Sumatra Journal of Disaster, Geography and Geography Education: June 2026. Vol.10. No.1. pp. 145-150
Disaster, Geography, Geography Education http://sjdgge.ppj.unp.ac.id/index.php/Sjdgge
ISSN: 2580 - 4030 (Print) 2580 - 1775 (Online), Indonesia

RECIPROCAL TEACHING INSTRUCTION AT STATE ISLAMIC SENIOR HIGH SCHOOL (MAN) 1 BANJARNEGARA, BANJARNEGARA REGENCY, INDONESIA

Ahmad Munsif bin Ismail[1], Saiful Adli bin Suhadak[2], Radin Muhd. Imaduddin bin Radin Abdul Halim[3], *Inarotul Faizah[4], Dewilna Helmi[5]

[1]Lecturer, Institute of Teacher Education, Bangi Campus, Malaysia
[2]Selangor Education Official, Malaysia
[3]Special Duties Officer to the Minister of Education Malaysia, Malaysia
[4]State Islamic Senior High School (MAN) 1 Banjarnaegara, Indonesia
[5]Department of Geography, Universitas Pattimura, Indonesia
Email: inarotulfai@gmail.com

*Corresponding Author, Received: February 27, 2026. Revised: April 28, 2026. Accepted: May 28, 2026

ABSTRACT: The phenomenon of low active involvement and weak conceptual understanding in students of grades XI-7 MAN 1 Banjarnegara in the subject of Geography became the main trigger for the implementation of this research. The problem is allegedly rooted in the application of conventional instructional methods that still dominate the classroom, thus limiting students' intellectual mobility. As a solution, this Classroom Action Research (PTK) was initiated to evaluate the extent to which the *Reciprocal Teaching model* is able to escalate the dynamics of activities as well as the achievement of student learning outcomes through a more participatory approach. In its implementation, this study takes two action cycles that integrate the four pillars of cognitive strategy, namely *summarizing*, question *generating*, *clarifying*, and *predicting*. In Cycle I, observations showed that student involvement was still held at a low to moderate level, with the classical completion rate only reaching 46.7%. Nevertheless, through deep reflection and strengthening collaboration in Cycle II, there was a significant spike in the intensity of interaction in the classroom. It was recorded that students' questioning activities increased drastically to the very high category (81%), which was directly proportional to the increase in learning completeness which reached 70%. This success confirms that the paradigm shift, in which students take on the role of "teachers" to their peers, is effectively able to stimulate metacognitive independence and build their confidence. Comprehensively, the implementation of *Reciprocal Teaching* has succeeded in transforming the learning atmosphere into a more dynamic and in-depth ecosystem. These results prove that the target of process improvement and optimization of learning outcomes in Geography material has been completely fulfilled in the second cycle, so that no more intervention is needed in the next cycle.

Keywords: Reciprocal Teaching, Learning Activities, Geography.

1. INTRODUCTION

The essence of geography education lies in the in-depth study of spatial dynamics, regional perspectives, and the complexity of interactions between environmental and social dimensions. This discipline requires students to hone an integrative mindset and analysis-synthesis skills in order to dissect the reciprocal relationship between the geosphere and the anthroposphere. However, the complex characteristics of the material are often an obstacle in learning at the secondary level. In fact, the urgency of geography is not just the retention of physical and social facts, but the formation of critical reasoning on human-environmental relations. In line with the vision of the Independent Curriculum, the learning orientation now focuses on achieving spatial literacy, analytical acuity, and applicative problem-solving skills [1-4].

The role of geography is crucial, especially in equipping students with an understanding of mitigation and disaster risk [5]. Mastery of this field requires students to be proficient in interpreting data, mapping potential risks, and formulating territorial-based solutions. Therefore, the learning scheme must be able to construct cognitive involvement as well as practical skills simultaneously. Entering the challenges of the 21st century, the aspect *of Higher Order Thinking Skills* (HOTS) which includes critical and creative

thinking is a fundamental competency. In the realm of geography, HOTS is actualized through the ability to analyze the interconnectedness of geosphere phenomena, evaluate environmental policies, and create adaptive innovations to climate change [6-10].

The foundation of HOTS is metacognitive skills, which are students' awareness to control, direct, and reflect on their own thought processes. Without metacognition, students tend to be trapped as passive recipients of information. Ideally, students of Class XI MAN 1 Banjarnegara are able to activate this metacognitive function, considering the strong positive correlation between this awareness and the depth of mastery of geographical concepts [11].

