

## Jigsaw in Action: Bridging Collaboration Gaps in Junior High School Classrooms

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### Abstract

*This study explores the challenges and solutions in implementing the Jigsaw technique to improve reading comprehension among junior high school students through collaborative learning. Using a qualitative descriptive approach, data were collected through classroom observations, teacher interviews, student questionnaires, and field notes. The participants were purposively selected from a class identified as having significant difficulties in reading comprehension. The findings revealed that while the Jigsaw technique encouraged student engagement, motivation, and peer collaboration, its implementation was not without obstacles. Challenges included disparities in student participation, time constraints, uneven role distribution, and external factors such as socioeconomic differences. These issues often influenced students' readiness and confidence during group activities. To address them, teachers employed strategies such as scaffolding materials, rotational role assignments, the use of multimedia tools, and adaptive pacing. Student feedback also highlighted the importance of pre-teaching key vocabulary, clear role expectations, and supportive group dynamics. The study concludes that the effectiveness of the Jigsaw technique depends on thoughtful instructional design, sensitivity to learner diversity, and continuous teacher reflection. When applied adaptively, it not only enhances reading comprehension but also supports a more inclusive and student-centered learning environment.*

**Keywords:** Jigsaw Technique, Reading Comprehension, Collaborative learning, Challenges, Solutions.

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## 1. INTRODUCTION

Reading comprehension is essential for students' academic success, especially for those learning English as a second language. It does not merely involve understanding individual words but also mastering higher-order thinking skills such as analysing texts, interpreting abstract ideas, and applying information in real-world contexts. Conway (2017) emphasizes that proficient reading comprehension equips students with the ability to process and evaluate information across academic subjects. However, the reading literacy level in Indonesia remains a major concern. The Programme for International Student Assessment (PISA) reported that Indonesian students scored below the international average in reading (OECD, 2019). Based on classroom observation and teaching experiences, many students still rely heavily on literal comprehension and struggle to explain deeper meanings, purposes, or inferences from texts. This condition reveals a critical gap between current instructional practices and the cognitive skills students must develop to thrive in today's knowledge-driven world.

Various studies have identified traditional instructional practices as a significant factor contributing to the low levels of reading comprehension. These methods often emphasize rote memorization, isolated reading assignments, and one-way teacher-centered communication, which fail to engage students in meaningful reading experiences (Ummah, 2019; Guthrie, 2004). When students are not actively involved in discussing, analyzing, or collaborating on texts, they tend to develop only surface-level understanding and may lose interest in reading altogether. In contrast, more interactive and student-centered methods—such as the Jigsaw technique—have shown promise in improving both student engagement and learning outcomes. Research by Azmin (2015), Namaziandost et al. (2021), and Doymus (2008) found that the Jigsaw method enhanced reading comprehension, critical thinking, and student motivation through structured collaboration and peer teaching. These findings suggest that incorporating collaborative learning strategies into English instruction could help address persistent gaps in students' literacy skills.

This study aims to investigate the application of the Jigsaw technique in enhancing reading comprehension among junior high school students. It seeks to explore how students perceive and experience the use

of Jigsaw in English classes, and how this method affects their engagement, motivation, and comprehension skills. Additionally, the research aims to identify the main challenges teachers and students face when applying this technique and to explore possible solutions to overcome these barriers. By examining both student perspectives and implementation obstacles, this research strives to provide a holistic understanding of how the Jigsaw model can be effectively integrated into English language teaching, particularly in contexts where traditional approaches have fallen short.

This research is conducted in response to the urgent need for more effective and engaging teaching strategies that go beyond passive reading and memorization. As classroom demands become more complex and learners more diverse, the limitations of traditional reading instruction have become increasingly evident. Students require more than just vocabulary or grammar drills—they need learning environments that foster curiosity, dialogue, and critical interpretation. The Jigsaw technique offers a promising solution by transforming students into active contributors to one another's learning. When combined with technological tools that personalize instruction and provide immediate feedback, the potential for deeper comprehension increases even further. Therefore, this study is motivated by the belief that collaborative, student-centered methods like Jigsaw are not just innovative—they are necessary for preparing students to become thoughtful, literate, and confident learners in a globalized educational landscape.

