

Empowering EFL Readers Through Gamified Jigsaw Strategies in Non-Fiction Narratives

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Abstract

This study aims to enhance EFL students' reading comprehension of non-fiction narrative texts through the implementation of a Gamified Jigsaw Strategy. Conducted as a Classroom Action Research with eleventh-grade students in Karawang, the study followed a cycle of planning, acting, observing, and reflecting. Students engaged in Jigsaw-based group discussions complemented by gamified activities using platforms such as WordWall, Educaplay, Genially, and Padlet. The findings indicated a significant improvement, with 75% of students achieving the minimum standard score for English. The integration of gamification successfully maintained student engagement despite scheduling challenges, while the use of culturally relevant texts fostered emotional connections that enhanced comprehension. Although limitations prevented the implementation of a second cycle, the first cycle demonstrated that the Gamified Jigsaw Strategy is an effective approach to empower EFL learners' reading skills. Future research is recommended to refine this method and explore its broader applications across diverse educational contexts.

Keywords: Gamified Jigsaw Strategy; Reading Comprehension; Non-Fiction Narrative Text

INTRODUCTION

Reading comprehension is a crucial English learning skill, involving constructing meaning from texts (Pang et al., 2003; Snow, 2002). It depends on the reader, text, and context (Defrioka, 2014), and plays a key role in developing language mastery (Tamsil et al., 2020), critical thinking (Ghaith, 2021), and emotional engagement (Lin & Hsieh, 2019). Non-fiction narrative texts, such as biographies and historical reports, improve comprehension by presenting real-world contexts (Latifah & Rahmawati, 2019; Tamsil et al., 2020; Utami et al., 2022). These texts follow a structured sequence and require analyzing story elements and vocabulary (Utami et al., 2022), while helping students connect prior knowledge and text structures (Latifah & Rahmawati, 2019). However, during teaching practice with eleventh-grade students, the writer observed difficulties in identifying narrative structures and key points due to gaps in cognitive and analytical skills. To address these challenges, the Jigsaw strategy was applied to improve students' comprehension and analytical abilities. The Jigsaw strategy promotes collaborative learning where students become responsible for learning and sharing different sections of material (Abuhamda et al., 2020; Jainal & Shahrill, 2021). It has been successfully implemented in EFL learning to enhance communication and comprehension (Namaziandost et al., 2020; Toyokawa et al., 2021). By using home and expert groups, students deepen their understanding and improve teamwork (Butros Abed, 2019; Zulyanis & Natasha, 2024). Studies highlight Jigsaw's effectiveness in improving reading comprehension, vocabulary, and academic achievement (Silalahi, 2019; Chang & Benson, 2020; Rahayu et al., 2024). Gamification further enhances Jigsaw's effectiveness. Game elements such as points and leaderboards increase engagement and motivation (Han & Chen, 2024). Studies by Damayanti & Rudyatmi (2020),

Manalu & Jonatan (2021), and Maharani & Susanti (2024) show that integrating gamified platforms like Kahoot and Quizwhizzer improves learning outcomes in various subjects, including reading. Sylvester (2024) also confirms that gamification improves knowledge retention. In language learning, Boudadi & GutierrezColon (2020) found gamification boosts motivation, while Adipat et al. (2021) emphasized its role in enhancing social interaction and engagement. Wang et al. (2024) demonstrated gamified narratives improve reading comprehension. Despite its promise, challenges remain. Zainuddin et al. (2020) noted that gamification's success depends on instructional design, while Vrceelj et al. (2023) highlighted limited application in primary and secondary education. However, despite the promising findings on engagement and learning outcomes, limited research has explored the aspect of student empowerment in the Gamified Jigsaw Strategy. Therefore, this study aims to fill this gap by investigating student empowerment in the Gamified Jigsaw Strategy.

METHOD

This study employed Classroom Action Research (CAR) to enhance eleventh-grade students' comprehension of narrative texts through the Jigsaw technique. According to Burns (2010), CAR is a reflective and systematic approach used by teachers to improve their teaching practices. It follows four cyclical stages: planning, action, observation, and reflection. In the planning stage, the teacher identified the problem and designed the intervention using the Jigsaw strategy. During the action stage, the teacher implemented the strategy in the classroom. In the observation stage, the teacher collected data on student engagement and comprehension. Lastly, in the reflection stage, the teacher evaluated the results and made adjustments for the next cycle if needed.



