HOW TO ASK AND CLARIFICATION STRATEGIES FOR STUDENTS IN REFLECTION LEARNING

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Abstract

In the process of studying mathematics in college, students must understand basic mathematical concepts. One of the main subjects in the mathematics education study program is transformation geometry. One of the materials in this course is the concept of reflection. This research aims to discover how to ask questions and clarify strategies in reflective learning. The research problem is asking questions and explaining procedures in reflation learning. The type of research is qualitative; data collection is through observation, interviews, and documentation. Observations were conducted to determine the process of asking questions, clarifying, and providing answers. This research found that in reflective learning, students remember mathematical formulas and know how to solve problems. Learn learning strategies together through questions on sensitive matters and clarification, focusing on student characteristics. Students ask questions and answers. Students form small groups, and each group provides explanations when there are questions. Discussions and interviews were conducted with representatives of each group. Students present survey results and provide clarification in class. Ask students to clarify if a question is ambiguous or incorrect. In this research, the lecturer acts as a facilitator.

Keywords: Learning, Concept, Reflection, Questioning, Clarifying

Abstrak

Proses belajar matematika di perguruan tinggi, mahasiswa harus memahami konsep dasar matematika. Salah satu mata kuliah utama pada program studi pendidikan matematika adalah geometri transformasi. Salah satu materi dalam mata kuliah ini adalah konsep refleksi. Tujuan penelitian ini adalah mengetahui cara bertanya dan strategi mengklarifikasi pada pembelajaran refleksi. Adapun masalah penelitian adalah bagaimana cara bertanya dan strategi mengklarifikasi pada pembelajaran refkelasi. Jenis penelitian adalah kualitatif, pengambilan data melalui observasi, wawancara, dan dokumentasi. Observasi dilakukan untuk mengetahui proses mengajukan pertanyaan, mengklarikasi dan memberikan jawaban. Hasil penelitian ini menemukan bahwa pada pembelajaran refleksi, siswa mengingat rumus matematika dan mengetahui cara dalam menyelesaikan masalah. Belajar strategi belajar bersama melalui pertanyaan pada hal-hal yang sensitif dan klarifikasi, berfokus pada karakteristik mahasiswa. Mahasiswa mengajukan pertanyaan dan atau jawaban. Siswa membentuk kelompok kecil, dan setiap kelompok memberikan penjelasan ketika ada pertanyaan-pertanyaan. Diskusi dan wawancara dilakukan dalam pada perwakilan setiap kelompok. Siswa mempresentasikan hasil survei dan memberikan klarifikasi di kelas. Meminta mahasiswa mengklarifikasi jika ada pertanyaan yang ambigu atau salah. Pada penelitian ini dosen bertindak sebagai fasilitator.

Kata kunci: Belajar, Konsep, Refleksi, Menanya, Klarifikasi

INTRODUCTION

In order to meet the demands of changes in local, national, and global life, the national education system must be able to guarantee equal distribution of educational opportunities, improve quality as well as the relevance and efficiency of education management, and address challenges. The learning process for academic units is interactive, inspiring, fun, and challenging, motivating students to participate actively and providing enough space for

initiative, creativity, and independence according to talents and interests, as per Government Regulation No. 19 of 2005 concerning National Education Standards.

The Tri Dharma of Higher Education refers to the three primary responsibilities of higher education institutions in Indonesia. These three pillars are Education and Teaching: Delivering quality education and teaching to students. As you mentioned, one of the tasks of lecturers is to provide teaching, and the goal is to enhance the quality of learning. This includes not only transferring knowledge but also fostering critical thinking, problem-solving skills, and a deep understanding of the subject matter. Research and Development. This aspect focuses on advancing knowledge through research activities. Lecturers are expected to engage in research to contribute to the academic community's understanding of various subjects. This research may involve exploring new ideas, conducting experiments, and publishing findings in academic journals—Community Service. Lecturers are also responsible for applying their expertise to benefit the community. This can involve collaborating with local communities, providing professional advice, and participating in projects that address societal needs. The aim is to ensure that the knowledge and skills developed within the university have a positive impact beyond the campus. These three components are considered integral to the mission of higher education institutions, and lecturers are expected to balance their efforts across teaching, research, and community service to contribute effectively to the broader goals of education and societal development.

