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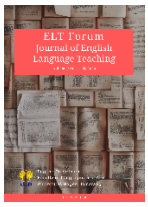

Cooperative learning for the implementation of deep learning to enhance students' reading skills

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Abstract

Reading is one of the important skills in learning English because it is a window to knowledge and a foundation for developing other language skills. However, students' reading skills in Indonesia remain low due to various factors, coupled with reading learning that still tends to be shallow and focused on memorization. Therefore, a learning strategy is needed that focuses not only on the final result but also on the thinking process and deep understanding. Although both Deep Learning and Cooperative Learning have proven effective in enhancing reading skills, there has been no research examining how Cooperative Learning can be used as a method for implementing the Deep Learning approach. Therefore, this article aims to explore how Cooperative Learning can be used as a method for implementing the Deep Learning approach to enhance reading skills. This article uses a library research method with a focus on the Jigsaw type as a representation of Cooperative Learning that implements Deep Learning. Jigsaw implements the principles of mindful learning through conscious and attentive student involvement, meaningful learning through linking information from the text to personal experiences, and joyful learning through a collaborative and enjoyable learning atmosphere. In conclusion, Cooperative Learning can serve as a method for implementing Deep Learning to enhance students' reading skills. The implications of this article can serve as a reference for teachers in optimizing teaching reading and can also be the basis for empirical research in the future.

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INTRODUCTION

In Indonesia, English is taught from the third grade of elementary school to senior high school. This shows that even though English is a foreign language, it occupies an important position in the world of education in Indonesia. Mauliska and D'Angelo (2024) said that English learning in schools has a crucial role in equipping students to continue their education to a higher level and face competition in the global. As part of the effort to enhance students' English proficiency, the Emancipation Curriculum sets out six skills that students need to achieve in learning English. These skills include listening, speaking, reading, viewing, writing, and presenting. These skills are interrelated and support each other.

Reading is one of these six skills. It involves complex cognitive processes. According to Chaniago and Yunaspi (2021), reading is an activity carried out by readers to understand and capture messages conveyed by the author through written text. Thus, reading does not only involve pronouncing words, but more than that, it includes understanding the meaning contained in the text. Suherman and Mandarani (2021) emphasize that reading will be meaningless if the reader does not understand the content of the reading.

Reading is an important skill. As stated by Satriani (2018), reading is a window to knowledge because through this activity students can obtain various information they need. Not only that, reading also helps students expand their vocabulary which will later be useful in supporting other language skills (Suryani & Kareviati, 2021). This reading skill is not only important in English subject, but also affects all subjects. Almost every subject requires the ability to read and understand written texts well. According to Ningsih *et al.,* (2019), students who do not have good reading skills will have difficulty in following the learning of various subjects. Therefore, reading is not only important as a language skill, but also as a foundation for academic success.

Despite its importance, students' reading skills in Indonesia remains low. Based on the results of the Programme for International Student Assessment (PISA), Indonesian students' reading scores were at 359 (OECD, 2023). This score is below the 2022 Indonesian PISA national average of 369. Furthermore, Indonesian students' reading scores in 2022 also decreased by 12 points compared to 2018. This decrease reflects the existence of problems in reading among students. According to Kaharuddin and Thaib (2023), many students still experience difficulties in reading, both in Indonesian as their mother tongue and in English as a foreign language. Moreover, English is a foreign language, reading English texts certainly requires more effort. Alderson (2000, as cited in Asani, 2022) said that students' difficulties in understanding reading texts can be influenced by various factors such as language knowledge, students' prior knowledge, motivation, lack of reading strategies, and the reading process. First, limited language knowledge makes it difficult for students to understand vocabulary or sentence structure in the texts. Second, students' lack of prior knowledge makes it difficult for them to connect the content of the reading with experiences or information they already know. Third, low motivation makes students less interested or lazy to read. Fourth, the lack of reading strategies, such as not knowing how to find the main idea or summarize the contents of the text, limits their understanding. Lastly, the reading process itself can be a problem if students cannot focus, read too quickly, or do not double-check whether they understand the content of the reading. This problem is exacerbated by student learning methods that still focus on memorization and do not train critical thinking skills (Liu *et al.,* 2025). If these problems are left without proper solutions, students will fall further behind in reading skills. They are only able to read the surface or memorize it, without really understanding the information in the text. In the long run, this will certainly affect their academic success.

