

## **The Implementation of the Reciprocal Teaching Method to Improve Students' Creativity and Learning Outcomes in Sociology Subject of Class XII IPS 4 at SMAN 3 Mataram**

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### **Abstract**

This research is a Classroom Action Research (CAR) which aims to improve creativity and student learning outcomes in Sociology subjects in class XII IPS 4 SMAN 3 Mataram through the application of the reciprocal teaching method. This research was conducted in two cycles, where each cycle consisted of two meetings. The reciprocal teaching method was chosen because it can improve conceptual understanding through active interaction between students and teachers, as well as encourage critical thinking skills. In cycle I, the results of the study showed that the learning process with this method achieved an achievement of 76%, student creativity only reached 36% in the good category, and student learning outcomes that achieved KKM 75 were only 33%. Because it had not met the expected performance indicators, the study was continued to cycle II. In cycle II, there was a significant increase, where the achievement of the learning process increased to 100%, student creativity increased to 80% in the good category, and student learning outcomes showed that 83% of students had achieved KKM. Thus, the results of this study prove that the application of the reciprocal teaching method can significantly improve creativity and student learning outcomes in the Sociology subject of class XII IPS 4 SMAN 3 Mataram.

**Keywords:** Reciprocal Teaching, Creativity, Learning Outcomes, Sociology.

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## **INTRODUCTION**

Education plays a pivotal role in shaping individuals capable of critical, creative, and innovative thinking, particularly in the digital age and in post-pandemic learning contexts (Susilowati, 2018). As schools worldwide strive to cultivate 21st-century skills, the choice of instructional methods becomes increasingly consequential. Among these, teaching strategies that actively engage learners, foster metacognitive awareness, and build higher-order thinking skills are essential. In the realm of senior high school sociology, an effective approach must not only convey theoretical constructs—such as social interaction, structure, and change but also encourage students to analyze, synthesize, and evaluate complex societal phenomena (Triyanto, 2014).

Preliminary observations at SMAN 3 Mataram revealed that Sociology instruction in class XII IPS 4 remains largely teacher-centered, relying heavily on lecture methods. Of the 34 students observed, only 30% participated in classroom discussions, while 70% remained passive listeners (researcher observation, 2023). Daily assessment data showed that merely 33% of students achieved the Minimum Competency Criteria (KKM) of 75, indicating superficial concept mastery and limited reflective capacities. This discrepancy between the aspiration for active, constructivist learning and the prevailing passive model highlights a clear research gap: there is a dearth of empirical studies examining student-centered, dialogic strategies particularly Reciprocal Teaching in Indonesian senior high school sociology settings.

Reciprocal Teaching (RT) is a collaborative instructional framework designed to improve reading comprehension through four interrelated strategies: summarizing, questioning, clarifying, and predicting

(Navaie, 2018; Oo et al., 2021). Grounded in Vygotsky's (1978) social constructivist theory, RT posits that learners co-construct meaning through guided social interaction. Initially developed by Palincsar and Brown (1984) for reading instruction, RT has since been adapted across disciplines and age levels. In this model, teachers first model each strategy demonstrating how to extract main ideas (summarizing), generate critical inquiries (questioning), resolve ambiguities (clarifying), and anticipate forthcoming content (predicting) before gradually handing responsibility to students who rotate in "teacher" roles, facilitating peer discussion (Mafarja et al., 2023; Ulphah et al., 2020).

Each RT component serves a distinct cognitive and metacognitive purpose. Summarizing requires students to distill essential information, reinforcing retention and comprehension by identifying central concepts (Dadabhoy & Dadabhoy, 2021; Oo et al., 2021). Questioning stimulates deeper engagement, as students formulate and pose queries that probe underlying assumptions and relationships within the text (Kabash: 2018). Clarifying addresses comprehension obstacles such as unfamiliar vocabulary or convoluted arguments thereby strengthening schema development and facilitating vocabulary acquisition (Oo et al., 2021). Predicting activates prior knowledge and contextual cues, enabling learners to forecast content trajectories and remain cognitively invested (Dadabhoy & Dadabhoy, 2021). Collectively, these strategies not only scaffold discourse but also cultivate metacognitive awareness, encouraging students to monitor, evaluate, and regulate their own comprehension processes (Oo et al., 2021).