Figure 1. Cyclical action research model based on David Hopkins (1985) as cited in Young, et. al.

In this research, the teacher also served as the researcher, applying the Jigsaw technique to address students' difficulties in understanding narrative texts. Several data collection methods were used, including observation checklists, field notes, tests, and questionnaires. The observation checklist was used to monitor student participation during the Jigsaw activities, while field notes captured classroom dynamics and student responses. Tests were administered after each cycle to measure students' comprehension, using the school's standard minimum score where a score of 78 or above is categorized as "Passed" and below 78 as "Not Passed." The success of the research was determined if 70% of students achieved the passing score.. To get students' mean score, the writer measured it by using the following formula adapted from Singh (2006:286) which is:

$$M = \frac{\sum fx}{N}$$

M : The Mean score of the students

N : The total of students in the classroom

$\sum fx$: The amount of students' score

From the mean score, it was able to show which qualification match the students. The result categorized as follow:

Table 1. The Categorized of Result

Range Score	Classification
90-100	Excellent
80-89	Good
70-79	Average
50-69	Poor
0-49	Very Poor

Additionally, a questionnaire containing Likert-scale items and open-ended questions was distributed to collect students' feedback on their engagement, understanding, and learning experiences during the implementation of the Jigsaw strategy. This approach aimed to improve not only students' comprehension but also their active participation in learning narrative texts.

RESULTS AND DISCUSSION

Results

The implementation of the Jigsaw technique was carried out in one cycle consisting of planning, acting, observing, and reflecting stages. The actions were implemented on April 15th and 22nd, 2025, targeting the students' reading comprehension of narrative texts. During the teaching-learning process, the researcher, who also acted as the teacher, facilitated Jigsaw activities and observed students' participation using observation checklists and field notes. To measure students' comprehension, two assessment tools were used: a quiz created on Educaplay and a set of six reflective essay questions posted on Padlet. These tests focused on evaluating students' understanding of the narrative text discussed in the group activities.

Pre-Test

Before implementing the learning treatment, the researcher conducted a pre-test to identify the students' initial abilities. The results showed that 11 out of 35 students (31.4%) achieved the minimum standard score of 78, while 24 students (68.6%) did not meet the criteria. The overall mean score was 65, which is below the expected standard. These findings indicate that most students had not yet mastered the targeted competencies, and thus, instructional intervention was necessary. The pre-test served as a diagnostic tool to guide the design of appropriate strategies for the upcoming learning cycle.

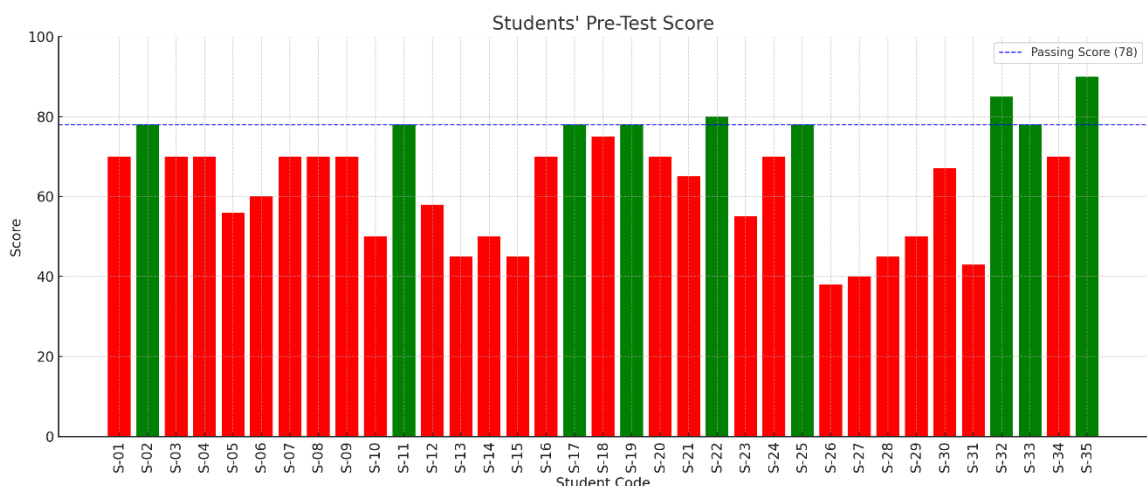


Figure 2. Result of Students’ Pre-Test Score

Based on the results of students in the Pre-Test, the scores can be categorized as shown in Figure 3.