To overcome these problems, a learning strategy is needed that focuses not only on the final result but also on the thinking process and deep understanding. One strategy that addresses this need is the Deep Learning approach, which emphasizes a meaningful, mindful, and joyful learning processes. As defined by Marton and Säljö (1976), Deep Learning is a learning process in which students are encouraged to truly understand the contents of the material, especially the intent or message that the author wants to convey. In line with this, the Ministry of Primary and Secondary Education promotes Deep Learning as an approach that prioritizes the creation of a conscious, meaningful, and enjoyable learning environment, emphasizing a process that involves the holistic and integrated engagement of the mind, emotions, senses, and body (Kementerian Pendidikan Dasar dan Menengah Republik Indonesia, 2025).

The Deep Learning approach has become popular since it was recommended by the Ministry of Primary and Secondary Education in February 2025. Mariana and Hula (2024) in their study

showed that the Deep Learning approach in foreign language learning succeeded in creating a more meaningful, mindful, and joyful learning experience for students. The results of this study show a significant positive relationship between this approach and the improvement of students' language skills and learning motivation. Students feel the material they learn is more relevant to their daily lives and become more reflective and focused during the learning process. Yuan (2024) in his study added that the implementation of Deep Learning in teaching English reading can enhance students' reading and logical thinking skills. According to Yuan (2024), by implementing Deep Learning, students can gain a more comprehensive understanding of English texts, instead of just looking for answers to the questions given. This approach encourages students to explore the deeper meaning of the text by connecting new information with prior knowledge. Similarly, Hu *et al.,* (2022) in their study found that the implementation of Deep Learning in reading can enhance the quality of students' learning process. Deep Learning encourages students to actively engage in higher order thinking processes such as critical thinking, analyzing, reflecting, and connecting previous knowledge with new knowledge. In the context of reading comprehension learning, this approach helps students understand the content of the text in a deeper and more relevant way, not just surface reading, but also linking it to their personal experience and life contexts.

As an approach, Deep Learning needs to be implemented through appropriate learning methods so that it can be applied effectively. The proposed method used to implement the Deep Learning approach is Cooperative Learning. Cooperative Learning is currently commonly used in the classrooms. According to Slavin (2005), Cooperative Learning is a variety of teaching methods in which students work in small groups to help each other learn the subject matter (Slavin, 2005). Meanwhile, Kagan and Kagan (2009) said that Cooperative Learning is not just ordinary group work, but a structured learning system designed to maximize interaction between students to improve academic and social outcomes. Acosta *et al.,* (2025) stated that Cooperative Learning supports the achievement of a deeper understanding of the material being studied. In this method, students are involved in reading activities while actively interacting with friends so that they can stimulate thinking skills and strengthen their understanding of the contents of the text. This encourages students to share their thoughts and communicate actively with their peers in a harmonious cooperative atmosphere (Saeed & Gull, 2023). In their study, Saeed and Gull (2023) specified two types, namely Think Pair Share and Jigsaw. From the students' point of view in Barbosa *et al.,* (2020) study revealed that reading enhancement occurred because the Jigsaw method covers a number of important aspects of reading, such as vocabulary development, understanding contextual clues, activating prior knowledge, exchange accurate information, asking relevant questions, and the ability to organize and summarize ideas.

Studies also show that Cooperative Learning brings additional benefits. Fajarina and Ma'rifatulloh (2021) in their study stated that Cooperative Learning type Mini Group Discussion can enrich new vocabulary unconsciously. This is because they automatically listen to their friends when their friends share vocabulary. Cooperative Learning can also facilitate reading because it encourages students to support each other in the learning process (Herlina, 2022). Students in groups can study, discuss, and share their understanding of the texts they read. This helps them understand the contents of the reading more deeply and see it from different perspectives. From the perspective of students in Idrus's (2023) study, learning English through group work activities is considered to help complete complex tasks that are difficult to complete individually, facilitate reading comprehension with the help of friends, and make the learning process easier than individual learning. Not only does it enhance reading skills, Cooperative Learning also enhances students' motivation and attitudes towards learning (Widiastuti, 2024). Motivation has an impact on how well students understand the material through reading (Hayani *et al.,* 2024). If students are motivated to read, they can read actively.

