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The Implementation Of Jigsaw Technique In Reading Comprehension Learning At A Disadvantaged School

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Abstract

This study describes the implementation of the Jigsaw Technique in reading comprehension learning and explores students' perceptions at SMPN 22 Mataram, a disadvantaged junior high school in Indonesia. Although Jigsaw has been widely studied, limited attention has been given to how the technique is implemented and perceived in low-resource school contexts; this study addresses that gap by combining observation of procedural implementation with student-reported experiences. A convergent mixed-methods design involved 20 eighth-grade students aged 13–14 with varied English reading proficiency. Data were collected through a 15-indicator observation checklist, a 15-item five-point Likert questionnaire, semi-structured interviews with six students, and documentation. Observation data were summarized descriptively, questionnaire data were analyzed using means and three perception categories, and interview data were transcribed and analyzed thematically. All 15 observation indicators were implemented according to the planned Jigsaw stages. Students generally reported positive perceptions, with an overall mean of 4.59; 18 students (90%) were positive, two (10%) were neutral, and none were negative. Interviews indicated that discussion and peer explanation helped students understand the texts, while vocabulary, confidence, and time allocation remained challenges. The study contributes contextual evidence on Jigsaw implementation in a disadvantaged school and highlights the need for clear instructions, vocabulary support, and sufficient discussion time. It does not measure reading achievement gains through pre- and post-tests.

Keywords: Jigsaw Technique, Reading Comprehension, Students' Perceptions, Disadvantaged School.

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INTRODUCTION

Reading comprehension is a crucial component of English language learning, as it enables students to grasp information, interpret ideas, and connect the meaning of a text with their existing knowledge (Grabe & Stoller, 2019; Susanto, 2020). In the context of English as a Foreign Language (EFL) instruction, reading comprehension requires not only a command of vocabulary and grammar but also the ability to identify main ideas, locate specific information, and draw inferences from a text (Duke & Pearson, 2009; Klingner et al., 2015). One strategy that can be employed to foster student interaction and accountability during reading is the Jigsaw technique—a cooperative learning approach in which a text is divided into several segments;

students study a specific segment within an "expert group" and subsequently explain it to members of their original group, thereby collectively constructing a comprehensive understanding of the text (Aronson & Patnoe, 2011; Slavin, 2014). In this study, "student perceptions" are defined as the beliefs, attitudes, and evaluations reported by students regarding the implementation of the Jigsaw technique, while "resource-constrained schools" refer to educational settings characterized by unequal access to learning materials, academic support, and opportunities for English language instruction (OECD, 2018).

In general, EFL students frequently encounter difficulties with reading comprehension—particularly when tasked with identifying main ideas, locating specific details, deciphering unfamiliar vocabulary, and synthesizing various parts of a text into a coherent, holistic understanding (Grabe & Stoller, 2019; Nation, 2009; Susanto, 2020). These challenges can be further exacerbated by reading instruction that fails to provide sufficient space for students to engage in discussion, ask questions, offer explanations, and assist one another in comprehending the text. On the other hand, while the Jigsaw technique has the potential to enhance interaction and individual accountability through expert group discussions and peer explanations, its implementation does not automatically guarantee success; it requires clear instruction, effective group management, vocabulary support, and sufficient time (Johnson et al., 2014; Gillies, 2016; Webb, 2009). Consequently, the core issue concerning this research variable is not merely low reading comprehension, but also the gap between the potential of the Jigsaw method as a cooperative strategy and the complexities involved in its classroom implementation.

Specifically, preliminary observations at SMPN 22 Mataram indicate that eighth-grade students struggle with comprehending English reading texts, identifying unfamiliar vocabulary, and participating actively in classroom reading activities. This situation aligns with the school's context—characterized by limited learning resources and English-language support—which necessitates reading activities that are more structured and interactive, and that provide opportunities for students to assist one another in understanding texts (OECD, 2018). Given these initial observations, this study does not focus on measuring effectiveness through pre-test and post-test scores; rather, it examines how the Jigsaw technique is implemented and how students perceive their learning experience within a school environment that faces resource constraints.

As a solution to this problem, the Jigsaw technique is implemented through a structured sequence of stages: explaining the objectives and procedures, forming "home" groups, assigning specific sections of a text, engaging in independent reading, participating in "expert" group discussions, returning to home groups, explaining content to peers, and receiving facilitation and monitoring from the teacher (Aronson & Patnoe, 2011; Slavin, 2014). Through these stages, students have the opportunity to discuss, exchange information, ask questions, and explain the specific text segments for which they are responsible, thereby fostering both interaction and individual accountability (Johnson et al., 2014; Lee et al., 2016). For this solution to be most effective, teachers must provide clear instructions, support vocabulary acquisition, manage reading and discussion time realistically, and offer assistance to students who lack confidence when explaining the material (Gillies, 2016; Nation, 2009; Webb, 2009).

