilities [21]. Furthermore, it is said that guided inquiry emphasizes the importance of students' discovery by proving hypotheses themselves [22]. Based on the results of the respondents' analysis needs, the step of giving orientation and making conclusion in guided inquiry learning are in high category. The teacher has carried out the stages of providing orientation to create a good learning atmosphere by explaining topics, objectives, and learning outcomes that are expected to be achieved by students. The step to make conclusions have been made by the teacher at the end of the lesson

Based on Figure 2, the percentage of communication skills is in medium category. Students are given the opportunity to describe observational data in learning is in medium category (51.1%), Students are given the opportunity to show the truth of the data or opinions obtained from the results is in low category (38.0%), Students are given the opportunity to respond to questions from friends is in low category (38.9%), and students are given the opportunity to make general conclusions from discussions with groups is in high category (61.7%). The lack of skills in showing the truth of the data and responding to friends' questions is caused by the teacher has not yet understand how to train communication skills. Students make observations according to scientific procedures, analyze data according to scientific principles, show obtained data based on facts and report the results of observations. There are several roles of the guided inquiry learning model to train student communication skills. In guided inquiry learning, students can discuss materials with others or the teacher as a form of communication, both oral and written, to make their provisional conjecture perfect, and to convince other students about their ideas by exposing evidences that make sense. When students are involved in observing and proving the problems they have, students are motivated to carry out discussions as a form of communication and they have a courage to express opinions and present the results of groups in front of the class. Discussion is aimed to improveunderstanding and scientific development [23], so that students must be able to representconceptual relations, find and evaluate information, and build explanations and arguments in scientific discourse [24]. Thus this guided inquiry learning is expected to be able to train student communication skills.

V. Conclusions

Based on the results and discussion, it can be concluded that the application of the guided inquiry model has been carried out during the learning process of the human digestive system material, although not all steps have been carried out properly, including formulating the problem, making and proving provisional assumption. Not all the communication skills during the learning process are trained, such as the skills to show the truth of data obtained from experiments and respond to questions from friends. The stages of guided inquiry need to be trained in students, in order to prioritize communication skills as the demands of the 21st century.

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