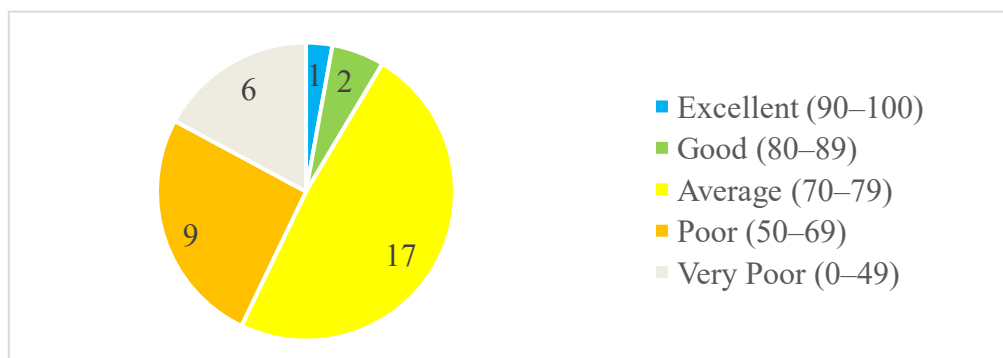


Figure 3. Categorization of Students’ Reading Scores in the Pre-Test

The categorization of students’ pre-test scores revealed that the majority of students (48.57%) fell into the Average category, indicating that most learners had a moderate understanding of the material prior to the instructional intervention. Only 8.57% of students achieved scores in the Good (5.71%) and Excellent (2.86%) categories, suggesting that a small portion of the class entered with strong prior knowledge. Meanwhile, 42.85% of students were classified as either Poor (25.71%) or Very Poor (17.14%), highlighting the need for substantial instructional support. These findings confirm that most students had not yet reached the minimum competency level, and thus, targeted teaching strategies were essential to improve learning outcomes.

The First Cycle

Planning: The researcher discussed the students’ problems with the English teacher. Then, prepare the material such as; lesson plans, teaching media, and students’ worksheets. To support the data, the researcher prepared research tools such as an observation checklist and field notes.

Acting: The researcher began the teaching activity by greeting the students and checking the students' attendance. The researcher then explained the learning objectives and the relevance of learning Non-Fiction Narrative Text to real-life communication and critical thinking skills. Since the students had already received prior instruction on the concept of Narrative Text, they

possessed initial knowledge of the material. In addition, at the beginning of the meeting, the researcher conducted a diagnostic assessment to measure the students' level of understanding through quizzes on the WordWall and Educaplay platforms.

In the main activity, the researcher introduced the Jigsaw method. Students were divided into core groups consisting of 4–5 members with different achievement levels, based on their learning portfolios to ensure a balanced distribution of abilities. Each student received a different biographical text selected to match the theme of the student module. The chosen figures were Greta Thunberg, Salsabila Khairunnisa, Pandawara Group, and Greenpeace. The selection of figures was aligned with the students' backgrounds, featuring two figures from West Java (Salsabila Khairunnisa and Pandawara Group) and two from international contexts (Greta Thunberg and Greenpeace). Students first gathered in expert groups, where they worked with peers studying the same figure. In their expert groups, students analyzed the structure of the biographical text (orientation, events, reorientation) and extracted the moral values and main achievements of their assigned figures. They documented their analysis collaboratively on *Padlet*.