This study differs from previous research, which has largely emphasized the effectiveness of the Jigsaw technique in improving learning outcomes or reading comprehension scores. For instance, Abed (2019) examined the use of Jigsaw to enhance the reading comprehension of university-level EFL students, while a meta-analysis by Kyndt et al. (2013) and a review by Slavin (2014) focused primarily on the impact of cooperative learning on academic achievement. Rather than measuring the impact of Jigsaw on grade improvements via pre-tests and post-tests, this study describes the implementation process and the perceptions of junior high school students within a resource-constrained school environment. Consequently, the focus of this research is distinct, as it centers on the execution of the Jigsaw procedure and the students' experiences, rather than on quantitatively measurable learning outcomes (Vives et al., 2025).

The novelty of this study lies in the specific combination of its context, focus, and the approach employed. First, this study describes the implementation of the Jigsaw technique in a resource-constrained school—specifically, SMPN 22 Mataram—a setting that has rarely been the focus of research on the Jigsaw method in reading instruction. Second, the study explicitly distinguishes between the implementation of procedures and the measurement of learning outcomes, thereby providing a more transparent account of classroom dynamics. Third, the study employs a convergent mixed-methods design, integrating observations based on 15 indicators, perception questionnaires, semi-structured interviews, and documentation to offer a comprehensive understanding of the Jigsaw implementation and students' perceptions (Creswell & Plano Clark, 2018). Consequently, this research provides contextual evidence regarding the use of the Jigsaw technique and student perceptions in a resource-constrained environment, rather than merely replicating existing studies on the effectiveness of the Jigsaw method in different contexts.

This study aims to describe the implementation of the Jigsaw technique in reading comprehension instruction and to explore students' perceptions of this implementation at SMPN 22 Mataram. More specifically, the study addresses two research questions: how the Jigsaw technique is applied in reading comprehension instruction within a resource-constrained school, and how students perceive the implementation of the Jigsaw technique in this context. The findings are expected to provide insight into the execution of the Jigsaw method and offer guidance for English teachers in designing reading instruction that is more interactive, structured, and aligned with the needs of students in resource-constrained school settings.

METHODS

Research Design and Participants

This study employed a convergent mixed methods design. Qualitative and quantitative data were collected during the same phase and considered together to develop a more comprehensive description of the implementation and students' perceptions. The participants were 20 eighth-grade students at SMPN 22 Mataram, West Nusa Tenggara, Indonesia.

Data Collection Instruments and Procedure

Data were collected through four sources: classroom observation, a student questionnaire, semi-structured student interviews, and documentation. The classroom observation checklist was completed by the English teacher, who observed

the researcher implementing the Jigsaw Technique. The checklist contained 15 indicators related to the planned stages and classroom activities. After the learning activities, the 20 students completed a questionnaire consisting of 15 statements rated on a five-point Likert scale from strongly disagree to strongly agree. Six students were selected for semi-structured interviews to obtain more detailed descriptions of their experiences. Documentation was used to support the description of the learning process.

The lesson used a descriptive text divided into sections. Students first received instructions and were organized into home groups. Each student read an assigned section individually and then joined an expert group with students assigned the same section. After discussing the text, students returned to their home groups and explained their sections to their peers. During the activities, the researcher facilitated group transitions, monitored discussion, and provided assistance when necessary.

Data Analysis

Observation data were summarized by identifying whether each checklist indicator was implemented. Questionnaire responses were analyzed descriptively using mean scores and the study's perception categories. Interview data were reviewed to identify recurring descriptions of students' experiences, helpful aspects, difficulties, and suggestions. The qualitative findings were then considered alongside the questionnaire and observation results. The study's scope was descriptive; it did not use pre-tests or post-tests to measure changes in reading achievement.