State Islamic Institute of Parepare has a mathematics education study program with one of the subjects that students must take is Transformation Geometry. The material of reflection or reflection is the material in the geometry of the transformation (Jimerson, 2013; Krogstie, 2009). In the learning carried out in this course, students tend to memorize formulas about reflection. Still, they need help to understand the concept of reflection.

The problem you've described involves determining the reflection matrix of a line, specifically the line $y = 3x$, which reflects points in the plane. It sounds like students might struggle with understanding the process of determining this reflection matrix, especially when it involves finding the equation of the locus of a curve.

To help students grasp the concept better, you can guide them through a step-by-step approach: Define the Reflection Matrix: Start by explaining what a reflection matrix is and its

purpose in transforming points in a plane. Emphasize that the reflection matrix is a mathematical tool used to map points to their reflected positions across a given line.

Understand the Line Equation: Discuss the equation of the line $y = 3x$ and explain how it represents the reflection line. Help students visualize this line on the coordinate plane. Derive the Reflection Matrix: Walk students through the steps of deriving the reflection matrix. This may involve understanding the concept of reflections across lines and applying mathematical operations to obtain the matrix. Encourage them to understand the geometric intuition behind each step.

Use Examples: Provide concrete examples of point reflections across the line $y = 3x$. Show how the matrix transforms specific points and demonstrate the relationship between the original and reflected points. Relate to Locus of a Curve: If the problem involves finding the locus of a curve, explain the connection between the reflection matrix and the curve's equation. Help students see how the matrix reflects points onto the locus and why it's relevant to the problem.

Encourage Problem-Solving: Assign problems that require students to apply the reflection matrix concept. Include a mix of straightforward problems and more complex ones that involve finding the locus of a curve. Provide Practice: Learning this kind of matrix transformation often involves practice. Provide exercises and examples for students to work through, gradually increasing in complexity.

Encourage Questions: Create an environment where students feel comfortable asking questions. This can be a challenging topic, and addressing specific concerns will help them gain a better understanding. By breaking down the problem, providing visual aids, and encouraging active engagement through problem-solving, students are more likely to grasp the process of determining the reflection matrix and its connection to finding the locus of a curve.

Reciprocal Teaching is a learning strategy that summarizes teaching materials, compiles questions and predicts further clarifying questions and answers and the materials presented. According to (Sirota, Dewberry, Juanchich, Valuš, & Marshall, 2021), reciprocal Teaching can be used in learning because it is a strategy that is carried out collaboratively (discussion) to understand a reading material so that it can improve understanding of the reading material (Bollato, 2016; Uche & Ogugua, 2013).

As one of the characteristics of reciprocal Teaching, questioning is very useful for digging up information, checking students' understanding, and improving students' critical thinking (Herrington, Parker, & Boase-Jelinek, 2014). While clarifying can be done by students by thinking creatively and critically to identify important information in solving the problems at hand.

If two characteristics of the reciprocal teaching strategy are sharpened, namely questioning (composing questions and answers) and clarifying (compiling clarification of question answers) in a lesson, learning is obtained by pointing out the characteristics of questioning & clarifying (Herrington et al., 2014; Krogstie, 2009). Learning by sharpening the aspects of questioning & clarifying allows students to understand the material by asking questions about these concepts and explaining concepts and questions posed between students so that students have the experience to construct the knowledge they have acquired.

This research was carried out to produce a reflection concept learning procedure by sharpening the characteristics of questioning & clarifying and its impact on students (Bollato, 2016; Uche & Ogugua, 2013). This research is expected to provide benefits for teachers/lecturers in adding insight into learning strategies for the concept of reflection and providing an overview for developing research with the same process for other materials and developing the same material with different methods.