After the expert discussion, students returned to their core groups to share their analyses. Each member presented their findings, leading to a group discussion comparing the backgrounds, struggles, and contributions of the different figures. To consolidate understanding, the researcher organized interactive activities, including *Guess the Character* (Genially) and *Non-Fiction Biography Quiz* (Educaplay). Additionally, students were instructed to compose a short reflective essay on *Padlet*, connecting the values and lessons from the figures' biographies to their personal lives.

Observing: While the students were engaged in group discussions, the researcher observed the learning process and collected data using an observation checklist and field notes. The observation results indicated that the learning process followed a clear and structured flow: from the introduction of learning goals, expert group discussions, home group knowledge sharing, to reflection activities. The integration of gamified media (WordWall, Educaplay, Genially, Padlet) helped maintain student engagement, even during sessions scheduled at the end of the school day.

Table 2. Implementation of Gamified Jigsaw Strategy

Indicator	Theme	Example
Learning objectives delivery	Goal Clarity	The teacher explained the relevance of the topic to real-life applications.
Lesson structure	Structured Jigsaw Sequence	Activities followed the Jigsaw steps: expert → home groups → reflection.
Group collaboration	Collaborative Learning	Students discussed in expert groups, then shared insights in home groups.
Teacher support for low-performing students	Instructional Scaffolding	Teacher asked guiding questions like “What is the main point of your text?”
Gamified media integration	Gamified Engagement	Interactive quizzes and reflective writing were conducted via digital tools.
Student participation	Active Engagement	Students stayed engaged despite time fatigue, due to game-based elements.
Understanding of text structure	Analytical Thinking	Students identified elements such as orientation, events, and reorientation.

Cultural relevance of text	Cultural Connection	Biographies of Greta Thunberg, Pandawara, etc., matched student contexts.
Student reflection and application	Critical Reflection	Students wrote essays connecting moral values to their lives.
Class pacing and time constraints	Time Allocation Challenges	Time was well-managed, but end-of-day timing reduced discussion intensity.

In support of the checklist, field notes revealed important qualitative dynamics within the classroom. Initially, students were highly engaged during expert group discussions, particularly when analyzing the biographical texts. However, variance in student confidence was observed: *“Some students with lower levels of understanding seemed less confident in explaining their part.”* (Field Note, April 2025)

To address this, the teacher implemented supportive questioning strategies, which allowed hesitant students to participate more confidently:

“The teacher provides additional guidance by asking guiding questions and encouraging students to help each other.”

Additionally, collaborative reflection tasks prompted deeper engagement. As students worked together to summarize and relate the values of the biographies to their lives, increased comprehension and confidence were noted:

“Students participated more in this phase, showing increased understanding after sharing information with each other.”

The researcher then proceeded to analyze the students' individual tests. After collecting and analyzing the students' tests, the researcher found that 26 out of 35 students (75%) passed the minimum standard score of 78, while 9 out of 35 students (25%) failed in the first cycle. Based on the test results, the students' mean score was 80. The learning process is considered successful if 70% of students meet the minimum standard score. This means that the first cycle was successful.