In the RT classroom, the teacher functions as a facilitator and scaffold. Initially, the instructor demonstrates each strategy explicitly perhaps summarizing a sociological theory, generating clarifying questions, modeling vocabulary support, and making predictions about a case study's implications before ceding control to student leaders who guide peer discussions (Sari et al., 2024). This dialogic approach fosters a culture of collaborative knowledge construction in which students exchange interpretations, critique one another's reasoning, and collectively build nuanced understandings (Ejiogu et al., 2021). Beyond enhancing comprehension, RT has been shown to boost learners' confidence in articulating ideas, as repeated practice in leading discussions and receiving constructive feedback strengthens self-efficacy (Ulphah et al., 2020).

Applying RT to high school sociology instruction offers distinct advantages. Sociology inherently involves examining social structures, power dynamics, and cultural phenomena topics that benefit from critical dialogue and reflective thinking (Triyanto, 2014). Through RT's structured discussion cycles, students can analyze sociological texts, debate contemporary social issues, synthesize theoretical frameworks, and predict the potential social impact of policies or events (Erianjoni et al., 2023; Cant et al., 2019). For instance, after reading a chapter on stratification, students might summarize key concepts, question the assumptions of social mobility theories, clarify contested terminology, and predict future trends in inequality thus bridging abstract theory and real-world application.

Although RT's effectiveness has been well-documented in language arts demonstrating gains in reading comprehension, self-regulation, and metacognitive strategy use (Navaie, 2018; Dadabhoy & Dadabhoy, 2021) research on its impact within the social sciences, particularly regarding creativity and overall learning outcomes in Indonesian high schools, remains limited. International studies report that RT fosters critical thinking and collaborative skills (Henita et al., 2023; Raslie et al., 2015), but few have systematically measured its influence on creative problem-solving the ability to generate novel ideas, connect disparate concepts, and apply knowledge innovatively which is a core competency in 21st-century education (Bakar, 2020; Yulius et al., 2024). Addressing this lacuna, the present study examines RT's dual impact on both creativity and academic achievement in the sociology classroom at SMAN 3 Mataram.

Other learner-centered approaches such as Problem-Based Learning (PBL) and Inquiry-Based Learning (IBL) also promote active engagement and higher-order thinking. PBL tasks students with collaboratively solving authentic, open-ended problems, while IBL engages learners in designing and conducting investigations to answer research questions (Jumaida, 2023; Lestari, 2023). However, these models do not consistently emphasize systematic metacognitive strategy instruction. RT's distinctive contribution lies in embedding metacognitive processes at the core of discourse, thereby nurturing both comprehension and strategic thinking skills (Bakar, 2020). Comparing RT with PBL and IBL within a

sociology context will elucidate which method most effectively enhances understanding, creativity, and retention for local learners.

Furthermore, contextual factors such as classroom culture, teacher readiness, and technological support may mediate RT's success. While some studies highlight the benefits of integrating digital tools (e.g., online forums, interactive applications) into RT to foster flexibility and engagement (Kasuma & Wiyasa, 2021), little is known about how technology-enhanced RT performs in resource-constrained Indonesian schools. Likewise, the efficacy of RT may depend on instructor facilitation skills and the provision of adequate scaffolding for summarization and questioning areas where teachers often require professional development and structured guidelines (Rosencrum et al., 2021).

In light of these considerations, this study aims to: (1) Analyze the effectiveness of Reciprocal Teaching in improving creativity and learning outcomes among students of class XII IPS 4 at SMAN 3 Mataram, (2) Compare the impacts of RT, PBL, and IBL within the sociology curriculum to identify the most suitable strategy for fostering deep understanding and creative thinking, and (3) Examine contextual facilitators and barriers including teacher scaffolding, peer dynamics, and technology integration affecting RT implementation in a local senior high school setting.

By validating research instruments through expert review and employing a two-cycle Classroom Action Research design, this investigation seeks to generate robust empirical evidence on RT's applicability in Indonesian social science classrooms. The findings are expected to offer practical recommendations for educators, curriculum developers, and school leaders, contributing to the refinement of pedagogy that balances academic rigor with creative and critical engagement.

This research addresses a critical gap in the literature on student-centered pedagogy in the Indonesian context. By focusing explicitly on the under-studied domain of sociology education and incorporating creativity as an outcome measure, the study extends existing knowledge on RT beyond its traditional reading comprehension roots. Moreover, by juxtaposing RT with other active learning frameworks and by situating the investigation within the real-world constraints of SMAN 3 Mataram the study offers contextually grounded insights that can inform scalable instructional innovations. Ultimately, the results will guide stakeholders in crafting learning environments that empower students as co-constructors of knowledge, capable of critical analysis and creative problem-solving in an increasingly complex social landscape.