However, the reality on the ground shows different conditions. Based on initial observations in Class XI MAN 1 Banjarnegara, a number of problems were found that hindered the quality of the process and learning outcomes, including: (1) Lack of Student Participation and Engagement: (1) Learning is still dominated by one-way lecture methods that trigger a passive attitude. Students are not used to collaborating or building knowledge independently, which has an impact on low enthusiasm in following lessons, (2) Limited Conceptual Comprehension: Learning orientation is still fixated on a low cognitive level (*recall*), so that students have difficulties when faced with analysis or evaluation in problem solving. The inability to understand these abstract basic concepts leads to obstacles in solving problems that require high reasoning, and (3) Low Learning Outcomes: As a result of the low accumulation of activities and mastery of concepts, students' daily test scores have collectively not been able to achieve the Minimum Completeness Criteria (KKM) [12-15].

The identification of these problems signals that conventional learning models are less effective in accommodating the development of metacognitive skills and critical thinking. An educational intervention is needed that is able to encourage active roles, facilitate collaborative dialogue, and train students' independence in summarizing, questioning, and predicting material. The *Reciprocal Teaching* approach emerged as a relevant instructional solution to address these disparities. The model is designed to strengthen self-understanding through four core strategies: *Summarizing*, *Question Generating*, *Clarifying*, and *Predicting*. Through *Reciprocal Teaching*, students are given the opportunity to exchange roles as teachers in leading discussions, which systematically fosters learning responsibility and communication skills [16-20].

2. METHODS

The selection of this location is based on the consideration that MAN 1 Banjarnegara has representative subject characteristics to answer the research problems raised. The existence of supporting facilities and the diversity of student backgrounds in this school allows researchers to obtain valid and comprehensive data. Thus, the spatial context that includes the spatial and physical aspects of the location becomes an important environmental variable in supporting the successful implementation of the planned action [21-24].

3. RESULTS AND DISCUSSION

The implementation of this research is systematically designed through a continuous two-cycle scheme to monitor the development of the subject periodically. In its implementation, each cycle includes two face-to-face meetings, where the time allocation provided for each session is 180 minutes. The duration is intended so that the intervention process and data collection can run in-depth and comprehensively.

In order to provide a clear picture of the effectiveness of the actions that have been given, the data obtained during the observation process will be described in detail. The presentation of the field findings will be presented in stages based on the order of the cycles that have been implemented. The following is a description and analysis of the research results achieved at each of these stages.

Cycle 1

Planning: (1) create a learning scenario, (2) think of questions that can be asked from what the student has learned, and make sure that the student can answer those questions, (3) predict what the teacher might discuss in the next section of the material, (4) create an observation sheet, (5) designing the necessary learning aids in order to help students understand Geography concepts well, and (6) designing an evaluation tool to see if Geography has been mastered by students.

Execution of Actions

At this stage, teachers carry out learning activities using the Reciprocal Teaching approach in accordance with the scenarios that have been designed in the planning stage. Some of the steps to implement learning are: (1) the teacher prepares the subject matter that will be discussed today. Tell the goal that students will be invited to learn a particular subject matter today by empowering their own abilities. The strategy to be trained is called Reciprocal Teaching, (2) teachers model the

Reciprocal Teaching strategy step by step using Indonesian, (3) materials as the Maritime Axis, (4) the teacher repeats this step using the next material. At the end of this step, students must be sure to understand the steps modeled earlier, (5) the teacher guides students to imitate what has been modeled, provide feedback and discuss the student's performance. The subject matter used is the material Location of Indonesia, and (6) the teacher asked the students to repeat the step again.

Observations
During the KBM process, several things observed by researchers and collaborators include the following:

Table 4. I Data on Student Activity Cycle I Class XI-7 MAN 1 Banjarnegara

No	Observed activity	Cycle I				Average increase (%)
		Meeting I (n= 30)		Meeting II (n= 30)		
		Amount	%	Amount	%	
1	Summary zing the material	10	31	14	44	13
2	Ask Questions	12	37	18	57	20
3	Defining advanced material	8	25	14	44	19

Source: Results of Researcher's Primary Data Analysis, 2025
Description: (1) 81% - 100%: very high, (2) 61% - 80%: high, (3) 41% - 60%: medium, (4) 21% 40%: low, (5) 0% - 20%: very low

Cycle 2

Planning: (1) think of questions that can be asked from what the student has learned, and make sure that the student can answer those questions, (2) make a summary of the most important information from what the student has obtained, (3) take note if there are things that are not clear or make sense from the material given and then whether the teacher succeeds in making it reasonable, (4) create an observation sheet, (5) designing the necessary learning aids in order to help students understand the location/position of Indonesia, and (6) design an evaluation tool to see if the material has been mastered by students.