In education, for almost 20 years, learning has been based on the behaviorist paradigm. This behavioristic learning only examines behavior based on visible facts (Anggraeni & Komalasari, 2021; Jimerson, 2013). Behaviorists assume that cultural transmission of knowledge is faster than individual knowledge construction (Samo, Darhim, & Kartasasmita, 2017). The constructivist view is very different from the behaviorist view. This view involves active students. According to the constructivist view, students are engaged in building knowledge and not just passively receiving it from the teacher. Mathematics learning is often carried out so that students are directly given material without paying attention to student readiness.

Another constructivist theory is the social constructivist theory, often called Vygotsky's. Vygotsky's learning theory emphasizes socio-cultural, namely social interaction through dialogue and verbal communication with adults, in developing children's understanding

(Chernikova et al., 2020; Warren & Dinnie, 2017). According to Vygotsky's theory, learning takes place when students work and acquire the skills necessary to manage tasks that have not yet been studied but are nonetheless in the zone of proximal development, or the gap between the actual level of activity, which is the capacity to solve problems on one's own, and the level of potential growth, through collaboration with more competent peers. In this ZPD, children can be given scaffolding, namely providing assistance to students in the learning process and reducing it, and letting them take responsibility for themselves when they can.

A typical teaching strategy was developed by Palincsar and Brown in 1984. Palancar and Brown stated, "A dialogue between teachers and students to jointly construct the meaning of the text." It is designed to improve student's reading comprehension by teaching four key reading strategies: Summarizing the main content, Formulating questions, Clarifying ambiguities, and Predicting what may come next (Margolis, 2020; Wang & Zheng, 2016).

Reciprocal Teaching is a teaching strategy involving a collaborative dialogue between teachers and students to construct meaning from a text. As you mentioned, the primary goal is to enhance students' reading comprehension through a structured process (Cord & Clements, 2010; Wang & Zheng, 2016). The four key components or strategies involved in Reciprocal Teaching, often referred to as the "Fab Four," are: Summarizing: Students are encouraged to briefly recap the text's main points in their own words. This helps them consolidate their understanding and identify the most crucial information. Questioning: Students generate questions about the content of the text. This can involve asking about unclear points, seeking clarification, or exploring the deeper meaning of the material. Questioning promotes active engagement with the text. Clarifying: If students encounter ambiguous or challenging aspects of the text, they work together to clarify their understanding. This may involve defining unfamiliar words, discussing confusing concepts, or resolving uncertainties. Predicting: Students predict what might happen next in the text based on their understanding. This encourages them to connect between different material parts and anticipate the author's direction.

The reciprocal nature of this teaching strategy involves students taking on the role of the teacher in these discussions. As they engage in these four key strategies, they deepen their comprehension, develop metacognitive skills, and become more self-directed learners. Reciprocal Teaching is often used in small groups, where students can collaboratively discuss

and apply these strategies. The teacher initially models the process, and then gradually, students take on more responsibility for leading the discussions. This method is efficacious in improving reading comprehension and fostering critical thinking skills.

The reciprocal teaching strategy briefly introduces group discussion techniques to understand and remember a material (Tauresia Kesuma, Putranta, & Cahyo Adi Kistoro, 2020; Warren & Dinnie, 2017). This reciprocal teaching strategy is a learning step with a concrete process. Namely, the teacher and students take turns leading the discussion. In the debate, questions are asked about the main problem or other issues and end by summarizing the core problems and their solutions (Radwan, 2014). If there is no agreement in this discussion, the questions are asked again, and a summary is made to reach an agreement.

This strategy aims to build a shared sense of meaning by prioritizing the involvement of students and teachers. This teacher becomes a performance model after enough teacher roles are withdrawn. This reciprocal teaching strategy can be modified for learning mathematics and problems understanding terms and meanings in mathematics.

According to (William E. Lovekamp, Soboroff, & Gillespie, 2017; Switzer & Barclay, 2012), in understanding terms of mathematics, learning actions can be used, namely; Identifying the goals of learning with reciprocal teaching strategies and revealing the reasons why each method is essential; Find the steps in each feature that can be applied; The teacher models the process used in learning.