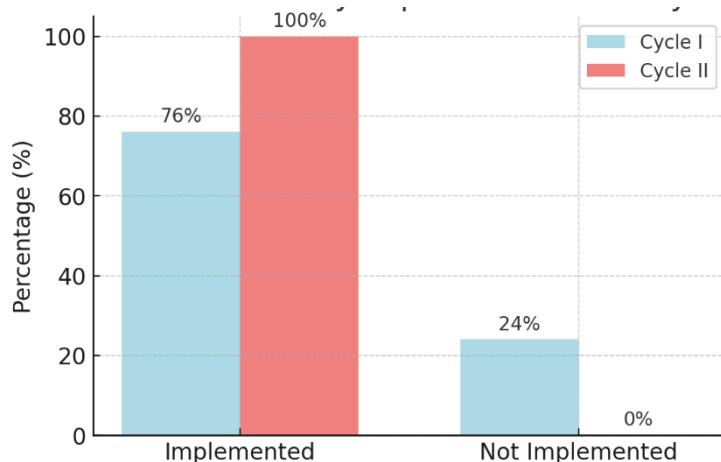
## RESEARCH METHODS

This study employed a Classroom Action Research (CAR) design following Susilowati's (2018) definition and Kemmis & McTaggart's (2005) iterative cycle model, involving two cycles of planning, action, observation, and reflection. Conducted in class XII IPS 4 at SMAN 3 Mataram, the research engaged 34 students and their sociology teacher, all of whom provided informed consent. In the planning stage, lesson plans were developed to integrate the four Reciprocal Teaching (RT) strategies predicting, clarifying, questioning, and summarizing and the teacher received scaffolded training on modeling and facilitating these strategies. During each cycle's action phase (two 45-minute meetings per cycle), students worked in small groups with rotating "leader" roles to guide structured discussions under teacher supervision. Data collection comprised validated observation sheets (one for teacher fidelity, one for student engagement), structured interviews with purposively sampled students, a creativity assessment adapted from Torrance's four-domain rubric (fluency, flexibility, originality, elaboration) and pilot-tested for clarity and content validity ( $CVI \geq 0.85$ ), and a learning-outcomes test of 20 multiple-choice and two essay items aligned to the KKM 75 benchmark ( $\alpha = 0.82$ ). Observation notes and interview transcripts provided qualitative insights, while pre- and post-cycle test scores offered quantitative measures of student creativity and achievement. Following Nasution's (1993) data-analysis model, raw data were reduced through coding and categorization, displayed via tables and graphs, and interpreted to draw conclusions about RT's impact across cycles. Credibility was ensured by triangulating sources (observation, interviews, tests) and methods, while dependability was enhanced through peer debriefing with two external educational researchers. Ethical rigor was maintained through school-administration approval and participant confidentiality. This CAR approach allowed ongoing refinement of RT implementation adjusting instructional scaffolds and discussion protocols in response to reflective

feedback ultimately yielding robust empirical evidence on how structured, collaborative strategies can enhance creativity and learning outcomes in high-school sociology.

## RESULTS AND DISCUSSION

The results of this study indicate that the implementation of Reciprocal Teaching (RT) significantly enhances student engagement in Sociology learning. Data obtained from two research cycles show an increase in student participation, conceptual understanding, as well as improvements in creativity and learning outcomes. In Cycle I, only 36% of students actively participated in class discussions, whereas in Cycle II, this number increased to 80%. Additionally, student learning outcomes also showed a significant improvement, with only 33% of students achieving the Minimum Competency Criteria (KKM) in Cycle I, while in Cycle II, this number rose to 83%.