FINDINGS AND DISCUSSION

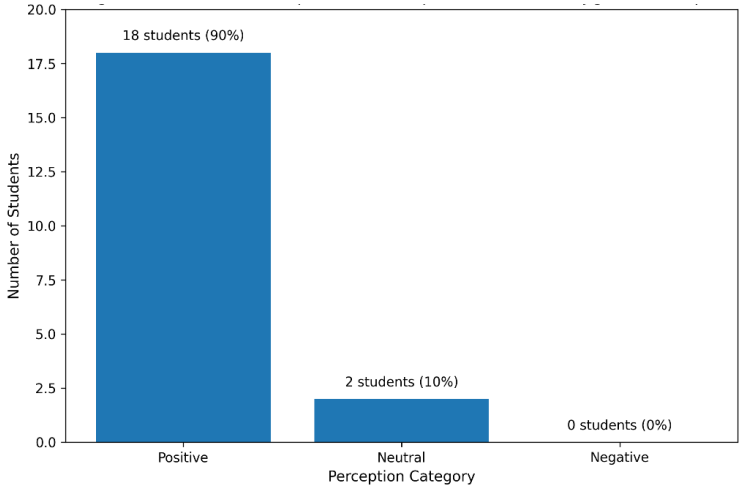
Implementation of the Jigsaw Technique

The classroom observation indicated that all 15 indicators on the observation checklist received a "Yes" response. The implementation began with an explanation of the learning objectives and the procedures of Jigsaw. Students were organized into home groups and assigned different sections of the descriptive text. They were given time to read their sections individually before meeting in expert groups with classmates who had the same assignment.

In the expert groups, students discussed the assigned sections and shared their understanding. They then returned to their home groups and explained the information they had learned so that group members could build a more complete understanding of the text. During the activities, the researcher monitored discussions, facilitated movement between groups, and provided assistance when needed. The observation also recorded students asking questions, responding to peers, collaborating, and completing their assigned responsibilities.

These steps reflect the core structure of Jigsaw described by Tamah (2007) and Abed (2019), in which learners study different parts of a text and teach the information to their peers. The procedure also reflects positive interdependence because students needed information from classmates to understand the whole text, and individual accountability because each student was responsible for explaining an assigned section (Johnson et al., 2013; Lammers, 2017). The observation therefore suggests that the technique was carried out according to the planned classroom procedure. However, these observations describe implementation and do not establish that students' reading achievement improved.

Students' Perceptions of the Jigsaw Technique



The questionnaire findings showed that students generally perceived the Jigsaw activities positively. Of the 20 respondents, 18 students (90%) were categorized as having positive perceptions, two (10%) as having neutral perceptions, and none as having negative perceptions. The questionnaire was organized into four domains: understanding and ease of activities; active participation and interaction; group collaboration and reading comprehension; and comfort, motivation, and overall experience. Across these domains, students generally reported that the activities were understandable and offered opportunities to participate, exchange ideas, discuss reading content, and explain their assigned sections.

No	Student	Total Score	Mean Score	Category
1	MRW	51	3.40	Neutral
2	AZM	53	3.53	Neutral
3	SH	69	4.60	Positive
4	DM	69	4.60	Positive
5	SR	68	4.53	Positive
6	AK	72	4.80	Positive
7	MNR	69	4.60	Positive
8	ADP	69	4.60	Positive
9	LUAU	69	4.60	Positive
10	PNS	73	4.87	Positive
11	CP	71	4.73	Positive
12	MRA	72	4.80	Positive
13	GS	71	4.73	Positive
14	RS	72	4.80	Positive
15	YAH	72	4.80	Positive
16	MZ	71	4.73	Positive
17	AA	72	4.80	Positive
18	RF	71	4.73	Positive
19	RI	70	4.67	Positive
20	ES	73	4.80	Positive

The table shows that the highest mean score was 4.87, while the lowest mean score was 3.40. Two students obtained mean scores within the neutral category, while the other 18 students obtained mean scores within the positive category. The overall mean of 4.59 shows that the students' responses to the questionnaire were generally positive.

The findings of this study indicate that the Jigsaw technique was carried out through a series of planned stages: explaining the objectives and procedures, forming home groups, assigning sections of the text, engaging in independent reading, participating in expert group discussions, returning to home groups, explaining content to peers, and receiving monitoring and facilitation from the teacher. All 15 observational indicators were met, confirming that, procedurally, the Jigsaw technique was implemented as designed. Critically, these findings are significant because they demonstrate that the Jigsaw technique is not limited to schools with abundant learning resources; it can also be organized within the context of schools with limited resources, such as SMPN 22 Mataram. The successful execution of these indicators aligns with the core structure of the Jigsaw method, which emphasizes the division of material, the use of expert and home groups, and individual responsibility for explaining specific text segments to peers (Aronson & Patnoe, 2011; Slavin, 2014). This procedural implementation also reflects positive interdependence and individual accountability, as each student holds information required by other group members and bears the responsibility of explaining their assigned portion (Johnson & Johnson, 2009; Johnson et al., 2014). Nevertheless, the successful execution of the procedure does not, in itself, prove that students' reading comprehension has improved. While observations confirm that the activities proceeded as planned, this study did not employ pre-tests or post-tests to measure changes in reading ability. Therefore, the findings regarding implementation should be viewed as evidence of the process being carried out, rather than as evidence of the effectiveness of learning outcomes.