## **2. LITERATURE REVIEW**

### **2.1. Reading**

Reading is a fundamental skill that supports language acquisition, academic success, and cognitive development. It involves not only decoding written symbols but also constructing meaning through interaction between the reader, the text, and contextual knowledge (Gani et al., 2016; Samiei & Ebadi, 2021).

#### *2.1.1 Definition of Reading*

Reading is broadly defined as a meaning-making process involving the reader's prior knowledge, perception, and thought. According to Gani et al. (2016), it is "a process of meaning formation involving dynamic interactions between the reader, the text, and the surrounding context" (p.

78). Similarly, Nurjanah (2018) emphasizes that reading is a complex act requiring both mental and perceptual engagement, while Samiei and Ebadi (2021) highlight comprehension as its core. Reading is also essential for learners of a second language. Babapour et al. (2019) argue that reading strengthens vocabulary, structure, and comprehension strategies. Moreover, Khonamri and Karimabadi (2015) state that "reading is the most essential skill for second language learners as it supports both academic and personal growth" (p. 94).

#### 2.1.2 *Purpose of Reading*

Harmer (as cited in Qureshi et al., 2023) outlines five main purposes of reading: identifying topics, predicting content, seeking specific information (scanning), obtaining detailed information (intensive reading), and understanding general ideas (skimming). These purposes help readers adjust strategies based on their needs.

#### 2.1.3 *Types of Reading*

Harahap et al. (2019) categorize reading into five types:

- Extensive reading, aimed at enjoyment and fluency,
- Intensive reading, for deep comprehension,
- Scanning, for locating specific information quickly,
- Skimming, to grasp general meaning,
- Critical reading, which involves evaluating the text for accuracy and bias.

Each type serves different contexts and purposes, with critical reading requiring higher-order thinking and analytical skills.

#### 2.1.4 *Aspects of Reading*

Reading involves several interrelated aspects. Dallmann et al. (1982) identify three key components: word recognition, comprehension, and reflection. Word recognition focuses on decoding symbols; comprehension involves translating symbols into meaningful language; and reflection allows readers to react to and internalize the content.

#### 2.1.5 *Process of Reading*

Reading can be approached through three major models:

- Bottom-up, focusing on decoding letters and words progressively to understand the whole text (Bintang Nadea et al., 2021),
- Top-down, relying on prior knowledge and context to interpret meaning (Babashamsi et al., 2013),

- Interactive, which integrates both decoding skills and background knowledge for a balanced comprehension process.

Babashamsi et al. (2013) explained that “interactive models provide a more accurate conception of reading success” as they allow compensation between decoding skills and conceptual understanding (p. 46).

## **2.2. Reading Comprehension**

Reading comprehension refers to the ability to understand, interpret, and reflect upon written texts by integrating linguistic knowledge with prior experiences and context. It is not a passive process but an active interaction between the reader and the text.

### *2.2.1 Definition of Reading Comprehension*

Reading comprehension involves decoding, vocabulary knowledge, syntax, and pragmatics (Dore et al., 2018). It requires readers to integrate prior knowledge with textual information at various levels—from words to entire passages (Torppa et al., 2020). Olson and Dillner (1982) note that vocabulary and decoding abilities are foundational to comprehension.

Core skills supporting comprehension include identifying main ideas, supporting details, and interpreting implicit meanings (Rakic et al., 2020). These skills promote deeper engagement and critical analysis of texts. Iftanti (2012) argues that weak reading habits, often rooted in low motivation, hinder comprehension, especially among EFL learners. Hence, interest-based reading and habitual practice are essential to improving students’ understanding.

### *2.2.2 Factors Affecting Students’ Reading Comprehension*

Reading comprehension is influenced by both text-related and reader-related factors (Varga Tanczikné, 2017). Text structures, such as cause-effect and problem-solution patterns, assist students in identifying key ideas. Literary features like style and tone also guide interpretation. On the reader's side, factors such as background knowledge, vocabulary, fluency, strategy use, motivation, and genre familiarity contribute to comprehension. Dallmann (as cited in Ichtiarti, 2020) emphasized that intelligence and cognitive differences shape individual comprehension capacities. Strategic readers actively monitor understanding and make necessary adjustments while reading.

### 2.2.3 Rubric of Reading Comprehension

This study applies the reading comprehension rubric from Isnawati (2012, in Junanto, 2014, as cited in Muntafi'ah, 2016). It assesses students across five levels—Excellent (A) to Very Poor (E)—based on criteria such as identifying stated/unstated information, interpreting the author's purpose, engaging with the text, and demonstrating holistic understanding. Higher scores reflect deeper critical engagement, while lower scores indicate difficulty in constructing meaning or making connections with the text.