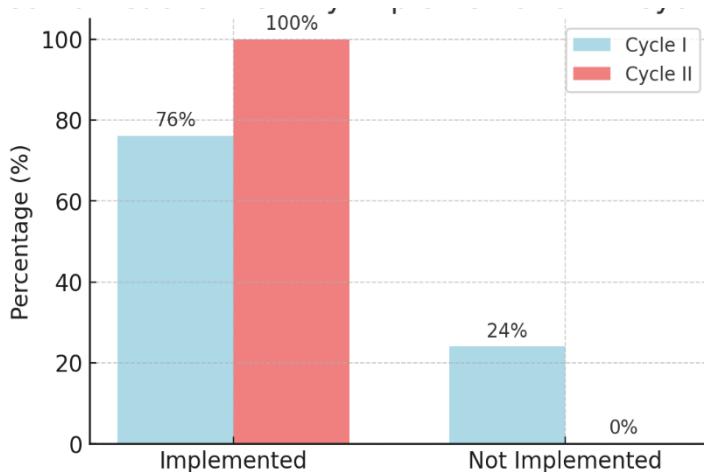


**Figure 1.** Comparison Chart of Learning Outcomes in Cycle I and Cycle II

Based on student learning outcome data, there was a significant improvement from Cycle I to Cycle II. In Cycle I, only 10 students (33%) achieved learning mastery, while 20 students (67%) had not yet reached mastery. After implementing instructional improvements in Cycle II, the number of students who achieved mastery increased to 25 (83%), while those who had not mastered the material decreased to 5 students (17%).

This means there was a 50% increase in learning mastery, while the number of students who did not achieve mastery decreased by 50%. These results indicate that the interventions or strategies applied in Cycle II were effective in significantly improving student learning outcomes. The substantial progress from Cycle I to Cycle II highlights the impact of targeted instructional adjustments. The improvement strategies likely involved refining teaching methods, increasing student engagement, or providing additional support to struggling learners. The data suggest that these efforts created a more effective learning environment, enabling more students to grasp the material and meet the required learning standards.

Furthermore, the results emphasize the importance of continuous evaluation and instructional enhancement in education. By analyzing student performance and identifying areas for improvement, educators can implement strategies that cater to students' learning needs. The 50% increase in mastery demonstrates how effective pedagogical interventions can bridge learning gaps and promote academic success. The findings illustrate the positive impact of refining teaching approaches. The success of Cycle II suggests that when educators employ data-driven strategies, they can significantly enhance student learning outcomes. Thus, continuous reflection and adaptation of teaching methods are essential in achieving higher levels of student mastery and overall academic improvement.



**Gambar 1.** Grafik Perbandingan Keterlaksanaan Siklus I dan Siklus II

Based on the data collected on teacher activity implementation in Cycle I and Cycle II, a striking improvement can be observed following the adjustments made to the Reciprocal Teaching (RT) strategy. During Cycle I, only 76 % of planned instructional activities were executed as intended, leaving 24 % of those activities incomplete. After modifications were introduced in Cycle II which included strengthened scaffolding techniques by the teachers and the incorporation of supportive technologies such as collaborative annotation tools and interactive platforms all instructional tasks were successfully carried out, achieving full implementation at 100 %. This 24 % gain clearly demonstrates that the refined RT approach was highly effective in empowering teachers to guide the learning process more efficiently and ensure that every phase of instruction was carried out as designed, from facilitating discussion roles to monitoring individual student progress.

These results correspond closely with the findings of Faidah et al. (2023), who reported that RT effectively boosts students' confidence in speaking and participating in collaborative discussions. When learners feel more assured in sharing their ideas aloud, overall engagement tends to rise, leading to richer exchanges of understanding. Similarly, Ostovar-Namaghi and Shahhosseini (2011) emphasized that RT fosters a dynamic classroom atmosphere in which students actively co-construct knowledge and build conceptual frameworks together. In such an environment, the teacher's role shifts from information provider to facilitator, orchestrating interactions that allow learners to explore multiple perspectives and refine their thinking through peer feedback and guided reflection an approach that directly supports the collaborative inquiry central to RT.

The foundation of effective scaffolding in RT lies in Vygotsky's concept of the Zone of Proximal Development (ZPD), which suggests that learners can achieve higher-order cognitive tasks with appropriate guidance from a more knowledgeable other (Belland, 2013; Pol et al., 2010). In practice, this guidance is delivered through teacher modeling of key strategies such as how to extract and condense central ideas into coherent summaries and how to clarify ambiguous or complex passages of text. As Hacker and Tenant (2002) noted, concrete demonstrations of summary construction and clarification techniques provide an initial framework that students can imitate and, over time, internalize. Teachers began sessions by thinking aloud as they identified main concepts, highlighted connecting details, and formulated probing questions, thereby giving learners a step-by-step blueprint for engaging deeply with texts.