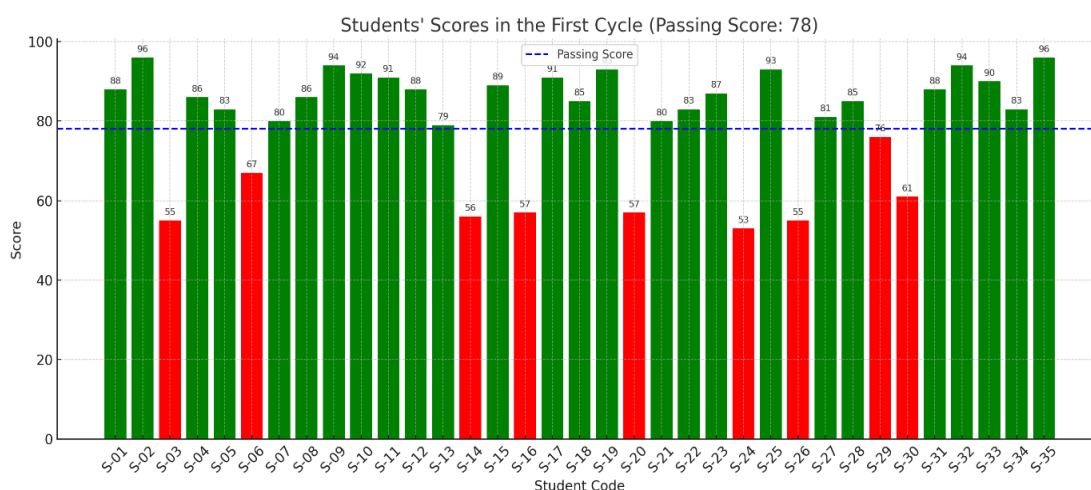


Figure 4. Result of Students' Score in The First Cycle

Based on the results of students in the first cycle, the scores can be categorized as shown in Figure 5.

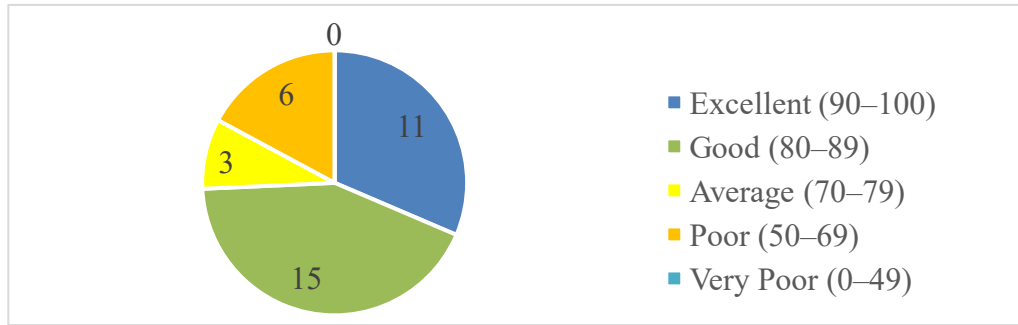


Figure 5. Categorization of Students' Reading Scores in the First Cycle

The categorization of students' scores revealed that the majority of students (74.3%) fell into the Good and Excellent categories. This indicates that most learners demonstrated a satisfactory to outstanding level of reading comprehension after the implementation of the Gamified Jigsaw Strategy. However, approximately 17% of students were classified in the Poor category, suggesting that a subset of the class still requires targeted interventions and additional support to strengthen their reading skills. Importantly, no students were categorized as Very Poor, which implies that all participants had achieved at least a basic level of competence in comprehending non-fiction narrative texts. Moreover, to evaluate the effectiveness of the implemented learning strategy, the average scores of students in the pre-test and post-test (Cycle I) were compared. The following table shows the improvement in students' reading skills after the implementation of the Gamified Jigsaw strategy.

Table 3. Comparison of Pre-test and Post-test Average Scores

Stage	Average Score	Score Increase	Percentage of Improvement
Pre-Test	65	15	23,08%
Post Test	80		

The data shows that the average score increased from 65 in the pre-test to 80 in the post-test, with an improvement of 15 points or approximately 23,08%. This significant increase indicates that the use of the Gamified Jigsaw strategy had a positive impact on enhancing students' reading skill. Furthermore, the number of students who achieved the minimum mastery criterion (KKM) also increased, supporting the quantitative data obtained from the test results.

Moreover, to see how students improved after the learning activity, their reading scores were grouped into categories and compared between the Pre-Test and Cycle 1/Post-Test. The table 4 below shows how many students were in each category before and after the activity, along with the changes and trends.

Table 4. Categorical Comparison of Students' Reading Scores

Category	Pre-Test	Cycle 1 / Post-Test	Change (± Students)	Trend
Excellent (90–100)	1	11	+10	Significant Increase
Good (80–89)	2	15	+13	Significant Increase
Average (70–79)	17	3	-14	Sharp Decrease
Poor (50–69)	9	6	-3	Slight Decrease
Very Poor (0–49)	6	0	-6	Eliminated

The comparison between the Pre-Test and Cycle 1/Post-Test results shows a clear improvement in students' reading performance. The number of students in the Excellent and Good categories increased significantly by 10 and 13 students, respectively, while those in the Average category decreased sharply by 14 students, indicating that many moved to higher achievement levels. The Poor category saw a slight decrease of 3 students, and the Very Poor category was completely eliminated. Overall, the data suggests a strong upward trend in student achievement after the intervention.