### 2.2.4 The Relationship Between the Relationship Between Reading and Reading Comprehension

Reading provides the basis for comprehension through decoding and word recognition, while comprehension transforms reading into meaningful learning (Mullis et al., 2015; Kohzadi et al., 2014). Alyousef (2006) views reading as the act of deriving meaning, emphasizing the reader's active role. Duke and Cartwright (2021) add that inference-making, memory, and self-regulation are key to comprehension. Thus, reading and comprehension are interdependent, with comprehension deepening the purpose and utility of reading.

### 2.2.5 Factors Affecting Reading and Comprehension

Several factors significantly impact reading comprehension:

- Vocabulary Knowledge: Essential for decoding meaning; unfamiliar words can hinder understanding (Alyousef, 2006).
- Background Knowledge: Helps readers connect texts with existing experiences (Alyousef, 2006).
- Critical Thinking Skills: Promote analysis and interpretation beyond surface meaning (Pratiwi & Maisaroh, 2021).
- Motivation and Engagement: Enhance attention and willingness to interact with texts (Springer et al., 2017).
- Fluency: Allows cognitive focus on comprehension rather than decoding (Florit & Cain, 2011).
- Instructional Approaches: Strategies like direct instruction improve structured engagement (Carnine et al., 2016).
- Scaffolding: Support tools such as graphic organizers aid comprehension development (Stockard et al., 2018; Wright et al., 2013).

## 2.2. Jigsaw Technique

The Jigsaw Technique is the subject of the researcher's first explanation, which covers its definition, advantages, and the procedure of using it. The definition of the Jigsaw Technique is the subject of the first discussion, as seen below:

### 2.3.1 *Definition of Jigsaw Technique*

The Jigsaw Technique is a cooperative learning strategy developed by Aronson et al. (1978) to reduce intergroup prejudice in schools. In this method, each student becomes an “expert” on a subtopic and then teaches it to their group (Levy & Williams, 2004; Roseth et al., 2019). This technique promotes interdependence and equal participation, with each learner contributing an essential part to the overall understanding (Study et al., 2017).

### 2.3.2 *Advantages of Jigsaw Technique*

The technique encourages student responsibility, active engagement, and cooperative learning. It builds positive peer relationships (Aronson et al., 1978), improves participation through role-sharing (Roseth et al., 2019), and strengthens classroom unity (Cochon Drouet et al., 2023). Students develop confidence, motivation, and accountability as they lead discussions and teach their peers.

### 2.3.3 *The Procedure of Using Jigsaw Technique*

According to Huda (2013), the Jigsaw process involves: (1) dividing the topic into sections, (2) grouping students, (3) assigning subtopics, (4) forming expert groups, and (5) returning to the home group for peer teaching. This eight-step process supports various language skills and relies on student collaboration and mutual support (SMP & Surakarta, 2018).

### 2.3.4 *Jigsaw: Connecting Reading and Comprehension*

The Jigsaw Technique aids reading by simplifying difficult texts and promoting peer teaching (Caposey & Heider, 2003; Slavin, 1980). It encourages critical thinking and active learning (Goodman, 1990; Sahin, 2010), fosters motivation (Sami, 2010), and supports collaborative learning even in texts with unfamiliar vocabulary (Tram, 2021).

### 2.3.5 How Jigsaw Helps Improve Reading Comprehension

Jigsaw strengthens comprehension by:

- Directing attention to key details (Karacop & Diken, 2017),
- Supporting critical thinking and motivation (Bayraktar, 2011; Nurbianta & Dahlia, 2018),
- Enhancing communication and retention (Kagan & Kagan, 2015; Slavin, 1991; Snow, 1998),
- Promoting inclusive participation across diverse skill levels (Al-Salkhi, 2019; Shume et al., 2016), and
- Building deeper understanding through group synergy (Mengduo, 2010; Brown, 2001; Aronson, 2016).