In addition to modeling, teachers implemented a gradual "fading" of support to foster student autonomy, as described by Okkinga et al. (2016). Initially, the instructor would provide explicit direction and scaffolding at each stage demonstrating how to identify main ideas, pose probing questions, and resolve misunderstandings before progressively stepping back to allow students to take the lead. This structured withdrawal of assistance enabled learners to develop metacognitive awareness and self-regulation skills, while ensuring that instructional support remained responsive to individual learning needs. Observations during Cycle II indicated that, as students gained confidence, they began to initiate discussions, offer peer clarifications, and apply RT strategies independently, marking a clear shift toward learner-driven exploration and higher-quality discourse.

The enhanced student engagement attained through RT had a measurable effect on both creativity and academic outcomes. Apryani et al. (2023) described how RT's discussion-based approach catalyzes creative thinking by encouraging learners to analyze and evaluate content rather than merely repeat information. When students were asked to connect textual themes to broader social phenomena—such as environmental issues or current events they demonstrated more original insights and innovative connections. Through the deliberate practice of predicting content, formulating questions, and generating clarifications, learners engaged in higher-order cognitive activities that extend beyond rote memorization. As Ahmadi et al. (2012) argued, RT strengthens metacognitive strategies by prompting students to reflect on their own learning processes and to adjust their approaches accordingly, fostering a mindset of continual improvement.

The positive correlation between RT and improved learning outcomes was evident in the marked increase in students meeting the minimum competency criteria. While only 33 % of students achieved the Kriteria Ketuntasan Minimal (KKM) during Cycle I, this figure leapt to 83 % in Cycle II, representing a remarkable 50 % improvement. These gains underscore the capacity of RT to bolster both retention and comprehension of material through iterative formative feedback cycles, in which students receive targeted guidance on their questions and summaries. The studies of Riyadi et al. (2023) and Iserbyt et al. (2010) lend further support, revealing that reflective and interactive pedagogies can significantly raise academic achievement by structuring opportunities for in-depth questioning, clarification, and collaborative sense-making.

Despite these advances, the implementation revealed persistent challenges in the summarization component of RT. Consistent with Navaie's (2018) findings, observations showed that without continued guidance, students often produced summaries that lacked coherence and failed to capture the essence of the text. This underscores the necessity for teachers to provide explicit scaffolding, such as exemplars of well-crafted summaries, scaffolded graphic organizers, and targeted feedback that highlights both strengths and areas for refinement. Only through sustained support and practice will students internalize the strategies required to distill complex information into concise, meaningful synopses and avoid reducing summaries to mere paraphrases of isolated sentences.

Beyond traditional scaffolding, the integration of technology emerged as a potent amplifier of RT's effectiveness. Kasuma and Wiyasa (2021) demonstrated that interactive learning applications and online discussion platforms can significantly increase student engagement compared to conventional RT methods. Employing the SAMR framework substitution, augmentation, modification, and redefinition allows educators to move from simple digitization of materials to fundamentally redefining learning tasks (Boateng & Kalonde, 2024). For instance, text annotation tools like Hypothesis or collaborative digital whiteboards enable real-time commentary and collective knowledge building, while asynchronous forum discussions provide additional time for reflection and deeper analysis of each RT strategy.

Underpinning this technological shift is the Technological Pedagogical Content Knowledge (TPACK) framework (Lee et al., 2022), which stresses the importance of harmonizing technology, pedagogy, and subject-matter expertise. Teachers who skillfully integrate these domains can craft RT experiences that cater to diverse learning preferences and promote deeper engagement. Digital environments such as Google Docs for shared text analysis, learning management systems for structured discussion forums, and specialized annotation tools facilitate continuous monitoring of student progress and timely, personalized feedback, thereby enhancing both the transparency and effectiveness of the learning process. By using analytics dashboards, instructors can identify which students struggle with particular RT strategies and intervene proactively.

One-to-one technology initiatives, such as provisioning individual laptops or tablets, further reinforce the potential of tech-enhanced RT. Zheng et al. (2016) found that technology-rich classrooms encourage project-based and self-directed learning, fostering sustained enthusiasm and active participation. Within RT, learners can independently interact with digital texts, leverage summarization tools that highlight key sentences, and engage in asynchronous debates, thus broadening the temporal and spatial boundaries of classroom dialogue. Assali (2024) added that technology-infused pedagogical practices spark creativity by allowing students to manipulate multimedia resources and collaborate across

various modalities text, audio, video thereby extending critical analysis into innovative digital landscapes where peer feedback becomes richer and more varied.