In the reciprocal teaching strategy, in the initial phase, the teacher begins by introducing each feature of the mutual teaching strategy to students. The teacher also tells them the purpose of this teaching strategy and explains each element that will be used. In the first feature, the teacher conducts a series of dialogues between the teacher and students, with a discussion centered on the text. The step taken is that students are asked to read silently (without speaking), but if students do not have reading skills like that, they are expected to read aloud only to be heard by the teacher.

The second feature of this strategy is to structure questions. The implementation of this double feature is carried out by discussing questions about the main content of the text. In this discussion, the teacher acts as a facilitator in differences of opinion or students' misunderstandings about the content of the text. At this stage, the teacher confirms the

contents of the text prepared by the students. This aims to identify the essence of the results of reading and student discussions.

The use of the third strategy is clarification. In this strategy, students provide clarification of words or concepts from the material that has been discussed that they do not understand. In this strategy, the teacher can help students find the meaning of words. Besides that, the teacher can also tell students to use definitions in identifying a concept.

The last strategy is to predict. In this strategy, the teacher asks students to make predictions about other possible materials related to the text. Things can be used as a basis for students to predict our knowledge of the topics they read, the instructions given in the texts they read, and their ideas that are not the same as the author's.

Questioning, as one of the characteristics of reciprocal Teaching, is very useful for digging up information, checking students' understanding, and can improve students' critical thinking. While clarifying can be done by students by thinking creatively and critically to identify important information in solving problems. Suppose a lesson is carried out with a reciprocal teaching strategy by sharpening two strategic characteristics, namely questioning & clarifying. In that case, this can be interpreted that the attributes of other joint teaching strategies are still being implemented. In-depth observations of these characteristics still need to be carried out.

The sharpening of the characteristics of the reciprocal teaching strategy was carried out in questioning and clarifying. The sharpening of investigation is carried out because with students compiling questions and compiling clarifications on the material, these students can think critically to increase the learning outcomes obtained. Learning that sharpens the characteristics of questioning & clarifying in reciprocal teaching strategies to determine student understanding of the concept of reflection by preparing questions and clarifying questions and materials.

According to (J Maynes 2013; Jeffrey Maynes, 2013), a person's knowledge always starts by asking. Asking can reflect individual curiosity while answering questions reflects one's thinking ability (J Maynes, 2013). Clarifying in Indonesian can be translated as describing or explaining activities. Clarification activities are essential activities for students who need help understanding. Students may need to learn the truth of their reading and know what the

terms in their reading mean. When students are asked to make clarifications, they will know the answers to the difficulties they are experiencing.

Clarifying is a student's creative and critical thinking activity in identifying vital information to solve problems (Namdar, 2017). If the idea cannot answer the problem, students need to understand the material again, either from other relevant sources or rely on other group members and the teacher. Hence, students find evidence to solve the problem.

In learning by sharpening the characteristics of questioning & clarifying the role of the lecturer as a facilitator and initial model in learning (Cord & Clements, 2010; William E. Lovekamp et al., 2017). After students can carry out their knowledge, the role of the lecturer is reduced. Students mainly carry out other learning activities by interacting with lecturers, students, and teaching materials.

The lesson begins with the teacher providing an understanding of the learning process by sharpening the characteristics of questioning & clarifying. This learning starts by forming groups consisting of 3-4 students. The lecturer and the researcher direct each group to read and conclude the teaching materials on reflection. After reading and completing the teaching materials, the lecturer gives students that from the material they have read. Students should ask questions related to the concept of reflection. Asking questions can be done in groups. After asking questions, each group can also clarify the questions and answers asked by each group and present them in class.

METHODS

While the type of study is classroom action research, this research method is qualitative research. The study's tools included learning outcomes tests, observation papers for lecturer and student activities, and validation sheets for research and learning tools. You're discussing the potential impact of implementing a reflective learning approach focusing on sharpening questioning and clarifying characteristics for a specific class at the State Islamic Institute of Parepare. The aim is to improve learning outcomes, explicitly achieving a high percentage of students scoring above 65%.