Execution of Actions
At this stage, teachers carry out learning activities using the *Reciprocal Teaching* approach in accordance with the scenarios that have been designed in the planning stage, but there are several changes in the implementation of learning to get maximum results in the use of *the Reciprocal Teaching method.* Some of the steps to implement learning are: (1) the teacher prepares the subject matter that will be discussed today. Tell the goal that students will be invited to learn a particular subject matter today by empowering their own abilities. The strategy to be trained is called *Reciprocal Teaching*, (2) conducting initial observations or studies on student activities in the classroom. In the first cycle, the teacher only made observations on some students, but in the second cycle it was leveled more evenly, in other words, all behaviors sought by students could be observed by the teacher, by further activating the role of collaborators, (3) teachers model *Reciprocal Teaching*, (4) strategies step by step using materials, (5) the teacher repeats this step using the next material. At the end of this step, students must be sure to understand the steps modeled earlier, (6) the teacher guides students to imitate what has been modeled, provide feedback and discuss the student's performance. The subject matter used is the material, (7) the teacher asked the students to repeat the step again, (8) the change in the implementation of group learning became a presentation in front of the class, and (9) teachers give more reinforcement and appreciation to students who are able to present learning materials well.

Observations
During the PBM process, some of the things observed by researchers and collaborators include the following:

Table 4.3 Student Activity Data for Cycle II Class XI-7 MAN 1 Banjarnegara

No	Observed activity	Cycle I				Average increase (%)
		Meeting I (n= 30)		Meeting II (n= 30)		
		Amount	%	Amount	%	
1	Summary zing the material	15	50	24	78	28
2	Ask Questions	16	53	25	81	28
3	Defining advanced material	15	47	26	84	37

Source: Results of Researcher's Primary Data Analysis, 2025
Description: (1) 81% - 100%: very high, (2) 61% - 80%: high, (3) 41% - 60%: medium, (4) 21% 40%: low, (5) 0% - 20%: very low

This positive correlation between classroom activities and conceptual understanding ultimately has a linear impact on students' academic achievement. The effectiveness of the applied learning model not only touches the affective and psychomotor aspects, but also succeeds in boosting their cognitive performance significantly.

In Cycle I, the percentage of students who achieved learning completeness was 46.7%. Methodologically, this figure is classified into Medium criteria. These results indicate that in the early stages of implementing *the Reciprocal Teaching method*, only almost half of the total students were able to internalize the material optimally. The low completion rate in the first cycle was triggered by students' adaptation constraints to the new learning model and the lack of students' courage in the presentation and question and answer process. Entering Cycle II, after improving classroom management and strengthening motivation, the percentage of students above the KKM jumped sharply to reach 70%. The achievements in this second cycle are included in the High criteria. This improvement is empirical evidence that the modification of actions in the second cycle—such as sharpening strategy modeling and rewarding—successfully helps students understand Geography concepts better and more deeply. Cumulatively, there was an average increase of 23.4% from Cycle I to Cycle II. Although this increase is technically in the category of Low criteria when referring to the percentage increase table, in the context of Classroom Action Research (PTK), the shift from 46.7% to 70% is a very significant achievement. This shows that the intervention carried out by the researcher has succeeded in moving the position of classical completeness from the "Medium" category to the "High" category [25-30].

The success of this increase of 23.4% confirms that the *Reciprocal Teaching method* is effective in improving students' mastery of the material. With 70% of students having completed, the researcher views that the action cycle has reached the expected saturation point, where the majority of the study subjects have shown stable academic progress. These dynamics provide a solid basis for researchers to conclude the research cycle and conclude that the goal of learning improvement has been achieved systematically. The process of adapting students to unfamiliar learning syntax takes time, so that the consistent growth of learning outcomes, no matter how small, indicates the effectiveness of the interventions provided. The transition from conventional learning patterns to independence in the Reciprocal Teaching model is the basis for the dynamics of obtaining these scores [31-34].