## 2.4. Collaborative Learning

The definition and role of collaborative learning are the focus of the researcher's explanation, drawing on the insights provided by Van Leeuwen and Janssen (2019). This discussion will outline how collaborative learning fosters a supportive educational environment, enhances student interaction, and promotes deeper understanding of the subject matter, as detailed below:

### 2.4.1 Definition of Collaborative Learning

Collaborative Learning (CL) is a teaching method in which two or more students work together to achieve a shared learning goal (Asterhan & Schwarz, 2016; Dillenbourg, 1999; Gillies & Boyle, 2008). This approach emphasizes positive student interaction, encouraging them to ask questions, provide detailed explanations, share arguments, and solve problems collectively (Johnson & Johnson, 2009; Lou et al., 1996). Several meta-analyses (Chen et al., 2018; Kyndt et al., 2014; Rohrbeck et al., 2003; Roseth et al., 2008) demonstrate that students working in small groups tend to achieve better learning outcomes than those studying individually, including improved test performance. However, these benefits are most effective when teachers make well-informed instructional decisions and closely guide the learning process (Cohen, 1994; Kaendler et al., 2015; Van de Pol et al., 2010; Van de Pol et al., 2015).

### 2.4.2. Comparison with Cooperative Learning

Some studies use the terms “collaborative learning” and “cooperative learning” interchangeably (Kreijns et al., 2003; McInerney & Roberts, 2004; Sung et al., 2017), while others distinguish between them. Cooperative learning usually involves dividing tasks among students,



whereas collaborative learning focuses on students working jointly to solve problems (Dillenbourg, 1999; Dillenbourg et al., 1996; Slavin, 1997; Roschelle & Teasley, 1995; Yang, 2023). The Jigsaw Technique is frequently applied in collaborative learning contexts, as it reflects the core principles of joint effort, shared knowledge, and group interdependence (Aronson & Bridgeman, 1979).

#### 2.4.3. *The Role of Teacher in collaborative Learning*

Teachers play a crucial role in CL, particularly during the interactive phase when students are actively working together. They form student groups, model effective interaction, and prompt students to share their ideas or ask clarifying questions (Webb, 2009; Kaendler et al., 2015; Dobber et al., 2014). While several reviews provide theoretical frameworks on teacher roles in CL, they often lack a systematic synthesis of how teacher guidance directly affects student collaboration. Therefore, further systematic research is needed to explore the impact of teacher facilitation strategies on students' collaborative processes and learning outcomes (Webb, 2009; Kaendler et al., 2015).

#### 2.4.4. *The Jigsaw Technique as an Example of Collaborative Learning*

The Jigsaw Technique is a strong representation of collaborative learning as it encourages shared responsibility, balanced participation, and interdependence. Each student becomes responsible for a unique piece of the material, studies it in an expert group, and teaches it to their home group (Kagan, 2015; Slavin, 1991). This structure enhances reading comprehension through discussion and the exchange of ideas (Snow, 1998). According to Mullins, Rummel, and Spada (2011), meaningful interactions—such as elaborating ideas and asking follow-up questions—are linked to higher learning gains. Meta-analyses (Chen et al., 2018; Roseth et al., 2008) confirm that students engaged in collaborative teams outperform their peers in individual learning settings. Overall, Jigsaw supports the creation of a positive, cooperative learning environment that enhances both academic achievement and social development (Jolliffe, 2007).

### 3. **METHODS**

This study employed a qualitative descriptive method aimed at investigating the challenges encountered and the solutions implemented during the use of the Jigsaw technique in reading instruction. The

qualitative approach was chosen as it allows for in-depth exploration of participant perspectives and contextual understanding, as emphasized by Creswell (2014) and Hammarberg et al. (2016). This method also accommodates multiple forms of data—interviews, observations, and field notes—which are suitable for identifying nuanced problems and strategies used in real classroom settings. The research was conducted at *SMP Negeri 6 Sidoarjo*, located in East Java, Indonesia, involving eighth-grade students during the period of March to April 2025. The learning focus during the research was on procedure texts, which were grouped into three categories: *how to do*, *how to make*, and *how to go*.

To answer the research questions, this study targeted a specific sample selected through purposive sampling. One class, VIII-A, consisting of 38 students, was chosen based on the recommendation of the English teacher. The students in this class were known to struggle with reading comprehension, making them a suitable group to observe the challenges in applying the Jigsaw technique and to evaluate potential solutions. This aligns with Palinkas et al. (2015), who support purposive sampling when researchers need participants with specific characteristics relevant to the study. Data were collected using four main instruments: interviews, observation checklists, field notes, and documentation. These instruments allowed the researcher to gather comprehensive and triangulated data from different sources to answer both research questions.