Nevertheless, variability in student responsiveness highlighted the continued need for inclusive facilitation. Some learners readily embraced the RT roles summarizer, questioner, clarifier, predictor—while others remained reticent. Wuryaningtyas and Irsadi (2023) emphasized the importance of designing an inclusive environment that actively draws in quieter students by employing strategies such as rotating roles regularly, using think-pair-share prompts, and setting clear participation norms. Rosencrum et al. (2021) also underscored the critical function of the teacher as a facilitator who fosters equitable dialogue, guiding students from passive reception toward active construction of meaning, and adjusting group configurations to balance differing comfort levels and skill sets.

Several limitations of RT surfaced, particularly around the uneven application of core strategies. Navaie (2018) documented widespread student difficulty in producing meaningful summaries, while Okkinga et al. (2016) reported significant variation in how teachers modeled and scaffolded RT during group sessions. Hacker and Tenent (2002) similarly noted that inconsistent facilitation techniques can erode the collaborative and reflective potential of RT, suggesting that its success is contingent upon uniform teacher proficiency and fidelity to the method. These findings point to the need for systemic support structures, including policy-level endorsement and resource allocation for teacher training, to ensure consistent implementation quality.

Given these observations, a number of recommendations emerge to sustain and further enhance RT implementation. Developing comprehensive RT modules grounded in the TPACK framework would provide teachers with structured guidance on modeling, scaffolding, and leveraging technology. Intensive, ongoing professional development and in-class coaching are also essential to ensure educators can effectively orchestrate RT strategies and manage group discourse. Future research should investigate the impact of asynchronous digital platforms such as AI-powered chatbots, collaborative annotation tools, and multimedia forums on RT's core processes, and should incorporate analyses of psychological and sociocultural factors that influence student participation. Longitudinal studies would further elucidate the durability of metacognitive gains and academic improvements arising from sustained RT practice, while policy research could explore how institutional support affects scalability.

This study confirms that Reciprocal Teaching, when reinforced by precise teacher scaffolding and strategic integration of technology, substantially elevates student engagement, creativity, and learning outcomes. By maintaining rigorous support during initial phases, systematically fading assistance, and harnessing digital tools within a TPACK-aligned pedagogy, educators can transform RT from a static instructional strategy into a dynamic, student-centered approach. Such an approach not only adapts to the evolving demands of diverse educational contexts but also offers a scalable model for continuous improvement and deeper levels of learner autonomy.

## CONCLUSION

The findings of this study confirm that the implementation of Reciprocal Teaching (RT) is an effective strategy for enhancing student engagement, fostering collaboration, and improving creativity and learning outcomes in Sociology education. The structured nature of RT, which includes predicting, clarifying, questioning, and summarizing, allows students to interact actively with learning materials, develop a deeper understanding of concepts, and apply their knowledge in meaningful ways. The results demonstrate a substantial improvement in student participation, with engagement increasing from 36% in Cycle I to 80% in Cycle II. Furthermore, student learning outcomes showed a significant rise, with the percentage of students achieving the Minimum Competency Criteria (KKM) increasing from 33% to 83%. These findings indicate that RT not only encourages active learning but also strengthens students' cognitive abilities, allowing them to think critically and creatively in analyzing social issues. However, the study also highlights that certain challenges persist, particularly in students' ability to summarize effectively without adequate scaffolding from instructors. This suggests the need for continuous teacher guidance in refining students' summarization and critical questioning skills.

## RECOMMENDATIONS

Based on these findings, several recommendations are proposed to optimize the implementation of RT in Sociology education. First, teachers should incorporate structured scaffolding techniques to support students in mastering each RT component, especially summarization and questioning. Providing explicit modeling and step-by-step guidance can help students refine their skills and apply them more effectively. Second, the integration of technology in RT should be explored to further enhance engagement and learning outcomes. The use of interactive digital tools, such as discussion forums or collaborative learning platforms, could provide students with additional support and create a more dynamic learning environment. Third, ensuring an inclusive classroom environment is essential, as some students may struggle with active participation. Strategies such as rotating discussion roles, peer mentoring, and differentiated instruction should be considered to involve all learners equally. Lastly, further research should investigate the long-term impact of RT on students' academic development and explore its applicability across different subjects and educational contexts. By addressing these aspects, RT can be further refined as a sustainable and effective pedagogical approach for enhancing student learning experiences in Sociology and beyond.

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