Here's how you can articulate the idea: Objective: The objective of implementing the reflection concept learning, emphasizing sharpening questioning and clarifying characteristics, is to enhance the learning outcomes of Class 1B for the academic year 2021/2022 at the State Islamic Institute of Parepare. Strategy: The strategy involves

incorporating reflective practices into the learning process, focusing on refining the students' abilities to ask meaningful questions and clarify any uncertainties in the learning material. Expected Impact: It is anticipated that by fostering a reflective approach with an emphasis on questioning and clarifying, students' understanding of reflection concepts will notice a noticeable improvement. This improvement is reflected in the target of achieving a learning outcome of 86.7%, where students score higher than 65%. Components of the Reflective Learning Approach: Questioning: Students will be encouraged to ask thoughtful and probing questions about the studied reflection concepts. This not only deepens their understanding but also promotes critical thinking skills. Clarifying: Emphasis will be placed on addressing any ambiguities or uncertainties students may have about the reflection concepts. This can involve peer discussions, teacher explanations, or additional learning resources.

Assessment and Monitoring: Regular assessments and monitoring of student progress will be conducted to gauge the effectiveness of the reflective learning approach. This includes formative assessments, class participation, and periodic evaluations. Success Criteria: The achievement of the set target will measure the success of the implementation: a learning outcome of 86.7% of students scoring more significant than 65%. This indicates a substantial improvement in the understanding and application of reflection concepts.

Continuous Improvement: Feedback from students and ongoing assessment results will be used to refine and improve the reflective learning approach continuously. This ensures that the teaching strategies remain effective and aligned with the learning needs of the students. This approach aligns with contemporary educational theories that emphasize active and reflective learning, aiming not only for knowledge acquisition but also for developing critical thinking and problem-solving skills.

The information used in this study comes from validators of learning resources and research tools, witnesses of lecturer and student activities, and students who took the tests at the conclusion of the study. After that, the data were examined using Mills and Huberman's three steps for analysis: data reduction, data presentation, and conclusion making.

Your statement is accurate. Triangulation is a method used in research to enhance the credibility and accuracy of data by cross-verifying information from multiple sources or using different data collection methods. Triangulation helps researchers gain a more comprehensive and nuanced understanding of the phenomenon under investigation. In the

context you've mentioned, you're using triangulation to validate the accuracy of the data in your research. Triangulation involves comparing or matching data collected through one method with data obtained through another or different sources. This can include using multiple data collection techniques, such as interviews, surveys, observations, or document analysis, to corroborate findings.

By employing triangulation, researchers aim to reduce the risk of bias, errors, or misinterpretation associated with relying on a single data source or method. The convergence of evidence from different angles or perspectives enhances the reliability and robustness of the research findings. For example: (1) If you collect survey data on a particular topic, you might use triangulation by conducting interviews with participants to gather qualitative insights. (2) You could compare findings from your primary data collection method with existing literature or historical records to see if they align or provide different perspectives. This methodological approach is precious in social sciences, qualitative research, and mixed-methods research, where the richness and complexity of the phenomenon often require a multifaceted understanding.

The data in this study are data from validation results, data from observations of student and lecturer activities, and student test results which are then reduced and presented. Conclusions are drawn based on the success criteria for each of these data. Based on the results of this conclusion, the three data are compared, namely comparing the data from the validation results from the validator, the data from the observations from the observer, and the data from the student test results from the students.