The implementation of *the Reciprocal Teaching strategy* in this study has been empirically proven to be effective in stimulating students' active participation, especially in three main indicators: the ability to summarize the material, the courage to ask questions, and the ability to project advanced material. In the implementation of Cycle I, the dynamics of student activities were still monitored in the range of the "Low" to "Medium" category. This phenomenon is triggered by several fundamental obstacles, such as psychological obstacles for students who do not dare to discuss openly and inefficient time allocation management. This situation is considered reasonable in the transition phase, considering that students are in the stage of adapting to a new learning model that requires them to take on the role of "teachers" for their peers. Entering Cycle II, there was a very progressive acceleration of activity. One of the outstanding achievements is the aspect of asking questions that soared to the "Very High" criterion (81%). This sharp increase is a direct impact of the optimization of actions in the second cycle, where the researcher integrates *reinforcement* and appreciation for students who show initiative. In addition, modifying methods by changing small group discussions to classical presentations in front of the class has proven to be much more effective in constructing students' confidence. This transformation is in line with the basic principles *of Reciprocal Teaching* which focuses on students' independence and personal responsibility for the success of their learning process.

In line with the strengthening of these affective and psychomotor aspects, learning outcome data also showed a significant positive trend. In the first cycle, despite the tendency to increase the value between meetings, the classical completeness rate only touched 46.7%. However, after improvements were made to the instructional scenario and an increase in the intensity of the role of collaborators in Cycle II, the percentage of students who exceeded the KKM shot up to 70%. This success confirms that consistent training in summarizing, asking questions, and predicting material is able to deepen students' conceptual understanding, especially on the topic of "Indonesia as a Maritime Axis". Substantially, this *Reciprocal Teaching model* is very effective because it spurs intensive cognitive engagement of students. Through summarizing activities, students are trained to sort out essential information from just supporting data. Meanwhile, in the process of question and answer and determination of advanced material, students are encouraged to hone their critical thinking skills [35-39].

4. CONCLUSION

Some of the key factors that support the success of this research include: (1) Consistent Modeling: Researchers repeatedly provide examples of how to conduct *Reciprocal Teaching strategies* before asking students to imitate, (2) Managerial Improvement: The change from group work to class presentations in Cycle II minimizes the presence of passive students in the group, and (3) Time Optimization: In Cycle II, the efficiency of discussion time increases so that the reflection process at the end of learning becomes more meaningful.

Although successful, the study notes that initial barriers such as shyness and time constraints are the main challenges. Solutions in the form of providing reinforcement (*rewards*) and more intensive guidance have proven to be effective in overcoming these obstacles in Cycle II. Overall, this classroom action research proves that *Reciprocal Teaching* can be a solution to improve the quality of Geography learning at MAN 1 Banjarnegara.