Next, to gain insight into students' perceptions regarding the implementation of the Gamified Jigsaw Strategy, a feedback questionnaire was administered, and the results are summarized in Figure 6. below.

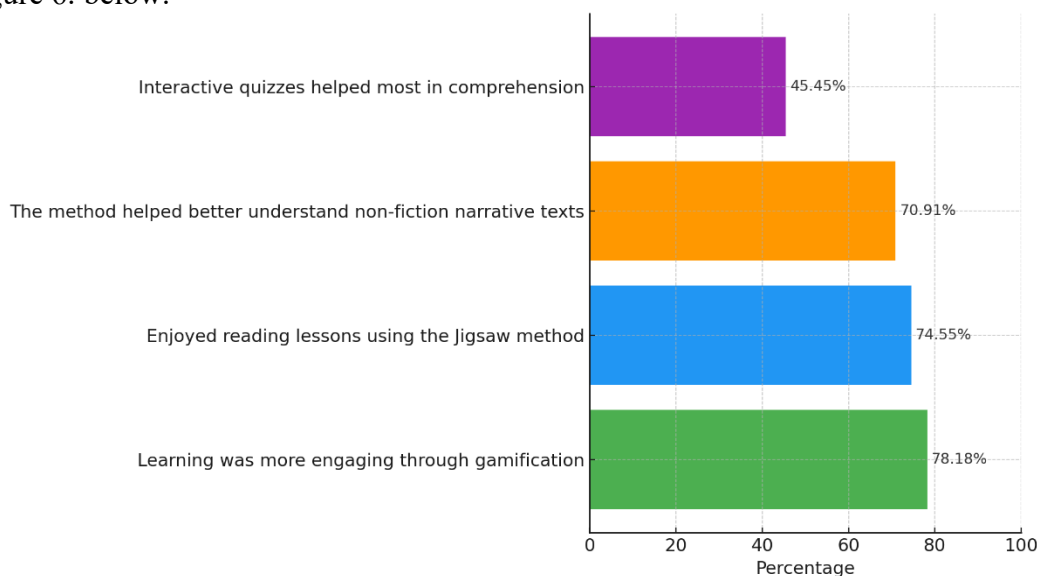


Figure 6. Student Feedback on the Gamified Jigsaw Strategy

Furthermore, based on the questionnaire results, 78.18% of students stated that the use of gamification platforms (WordWall, Educaplay, Genially, and Padlet) made the learning process more engaging. Additionally, 74.55% of students reported feeling happy participating in reading lessons using the Jigsaw method, and 70.91% indicated that the method helped them better understand non-fiction narrative texts. Interactive quizzes (WordWall/Educaplay) were selected by 45.45% of students as the activity that most helped them comprehend the text.

Moreover, in the open-ended responses, students shared their preferences and learning experiences. One student remarked, *"I like learning through WordWall because it is fun and makes me remember the material better."* Another student noted, *"Group discussions helped me understand the story more easily because my friends explained it in simple words."* These findings further validate the positive impact of the Gamified Jigsaw Strategy on students' engagement, motivation, and comprehension.

Reflecting: Based on the results of the first cycle, the researcher reflected on the learning process to identify strengths and areas for improvement. Although the cycle was considered successful, as 75% of the students achieved the minimum standard score, several challenges were observed. The timing of the lesson, which was scheduled at the end of the day, contributed to student fatigue, affecting the effectiveness of both group and individual activities.

Despite this, the implementation of gamified activities through platforms like WordWall, Educaplay, Genially, and Padlet significantly boosted student engagement and motivation. The Jigsaw method successfully facilitated collaborative learning and critical thinking, as students were able to analyze texts in expert groups and then share their understanding within their core

groups without formal presentations. Students engaged meaningfully during the learning process.

The diagnostic assessment at the beginning helped gauge students' prior knowledge effectively, and the selection of relevant and culturally connected biographical figures increased students' interest and participation. However, time management during group activities and the transition between expert groups and core groups needs to be improved to maintain focus and depth of discussion.