RESULTS AND DISCUSSION

You're presenting the results of a research study conducted over three meetings, explicitly focusing on observations of student and lecturer activities. Here's a summary of the information you provided: First Meeting: Student activities observed: 88% and 82% met the criteria well; Lecturer activities observed: 86% met the criteria well. Second Meeting: Lecturer activities observed: 90%, fitting the criteria well; student activities (two observers): 88%, meeting the criteria well. Third Meeting: Lecturer activities observed: 90%, fitting the criteria very well; student activities observed: 86% and 84%, meeting the criteria well. Summary: The results indicate consistency across meetings, with lecturer and student activities meeting the established criteria. The actions of both lecturers and students fall into a suitable category

based on the observation results. The data suggests a positive trend in the observed activities, with a notable increase in lecturer activities during the second meeting. Overall, the study implies that the teaching and learning processes are aligned with the criteria set for the research, indicating a positive environment for both students and lecturers. If you have questions or a particular aspect you would like to discuss further, please provide more details or ask for clarification.

The observation of student activities is carried out by two observers so that more representative results can be obtained. The difference between the first and second observers is that your students are still adjusting to implementing learning and lecture materials. T at the first meeting, his results in ineffective use of time.

Meanwhile, the final cycle test found that the percentage of students who scored more than 65 was 26, so TB = 26/30 x 100% = 86.7%. This shows that the learning in cycle I meet the criteria for mastery learning, namely, at least 85% of the students who take the test.

The learning outcomes obtained from learning the concept of reflection by sharpening questioning & clarifying meet the established criteria, namely 86% of 30 students scored more than equal to 65. These results can be obtained because students already know the learning process in class that uses questioning & clarifying that can improve students' thinking skills. Following what was expressed, namely, questioning & clarifying, can develop critical thinking skills to improve learning outcomes (W.E. Lovekamp, Soboroff, & Gillespie, 2017; Jeffrey Maynes, 2013).

Based on the results of observations in learning activities I and II that meet the criteria and the end-of-cycle test also meets the requirements, this learning activity has achieved success (Namdar, 2017). Thus, the first cycle has met the success criteria in this classroom action research.

Research findings on implementing actions include student activities in compiling questions running quite effectively according to the student worksheet (SW). SW, the questions are 2-4, almost all of which refer to the teaching materials provided. Students' attention should have been more focused on the lecturer. They have interacted in groups. And they clarify the answers given by their friends in one group.

At the first meeting, the timing could have been more effective because, in this meeting, the lecturer introduced a reciprocal teaching strategy by sharpening the characteristics of

questioning & and clarifying the role of students in learning. In learning with joint teaching strategies, teachers/lecturers introduce learning processes, objectives, benefits, and learning procedures for students (Jarvis & Baloyi, 2020; Pathoni et al., 2020). At the second and third meetings, the timing followed the lesson plans because students were already familiar with the learning carried out by sharpening the characteristics of questioning & clarifying.

Learning the concept of reflection by sharpening the characteristics of questioning & clarifying in preparing questions and clarifications is carried out in groups with friends sitting close together. These small groups consist of 3 students. Teachers can optimize the reciprocal teaching-learning model, especially in large classes, by grouping students into small groups (W.E. Lovekamp et al., 2017; Switzer & Barclay, 2012).

Meanwhile, according to (Cicchino, 2015, 2015), the advantages of learning in groups are (1) processing subject matter in more depth and applying the learning outcomes that have been obtained by working or studying individually on new problems or questions, (2) meeting the needs of students to feel happy in learning and motivated in learning, (3) acquire the ability to cooperate (social skills).

In learning the concept of reflection by sharpening the questioning feature, this is written in the SW in preparing questions and clarifications. SW, in this study, is a medium for students to formulate questions and arrange answers. Students are in groups with friends in this SW with adjacent seating positions. In this SW, students are given the freedom with friends in their groups to formulate questions and arrange clarifications on the inquiries made. The results of clarifying these questions are the answers to these questions. By compiling questions, students actively form their knowledge. Dipple's opinion (2021) states that this questioning has a dual purpose. When students ask questions about the material, they use the information and then arrange questions from the existing material. This means that students can conclude from what they ask and use their knowledge to construct new knowledge.

Meanwhile, according to (Cicchino, 2015, 2015), questions asked by students based on the source of their reading, these students will consciously understand that the material in the reading source is essential so that indirectly they will better understand the contents of their homework by the process of compiling the ideas contained in the reading.