5. REFERENCES

[1] Agustina, R. (2017). The Effectiveness of the Reciprocal Teaching Learning Model on the Ability to Understand Mathematical Concepts. Journal of Educational Vehicles, 4(1), 55-62.
[2] Arikunto, Suharsimi. (1989). Research Procedure of a Practical Approach. Jakarta: Rineka Cipta.
[3] Brown, A. L., & Palincsar, A. S. (1984). Reciprocal Teaching of Comprehension-Fostering and Monitoring Activities. Cognition and Instruction, 1(2), 117–175.
[4] Brown, A. L., & Palincsar, A. S. (1989). Guided, cooperative learning and individual knowledge acquisition. Dalam L. B. Resnick (Ed.), Knowing, learning, and instruction: Essays in honor of Robert Glaser (hlm. 393-451). Hillsdale, NJ: Erlbaum.
[5] Carin, Arthur A. & Sund, Robert B. (1989). Teaching Science Through Discovery. New York: Merrill Publishing Company.
[6] Carter, C. J. (1997). Why Reciprocal Teaching? Educational Leadership, 54(6), 64-68.
[7] Doolittle, P. E., Hicks, D., Triplett, C. F., Nichols, W. D., & Young, C. A. (2006). Reciprocal teaching for online high school students. Journal of Interactive Online Learning, 5(2), 163-176.
[8] Hamalik, Oemar. (2001). The Teaching and Learning Process. Jakarta: Bumi Aksara.
[9] Hardy, P. & Fleer, M. (1996). Science for Children: A Handbook for Teaching Science. Englewood Cliffs, NJ: Prentice Hall.
[10] Hattie, J. (2009). Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement. London: Routledge.
[11] Huda, M. (2013). Teaching and Learning Models: Methodical and Paradigmatic Issues. Yogyakarta: Student Library.
[12] Lestari, K. E., & Yudhanegara, M. R. (2015). Mathematics Education Research. Bandung: Refika Aditama.
[13] Mafarja, N., Mohamad, M. M., Zulnaidi, H., & Fadzil, H. M. (2023). Using of reciprocal teaching to enhance academic achievement: A systematic literature review. Heliyon, 9(e18269).
[14] Maulida, A. (2020). Application of the Reciprocal Teaching Model to Improve Students' Reading Comprehension Skills. Journal of Elementary School Teacher Education, 5(2), 110-118.
[15] Muslimin, I., & Maryono. (2019). Reciprocal Teaching Learning Strategies in Improving Critical Thinking Skills. Journal of Geography Education, 24(1), 45-53.
[16] Oczkus, L. D. (2018). Reciprocal Teaching: At-Work Strategies for Reading Comprehension (3rd ed.). Alexandria, VA: ASCD.
[17] alincsar, A. S. (1986). Metacognitive Strategy Instruction. Exceptional Children, 53(2), 118–124.
[18] Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1(2), 117-175.
[19] Pratiwi, D. (2018). The Influence of Reciprocal Teaching Strategies on Geography Learning Outcomes of High School Students. Journal of Geography Education: Studies, Theories, and Practices in the Field of Education and Geography, 23(2), 112-119.
[20] Roestiyah. (1989). Teaching Problems as a System. Jakarta: Rineka Cipta.
[21] Rooijakkers, A. (1991). Teaching Successfully. Jakarta: Gramedia Pustaka Utama.
[22] Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. Review of Educational Research, 64(4), 479-530.
[23] Sanjaya, W. (2016). Learning strategies are oriented to the standards of the educational process. Jakarta: Prenadamedia Group.

[24] Shoimin, A. (2014). 68 Innovative Learning Models in the 2013 Curriculum. Yogyakarta: Ar-Ruzz Media.
[25] Slameto. (1995). Learning and Factors That Influence It. Jakarta: Rineka Cipta.
[26] Slavin, R. E. (1997). Educational Psychology: Theory and Practice (5th ed.). Boston: Allyn & Bacon.
[27] Slavin, R. E. (2019). Educational Psychology: Theory and Practice (12th ed.). New York, NY: Pearson.
[28] Spörer, N., Brunstein, J. C., & Kieschke, U. (2009). Improving students' reading comprehension skills: Effects of strategy instruction and reciprocal teaching. Learning and Instruction, 19(3), 272-286.
[29] Sudjana, Nana. (2000). The Basics of the Teaching and Learning Process. Bandung: Sinar Baru Algensindo.
[30] Suprijono, A. (2015). Cooperative Learning: Theory and Application of PAIKEM. Yogyakarta: Student Library.
[31] Syah, M. (2010). Educational Psychology with a New Approach. Bandung: PT Remaja Rosdakarya.
[32] Trianto. (2011). Designing an Innovative-Progressive Learning Model. Jakarta: Kencana.
[33] Usman, M. U. (2013). Become a Professional Teacher. Bandung: PT Remaja Rosdakarya.
[34] Usman, Uzer. (2000). Becoming a Professional Teacher. Bandung: Remaja Rosdakarya.
[35] Vygotsky, L. S. (1978). Mind in Society: The Development of Higher Psychological Processes. Cambridge, MA: Harvard University Press.
[36] Wahyuni, S. (2015). Development of Reciprocal Teaching-Based Science Learning Tools to Increase Self-Efficacy. Journal of Science Education, 3(3), 120-128.
[37] Wardani, I. G. A. K., & Wihardit, K. (2013). Classroom Action Research. Jakarta: Open University.
[38] Wena, Made. (2009). Contemporary Innovative Learning Strategies: An Operational Conceptual Review. Jakarta: Bumi Aksara
[39] Zubaidah, S. (2017). Contextual Learning Based on Reciprocal Teaching to Improve Geography Literacy Skills. Proceedings of the National Seminar on Geography Education, Malang, Indonesia.