Student perceptions were generally positive—with an overall average score of 4.59, and 18 out of 20 students (90%) falling into the positive category—suggesting that the Jigsaw technique was well-received as a distinct learning experience that provides space for interaction. Students perceive reading activities to be more open, as they are able to engage in discussions, ask questions, listen to explanations from peers, and explain the specific parts of the text for which they are responsible. These findings can be explained through the principles of cooperative learning, which posit that interaction among students facilitates the exchange of information, the negotiation of meaning, and mutual assistance in comprehending the material (Johnson & Johnson, 2009; Kyndt et al., 2013; Slavin, 2014). From a sociocultural perspective, peer explanations also serve as a form of social mediation, helping students grasp portions of a text that were previously difficult to understand (Vygotsky, 1978; Oxford, 1997). This aligns with findings by Abed (2019), which indicate that the Jigsaw method can support reading comprehension through group collaboration, as well as with research by Long and Porter (1985), who emphasize that small-group interaction provides learners with opportunities to modify input and produce more meaningful output. Nevertheless, these positive perceptions should be interpreted with caution, as the questionnaire data represent students' self-reports rather than objective measures of reading ability. High scores may also be influenced by a "novelty effect"—given that the Jigsaw method differs from the students' usual

reading routines—or by a tendency among students to provide socially desirable, positive evaluations of activities prepared by their teachers. Thus, while these positive perceptions reflect a favorable reception and a positive affective experience, they cannot serve as a basis for concluding that there has been a causal improvement in reading comprehension.

On the other hand, interviews revealed that students' perceptions were not entirely positive across all aspects. Some students struggled with unfamiliar English vocabulary, felt a lack of confidence when explaining parts of the text to their peers, and perceived the time allocated for reading, discussing, and explaining as insufficient. These findings are significant because they indicate that the Jigsaw method does not eliminate reading difficulties; rather, it shifts a portion of the cognitive and social burden into group interactions. The challenges related to vocabulary align with Nation's (2009) view that vocabulary mastery is a crucial prerequisite for reading comprehension; consequently, students with limited vocabulary will continue to face obstacles, even when group activities are designed to be engaging. The lack of confidence during explanations can be understood through the concept of "self-efficacy"—an individual's belief in their own capacity to complete specific tasks (Bandura, 1997)—as students who perceive their English proficiency to be low are often reluctant to speak in front of their groupmates. Meanwhile, the issue of limited time reflects the fact that the Jigsaw method demands more complex classroom management, as teachers must coordinate group transitions, monitor discussions, and ensure that every student has the opportunity to explain their findings (Chopra et al., 2023). These findings reinforce the arguments of Webb (2009) and Gillies (2016) that cooperative learning does not automatically succeed without the teacher's role in facilitating dialogue, providing scaffolding, and maintaining the quality of interactions. Without such support, discussions within "expert groups" risk becoming merely superficial information-sharing exercises, which could even perpetuate misunderstandings among students.

In the context of schools with limited resources, these research findings suggest that implementing the Jigsaw method requires more careful adaptation compared to settings with more abundant learning materials. As noted by the OECD (2018), restricted access to materials, a lack of English-language support, and unequal learning opportunities make students more dependent on assistance from their teachers and peers to comprehend texts. Therefore, the success of the Jigsaw method in this context is inseparable from the teacher's role as a facilitator—providing clear instructions, assisting with difficult vocabulary, managing time, and monitoring student engagement. These findings differ from research that emphasizes the effectiveness of Jigsaw in higher education or better-resourced school settings—such as the study by Abed (2019)—because this research does not focus on improvements in reading scores, but rather on how the procedure is implemented and how students perceive it. This contextual difference is significant, as the same cooperative strategy can yield different experiences when applied to students with varying levels of learning autonomy, vocabulary proficiency, and academic support. Thus, the contribution of this research lies not in proving the general effectiveness of the Jigsaw method, but in providing a more contextualized understanding of its implementation in schools with limited resources.