While clarifying in this learning is to define and explain the answers to questions in groups by compiling clarifications, it is hoped that students will exchange opinions and refine what their friends convey to each other. In addition to explaining in groups, students also explain the results of preparing questions and answers from different groups presented in class. This follows what was stated by (J Maynes, 2013; Rohman, Susanto, Hobri, Saiful, & Sahnawi, 2019) that the teacher would appoint group representatives who can lead discussions to explain the results of preparing the following question in turn for other students. The lecturer is only a facilitator and moderator to implement the discussions at this stage.

Lecturers, in learning the concept of reflection by sharpening the characteristics of questioning & clarifying, only act as facilitators and explain if there is a misunderstanding between students during presentations in class. This is in line with what was expressed by Brown (Jose M Ocampo, 2018; Jeffrey Maynes, 2013) that the lecturer initially became the leader of the discussion. After the student discussion went well, the role of the lecturer was only as a facilitator. At the end of the lesson, the lecturer directs students to make conclusions about the material that has been understood. This is done to reinforce the material that has been studied. The implementation of learning by sharpening the characteristics of questioning & clarifying is following what was planned.

In learning the concept of reflection, five students were silent. They tended to be passive in compiling questions in groups. This happens because they need to get used to working together in groups to formulate and answer questions. In addition, they are afraid that they are not used to answering questions in their group. After the lecturer knows the cause of the passive student, the lecturer tries to approach giving direction that with this learning, students can clarify each other's answers in groups to help each other. The steps taken by this lecturer followed what (Samo et al., 2017) stated. If students have started the dialogue process, the lecturer is only a facilitator who directs students to carry out their role in learning.

Students are conditioned in groups in learning so that they can clarify the answers given by their friends in one group. The conditioning of students in groups in small groups follows the opinion of (Springborg & Ladkin, 2018), namely the procedure for implementing the reciprocal teaching strategy by assigning students to small groups and teaching more

responsibility to students in groups. Group activities in formulating questions and clarifying are more likely to allow students to understand the mathematical ideas they are studying.

In learning the concept of reflection by sharpening the characteristics of questioning & clarifying, there are obstacles. These constraints are from the lecturer's aspect. Namely, in the early stages, the lecturers need to be able to use the time according to the plan in the lesson plan. This obstacle can be solved by the lecturer trying to manage time effectively by reducing the role of the lecturer after the students have understood the learning to be carried out. Another obstacle came from the student aspect. Namely, at the beginning of learning at the first meeting, the students still needed to understand the purpose of compiling questions. This is given a solution. The lecturer explains so that each group understands. The lecturer facilitates student questions regarding the learning procedure and clarifies the answers to the prepared questions.

Meanwhile, the constraint in implementing the presentation is that not all groups in one meeting can present the results of the preparation of questions and their clarifications. This can be given a group solution that delivers the results of their work in one group meeting. If time is still available, another group can be added. Meanwhile, the SW has an elementary problem, and at first, students found it challenging to understand the use of the SW. The lecturer provides guidance and explanation of the steps in preparing questions and clarifying them to overcome this.

CONCLUSION

The conclusion of this study is the procedure for learning the concept of reflection by sharpening the characteristics of questioning & clarifying for State Islamic Institute of Parepare students, namely (1) Students in groups do questioning. Namely, students prepare questions and answers based on teaching materials about the concept of reflection in SW, (2) Students in groups do clarify, namely clarifying questions or answers to questions both in groups and in-class presentations.

Based on the results of research and research findings, it is recommended that teachers use learning strategies by sharpening the characteristics of questioning & clarifying in classroom learning, taking into account several things, namely: teachers should be more active in designing teaching materials and SW used in education and streamlining time in

learning and other researchers, should be able to conduct further research on learning by sharpening the characteristics of questioning & clarifying as a component of reciprocal teaching-learning strategies so that improving the quality of learning mathematics can be carried out continuously and can also conduct further research on learning by sharpening other characteristics of common Teaching.

ACKNOWLEDGMENTS

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