**Table 1**

**Instruments & Its Purposes**

Instrument	Source	Purpose
<b>Interview Guideline</b>	Teacher & Students	To explore perceived challenges and suggested solutions in reading
<b>Observation Checklist</b>	Classroom Activity	To identify implementation difficulties and how they were handled
<b>Field Notes</b>	Teacher/Observer	To record spontaneous reactions, problems, and adaptive strategies
<b>Documentation</b>	Photos, Worksheet	To visually support findings and showcase evidence of learning response

The first interview was conducted with the English teacher to gain insight into the students' learning difficulties, the strategies used to address those difficulties, and potential methods for improving reading comprehension using the Jigsaw technique.

**Table 2****Interview Guideline for Teacher**

<b>Dimension</b>	<b>Sub-dimension</b>	<b>Item focus</b>
<b>General Condition</b>	Student engagement & skills	Questions 1-5
<b>Reading Challenges</b>	Types, causes, & patterns	Questions 6-10
<b>Teacher's Strategy</b>	Previous & current methods	Questions 11-15
<b>Jigsaw &amp; Solutions</b>	Teacher input & suggestions	Questions 16-20

The second interview involved six students: three students whose scores were below the school's minimum passing grade (KKM) and three students above it. This aimed to collect balanced reflections on the perceived effectiveness and practicality of the Jigsaw technique from different ability levels.

**Table 3****Interview Guideline for Students**

<b>Dimension</b>	<b>Sub-Dimension</b>	<b>Item Focus</b>
<b>Jigsaw Implementation</b>	Use & Time Management	Questions 1-7
<b>Student Response</b>	Motivation, Comprehension	Questions 8-14
<b>Effectiveness</b>	Strengths and Weaknesses	Questions 15-18
<b>Suggestions</b>	Feedback on Jigsaw	Questions 19-20

In addition, classroom observations were conducted in each Jigsaw session. The observation checklist focused on group interaction, teacher facilitation, and signs of comprehension or confusion. It was adapted from Purwowibowo (2015) and included specific behavioral indicators related to participation, problem-solving, and engagement during the

group activities. Field notes complemented the observation by capturing contextual elements not easily recorded through checklists. These notes detailed challenges in instruction delivery, group coordination problems, and impromptu adaptations made by the teacher – providing insight into real-time solutions that emerged during the process. Data analysis followed a three-step model proposed by Ary et al. (2001):

1. Organizing – Sorting the raw data into categories related to the research questions:
  - (a) challenges in implementing Jigsaw, and
  - (b) solutions to overcome those challenges.
2. Summarizing – Condensing the information to identify recurring themes.
3. Interpreting – Connecting patterns in the data to relevant theories and prior studies in cooperative learning and reading comprehension.

The following table summarizes the alignment of research questions, data sources, and focus:

**Table 4**  
Research Focus Alignment

Research Questions	Data Source	Focus Area
What are the challenges in implementing Jigsaw technique?	Interviews, Observation, Field Notes	Participation, comprehension barriers, group dynamics
What are the solutions to overcome those challenges?	Interviews, Observation, Field Notes	Teacher strategies, peer support, adaptation techniques

The table below outlines how each research question is connected to specific data sources and focus areas. The first question investigates the challenges found during the implementation of the Jigsaw technique. Data were collected through interviews, observations, and field notes, focusing on student participation, comprehension barriers, and group dynamics. The second question explores the solutions used to address those challenges, supported by the same data sources. The analysis centered on teacher strategies, peer support, and classroom adaptations. This alignment helped ensure that the research remained focused and grounded in the classroom context.

#### 4. FINDING

To gain deeper insight into the implementation of the Jigsaw technique in the classroom, teacher interviews were conducted to explore their experiences, perspectives, and strategies. These interviews offered valuable contextual understanding of both the strengths and limitations observed during the process. The data revealed several recurring themes, including student motivation, time constraints, group dynamics, and the use of innovative instructional tools. The following sections present a synthesis of teacher perspectives, highlighting key challenges and the practical solutions they employed to facilitate collaborative learning through the Jigsaw method.