Methodologically, the convergent mixed-methods design employed in this study allows for the comparison of data from observations, questionnaires, and interviews within a single phase, providing a more comprehensive picture of the implementation process and students' perceptions (Creswell & Plano Clark, 2018). Observations offer evidence regarding the execution of procedures, questionnaires provide an overview of general perceptions, and interviews offer insights into students' experiences that cannot be fully captured by numerical data. Nevertheless, this study has certain limitations that must be acknowledged. Observations were conducted by an English teacher—who was also observing the researcher—introducing the possibility of assessment bias due to the roles held within the classroom. The questionnaires relied on student self-reporting, while the interviews involved only six students, meaning they do not represent the full spectrum of student experiences. Furthermore, the absence of pre-tests and post-tests precludes any claims regarding improvements in reading comprehension. Consequently, the findings of this study should be interpreted as a description of processes and perceptions, rather than an evaluation of learning outcomes. These limitations highlight the need for future research that incorporates long-term observations, a larger number of interview participants, and assessments of reading ability to examine whether positive perceptions correlate with improvements in reading comprehension.

Pedagogically, the findings of this study offer several implications for English teachers who wish to implement the Jigsaw method in reading instruction. First, teachers must provide clear instructions and model how to explain sections of a text, ensuring that students understand their respective roles within both "expert" and "home" (original) groups. Second, teachers should provide vocabulary support—such as lists of key terms, simple glossaries, or pre-reading activities—as vocabulary difficulties were the most frequently cited obstacle during the interviews. Third, teachers need to allocate a realistic amount of time for independent reading, discussions within expert groups, and the subsequent explanation of material in home groups; insufficient time may lead students to engage only with the surface level of the text, failing to grasp its actual content. Fourth, teachers need to monitor students who lack self-confidence and provide scaffolding—for instance, by giving them the opportunity to explain concepts to a partner before presenting them to a larger group. This implication aligns with the view that cooperative learning requires task structure, individual accountability, and teacher guidance to ensure that group interactions lead to improved understanding (Gillies, 2016; Johnson et al., 2014; Webb, 2009). Thus, while Jigsaw can be considered a promising strategy, its success is conditional, depending on the quality of facilitation, language support, and its suitability to the students' specific context.

Theoretically, this study reinforces the notion that learning to read is not merely an individual cognitive process but also a social one, involving interaction, dialogue, and peer mediation (Vygotsky, 1978; Oxford, 1997). Students' positive perceptions of discussions and peer explanations suggest that group interaction can serve as a source of learning support, particularly when students encounter challenging texts. However, findings regarding vocabulary difficulties, self-confidence, and time constraints indicate that social interaction alone does not automatically result in deep understanding. From the perspective of cooperative learning, the benefits of Jigsaw emerge when there is positive interdependence, individual responsibility, promotive

interaction, social skills, and group evaluation (Johnson & Johnson, 2009; Slavin, 2014). If any of these elements are weak—for example, if students lack sufficient self-confidence or if the discussion time is too short—the benefits of Jigsaw become limited. Consequently, this study supports the view that Jigsaw is not merely a technique for dividing up a text, but rather a pedagogical practice that requires deliberate task design, language support, and the management of interactions.

Finally, the findings of this study should be positioned proportionally, with due consideration given to both its novelty and its limitations. This study does not aim to prove that the Jigsaw method is more effective than other approaches; rather, it describes how Jigsaw is implemented and how students perceive it within a school context characterized by limited resources. Its primary contribution lies in providing a contextual overview showing that Jigsaw can be executed according to its established procedures and is positively received by students, while also highlighting the challenges that arise when cooperative strategies are applied to students with limited vocabulary and low self-confidence.

CONCLUSION

The study found that the Jigsaw Technique was implemented through planned stages that included forming home groups, assigning text sections, individual reading, expert-group discussion, returning to home groups, peer explanation, and teacher facilitation. All 15 indicators on the observation checklist were recorded as implemented. Students generally perceived the activities positively: 18 of 20 students (90%) were categorized as positive, two (10%) as neutral, and none as negative. They valued discussion, sharing information, asking questions, and peer explanation, while some reported difficulties with vocabulary, confidence, and limited time. English teachers using Jigsaw may therefore benefit from giving clear instructions, providing sufficient reading and discussion time, and supporting students who struggle with vocabulary or explaining their assigned sections. Future research could examine the implementation in other school contexts. Because this study did not use pre-tests and post-tests, it does not claim measurable improvement in students' reading achievement.

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