Although the researcher had planned to implement a second cycle to make further improvements, such as enhancing group activity instructions, adding energizer activities, and better managing transitions, this plan could not be carried out. Due to school regulations, students were required to participate in a P5 project, which limited the opportunity for continuing the classroom action research into a second cycle. Thus, the findings and reflections from the first cycle alone were used to evaluate the implementation of the learning model.

Discussion

This study aimed to enhance students' reading comprehension of non-fiction narrative texts through the implementation of a Gamified Jigsaw Strategy. The findings of the classroom action research indicated a significant improvement in students' comprehension abilities. The success of the Jigsaw strategy observed in this research is consistent with the findings of Abuhamda et al. (2020) and Chang & Benson (2020), who argue that cooperative learning models like Jigsaw foster deeper comprehension through structured peer collaboration. By dividing students into expert and home groups, the method promoted both individual accountability and interdependent learning, echoing the ideas proposed by Toyokawa et al. (2021) and Jainal & Shahrill (2021). Furthermore, as emphasized by Namaziandost et al. (2020), students reinforced their comprehension by teaching their segment of the material to their peers. In addition, the integration of gamified learning platforms such as WordWall, Educaplay, Genially, and Padlet, played a critical role in maintaining students' engagement and motivation, even during the final periods of the school day. This finding resonates with Han & Chen (2024), Maharani & Susanti (2024), and Sylvester (2024), who underline the positive impact of gamification on emotional investment and cognitive focus. Specifically, the interactive quizzes and reflective writing tasks were aligned with Adipat et al. (2021), who advocated for maintaining high levels of cognitive engagement through game-based strategies.

Building on these outcomes, another important aspect observed was the emotional and cultural connection that developed through the selection of biographical texts relevant to students' backgrounds. This strategy aligns with the perspectives of Wang et al. (2024) and Lin & Hsieh (2019), who emphasize that emotionally connected and culturally relevant materials can significantly enhance comprehension.

Moreover, the administration of diagnostic quizzes at the beginning of the lesson provided a strategic advantage. This practice is in line with Boudadi & GutierrezColon's (2020) recommendation to assess students' prior knowledge and adapt instruction accordingly, helping to tailor expert group tasks more effectively to students' comprehension levels.

Furthermore, the results reaffirm the conclusions drawn by Damayanti & Rudyatmi (2020) and Manalu & Jonatan (2021) that the integration of Jigsaw and gamified assessments not only improves cognitive achievements but also enhances affective engagement. The students' enthusiastic participation in the games and discussions demonstrated how gamification could effectively mitigate typical fatigue associated with late-class sessions.

These findings support the extensive body of research emphasizing the benefits of collaborative learning (Abuhamda et al., 2020; Chang & Benson, 2020; Namaziandost et al., 2020), gamification (Han & Chen, 2024; Sylvester, 2024; Maharani & Susanti, 2024), and their

intersection in enhancing EFL learning environments (Rahayu et al., 2024; Zulyanis & Natasha, 2024).

CONCLUSION

The implementation of the Gamified Jigsaw Strategy effectively enhanced the reading comprehension of eleventh-grade students in understanding non-fiction narrative texts. The Jigsaw technique promoted collaborative learning, peer teaching, and critical thinking, while the integration of gamified activities (using WordWall, Educaplay, Genially, and Padlet) maintained student engagement, even during less favorable class periods. The success was evident from the increase in students' scores, where 75% of students achieved the minimum standard score, meeting the research success criteria. Additionally, the selection of culturally relevant biographical figures fostered emotional engagement, further improving comprehension. Overall, the combination of cooperative learning and gamification proved to be a powerful approach for empowering EFL readers. For future implementations, it is suggested to improve time management during group activities and include short energizer breaks to maintain student focus, especially in late-day classes. The use of culturally relevant texts should be continued to strengthen emotional engagement. Expanding the variety of gamified tasks can further boost motivation and accommodate different learning styles. It is also recommended to conduct multiple research cycles for deeper refinement and to explore the empowerment effects of the Gamified Jigsaw Strategy across diverse educational contexts.

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