##### 4.1 Challenges and Solutions in Implementing the Jigsaw Technique: Teacher Perspectives

###### 4.1.1. Organizing and Motivation Management

Teachers observed wide variability in student engagement levels across different classes. According to the teacher's statements, only about 50% of students in class 8A showed active participation. This was largely influenced by external factors such as parental support and access to additional English instruction. "*Respon umum tergantung kelas, ada yg aktif dan ada yg biasa. Kelas 8A responnya 50 persen cukup aktif.*" (The common responses are depended on the class, there is an active and inactive class, in 8A quite active) – T1. "*Orang tua yg peduli ya anaknya dikutkan les Bahasa Inggris... kalo nggak, ortu harus dampingi belajar.*" (The parents who care, they will provide their children either with course or accompany them in learning) – T2.

These quotes reflect the critical role of home environment in fostering motivation and performance. Students with access to external academic resources tended to be more confident and skilled in vocabulary usage. In contrast, those lacking such support were more hesitant to engage. Although most students responded positively to the Jigsaw technique, some experienced challenges due to varying learning styles and language proficiencies. To address this, diagnostic assessments were used to form balanced groups, and scaffolding—such as vocabulary lists and simplified texts—was provided. These supports allowed students to participate within their capability range. This highlights the need for differentiated instruction within collaborative learning environments to ensure all learners are included and supported.

#### 4.1.2. Time Management and Pacing

Another challenge involved time constraints and the need to manage class dynamics effectively. The teacher noted that repeating group discussions without variation led to student fatigue and disengagement: "*Tidak setiap hari [diskusi] karena bosan.*" (Not every day we do a discussion)— T4. To prevent monotony, the teacher alternated between whole-class and group activities, used various texts, and adjusted lesson pacing based on student responsiveness. Time management and lesson pacing also posed challenges during implementation. Some sessions felt rushed, while others left students with idle time, affecting focus and engagement. To maintain momentum and structure, it is important to integrate mini-lessons, warm-up tasks, and vary group configurations weekly. These strategies can help sustain student energy, prevent monotony, and create a more balanced flow throughout the Jigsaw process.

#### 4.1.3. Peer Collaboration and Unequal Contribution

Mixed-ability grouping was both an opportunity and a challenge. While it encouraged peer support, it also resulted in uneven contribution: "*Siswa pemahaman lebih digabung sama siswa pemahaman kurang.*" (Students who have good capability in english gather with those who don't) — T6. "*Sering reading jawab pertanyaannya nggak ngerti artinya... jadi sering tidak bermakna membacanya.*" (Often, I give a passage, when they answer, they don't know the meaning, so they don't get a meaningful reading activity)— T7. Some students struggled with explaining content due to limited vocabulary and comprehension skills. The teacher's mid-intervention provision of vocabulary lists (Field note, Week 2), Appendix 2, helped balance this gap: "Field note: Teacher provided vocabulary list on day two." — T8. While peer collaboration was a strength of the Jigsaw technique, unequal contribution emerged as a challenge. Some students dominated discussions, while others hesitated to speak or relied too much on peers. To foster more balanced participation, continuous support is essential—such as providing sentence starters, simplified texts, and assigning expert roles based on students' readiness. These adjustments help ensure that all group members contribute meaningfully and develop confidence in their roles.

#### 4.1.4. Strategic Innovations

The teacher was proactive in using multimedia tools such as SIBI and audiobooks to support learners with low reading fluency. This diversified instruction and addressed auditory and visual learning preferences. "*SIBI, e-book yang di-audiobook-kan.*" (SIBI, Audiobook that is made by ebook) – T11. Also, an openness to innovation showed a growth mindset: "*Kalau ada teknik baru yg bisa membantu supaya siswa lebih bisa memahami bacaan, saya akan coba.*" (If there is a new technique that helps students to get the better understanding in english, I will try) – T12. The implementation also revealed challenges on the teacher's side, particularly in designing innovative strategies that meet diverse student needs. To enhance instructional effectiveness, there is a need to expand teacher training on multimodal instruction and incorporate technology-integrated resources more consistently. These steps can help teachers deliver more engaging, accessible, and adaptive learning experiences in student-centered classrooms.

### 4.2 Challenges and Solutions in Implementing the Jigsaw Technique: Student Perspectives

#### 4.2.1 Individual Struggles and Group Dynamics

From six student questionnaires (*Appendix 4*) (S1–S6), both high and low achievers reported specific challenges. While many valued group discussions, those with limited English proficiency or low self-confidence struggled to contribute meaningfully: "*Kadang aku ngerasa jadi beban karena gabisa jelasin bagianku dengan baik*" (Sometimes I feel like a burden... I can't explain well.) – S5. "*Tidak bisa bahasa Inggris.*" (I can't speak English) – S6. S2, a high-achiever, also expressed doubt about the method's effectiveness: "*Tidak, Aku tidak merasa kemampuan membaca ku meningkat.*" (No, I didn't feel my reading improved.) – S2.

These comments highlight a dissonance between activity participation and perceived personal growth. Students could be engaged without recognizing their improvement. Some students faced individual struggles, such as anxiety when presenting or difficulty keeping up with group dynamics. To address this, incorporating reflective self-assessment tools and mini progress trackers can help students monitor their own development. Additionally, providing small rehearsal sessions before group sharing builds confidence and allows students to prepare more effectively, leading to more equal and meaningful participation.

### 4.2.2 Motivation and Perceived Benefits

Despite initial struggles, five out of six students showed increased motivation through peer interaction and responsibility sharing: "*Sekarang aku bisa memahami teks prosedur dengan lebih cepat dan menjelaskannya didepan kelompokku.*" (Now I can understand procedure texts more quickly and explain them in front of my group.)—S1. Students appreciated working with friends, feeling accountable for their text chunk, and the novel learning approach: "*Kalau metode jigsaw seru.*" (Jigsaw method is exciting)—S3. Although many students were initially enthusiastic, maintaining motivation throughout the weeks required consistent reinforcement. Some began to perceive the activities as repetitive or less beneficial over time. To sustain engagement, the Jigsaw technique should continue with thoughtful adaptations—such as making peer roles more engaging through gamification elements like role cards or achievement badges. These creative strategies can enhance the sense of purpose and enjoyment in collaborative tasks.

### 4.2.3. Suggestions for Improvement

Although students were not directly asked to propose solutions, several of their comments and behaviours indicated meaningful suggestions that could enhance the effectiveness of the Jigsaw technique in future implementations. These insights reflect an emerging metacognitive awareness among learners regarding what supports their engagement and comprehension. First, the need to pre-teach vocabulary emerged as a recurring theme. Students like S5 and S6 expressed difficulty in understanding English texts due to unfamiliar words, which hindered their ability to contribute meaningfully during peer teaching. When the teacher introduced a "List of Difficult Vocabularies" during the second week, students reacted positively, stating that it helped them understand the content better. This suggests that systematic vocabulary instruction before group discussions can reduce confusion, increase confidence, and foster more equal participation.

Secondly, students implicitly highlighted the value of rotating roles within the Jigsaw process. Some students found the process repetitive or expressed fatigue after the second week. By assigning varied roles—such as summarizer, questioner, or presenter—each week, the activity could maintain its novelty and distribute responsibilities more equitably, thus



preventing boredom and encouraging active engagement from all group members.

Finally, several students indirectly pointed to the importance of increased teacher facilitation, especially for those struggling with reading comprehension or group dynamics. Students like S4 and S5 indicated a lack of confidence in explaining the text, often depending on peers or avoiding active participation. More targeted support from the teacher—through monitoring, guiding questions, or individual check-ins—could help these students feel more competent and included in the collaborative learning process.

These learner-centered insights reinforce the importance of adaptive instructional design. By attending to student voices and tailoring the learning environment accordingly, educators can ensure that collaborative strategies like the Jigsaw technique become truly inclusive and effective. "*Bu sekarang saya ngerti artinya!*" (Ma'am, now I know the meaning!) — Field note, Week 2. They also showed awareness of group dynamics: "*Berbagi tugas*", "*dengan memahami setiap teks paragraf*", and "*bisa berdiskusi dengan teman*" (Shared task, by understanding all paragraphs in text, dan able to discuss with friends.) were common responses on managing their learning process. To improve the effectiveness of the Jigsaw technique, it is essential to implement more structured peer roles—such as summarizer, clarifier, or questioner—to guide participation and accountability within groups. Scaffolded group tasks should also be designed to match varying proficiency levels. Additionally, providing multimodal supports, such as combining audio and visual materials, should become a standard practice to accommodate different learning preferences and ensure inclusive participation.

## 5. DISCUSSION

### 5.1. Challenges and Solutions in Implementing the Jigsaw Technique: Teacher & Students Perspectives

This study revealed several practical challenges in implementing the Jigsaw method, especially regarding student engagement, group dynamics, time constraints, and instructional equity.

#### 5.1.1. Engagement Disparities and Socioeconomic Influences

Not all kids showed the same level of engagement, with parental participation and external academic help appearing as key influences.

Alshammari (2020) underlined how socio-cultural circumstances influence learner behavior and motivation.

Suwandi and Rahmawati (2021) found a connection between home literacy activities and classroom participation. According to Nugroho et al. (2020), access to technology and resources outside of school has a substantial impact on student preparation. Li et al. (2019) proposed that schools use compensating techniques such prolonged peer scaffolding and home-school communication. Aziz and Marlina (2022) also found that peer tutoring programs assist to reduce equity gaps. Furthermore, Alifia et al. (2023) demonstrated that variable classroom grouping based on performance criteria boosted student involvement across socioeconomic backgrounds.

#### **5.1.2. Time and Pacing Issues**

Maintaining momentum and avoiding tiredness necessitated varying instructional tempo. Kurniawati et al. (2019) claimed that course variation and participation are critical to preventing disengagement. Hermagustiana et al. (2020) discovered that rhythmic task switching promotes student attentiveness.

According to Widyaningrum and Fauziah (2022), alternating group and whole-class formats helps to keep students motivated. Lubis and Siregar (2023) shown that pacing based on student reaction time improves understanding. Sari et al. (2021) suggested using brain pauses and visual changes to restore concentration. Susanti and Arifin (2020) recommended for weekly variations in materials and procedures to retain freshness.

#### **5.1.3. Uneven Contribution and Role Distribution**

The disparity in group involvement reflects the confidence gap in peer-led learning, as described by Suh and MacIntyre (2020). Without a role assignment, powerful voices tend to overpower others. Wicaksono and Puspita (2021) reported that allocating rotational responsibilities increased equity. Kartikasari et al. (2019) discovered that children in organized groups outperformed peers on reading examinations. According to Basri and Gunawan (2022), explicit position definitions can encourage passive learners to contribute. Utami and Zain (2023) found that using varied support materials boosted interaction in mixed-level groups. Chen and Lee's (2022) meta-analysis indicated that role rotation improves task completion and learner satisfaction.

#### **5.1.4. Multimedia and Technological Integration**

The use of audio-based materials, such as SIBI and audiobooks, demonstrates Mayer's (2021) thesis that dual-channel input improves cognitive processing. This claim is supported by empirical data. Handayani and Fitria (2021) discovered that audiobook incorporation increased participation in EFL listening tasks. Fauzi and Nugraha (2022) found that multimedia applications helped them retain terminology better. Tanjung et al. (2020) found that pupils with reading impairments improved from visual-audio matching. Hidayati and Permana (2023) underlined how digital media improved understanding and learner autonomy. Rasyid et al. (2021) verified the accessibility benefits of using multimodal learning tools.

#### **5.1.5. Student Reflections and Adaptive Teaching**

Students' input on vocabulary help and task rotation demonstrates metacognitive awareness. Lee and Hannafin (2020) suggest that student involvement is critical for optimizing learner-centered models. Recent works reflect this sentiment. Lestari and Nurweni (2021) emphasized the relevance of learner agency in reading strategy building. Hamidah and Rosita (2022) found that student reflections led to increased task engagement. Nurhadi and Prasetyo (2020) examined the effectiveness of weekly learner diaries in adaptive education. Andini et al. (2023) found that redesigning group roles based on student input boosted responsibility and motivation. Finally, Novitasari and Putri (2022) stressed the need of including students in instructional decision-making to improve collaboration and comprehension.

### **6. CONCLUSION**

To overcome these issues, adaptive solutions such as scaffolding materials, multimedia support, flexible role assignments, and responsive pacing were applied. These approaches helped maintain student engagement and facilitated a more inclusive learning environment.

Based on these findings, it can be concluded that the success of the Jigsaw technique relies not only on its structure but also on the teacher's ability to adapt it to the classroom context. Strategic preparation and continuous reflection are key to ensuring equitable participation and meaningful learning for all students.

Suggestions for future research include exploring the long-term effects of adaptive scaffolding within collaborative techniques, as well as investigating how digital tools can further enhance inclusivity and engagement in group-based reading activities.

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