Although previous studies have proven the effectiveness of the Deep Learning approach and the Cooperative Learning method in reading learning, these studies still discuss both separately. In other words, there has been no research that examines how Cooperative Learning can be used as a method to implement the Deep Learning approach in enhancing students' reading skills. Therefore, this article aims to explain how Cooperative Learning can be used as a method to implement the Deep Learning approach in enhancing students' reading skills. It is hoped that the results of this article can be a reference for teachers in optimizing teaching reading and can be the basis for empirical research in the future.

METHODS

This article uses a qualitative approach to explore how Cooperative Learning can be used as a method to implement the Deep Learning approach in enhancing students' reading skills. Rather than collecting primary data from the field, this research draws on secondary sources, such as educational theory books, prior related studies, journal articles, and educational policy documents issued by official institutions. The qualitative approach was chosen because it is appropriate for studies that aim to develop a deeper understanding of existing ideas, theories, and findings. This approach helps the researcher develop a strong argument and clarify the relationship between Cooperative Learning as a method and Deep Learning as an approach aimed at enhancing students' reading skills.

This article uses the library research method, which involves searching, selecting, and critically analyzing relevant documents, both published and unpublished in order to develop conceptual arguments (Stapleton *et al.,* 2020). The library research method was chosen because it allows the researcher to systematically gather and interpret existing knowledge, which is essential without the need for fieldwork or direct observation. In conducting this library research, the researcher collected data and information from various literature sources, including educational theory books, prior related studies, journal articles, and educational policy documents from official institutions. According to Cahyono (2021), there are four stages of library research: (1) Collecting research materials, where the researcher gathers information from books, journal articles, and policy documents relevant to Deep Learning and Cooperative Learning. The researcher used keywords such as Cooperative Learning, Deep Learning, Mindful Learning, Meaningful Learning, and Joyful Learning in databases like Scopus, Google Scholar, and ResearchGate. The researcher also searched for books published by the Ministry of Primary and Secondary Education and educational theory books by scholars such as Slavin, Spencer Kagan, and David Ausubel; (2) Reading and understanding the literature, where the researcher actively reads to explore the content and identify ideas related to the research purpose. At this stage, the researcher read and reviewed the collected sources, focusing on content relevant to the research objective, which is to explore how Cooperative Learning can be used as a method for implementing a Deep Learning to enhance students' reading skills. For instance, the researcher read to understand how Cooperative Learning aligns with the principles of meaningful learning within the context of Deep Learning; (3) Recording research materials, in which the researcher takes important notes while reading to serve as the foundation for outlining and composing the discussion section. During this process, the researcher noted key or important findings that can be used to develop arguments or analyses later in the discussion section; and (4) Processing and analyzing the collected data, where all recorded materials are analyzed and synthesized into a coherent conceptual argument. In this stage, the researcher connects findings from various sources to construct an argument, demonstrating that Cooperative Learning can be a concrete strategy for realizing the principles of Deep Learning in enhancing students' reading skills. This process involves linking Cooperative Learning with the principles of Deep Learning to demonstrate that Cooperative Learning can serve as a concrete method for implementing Deep Learning to enhance students' reading skills in the classroom.

FINDINGS AND DISCUSSION

Deep Learning

Deep Learning is an approach that prioritizes the creation of a conscious, meaningful, and enjoyable learning environment, emphasizing a process that involves the holistic and integrated engagement of the mind, emotions, senses, and body (Kemendikdasmen, 2025). It involves the process of thinking, feeling, and using the body in a holistic and interconnected manner. This means that learning does not only focus on cognitive skills but also considers students' emotions and physical actions. The ultimate goal is for students not only to gain knowledge, but also to experience a complete learning process. Meanwhile, Marton and Säljö (1976) define Deep Learning as a learning process in which students are encouraged to truly understand the content of the material, especially the intention or message that the author wants to convey. In contrast to Surface Learning, which occurs when students merely focus on memorization, Deep Learning happens when students seek to understand, analyze and find meaning in what they learn. Therefore, Deep Learning can be defined as a learning approach that encourages students to fully comprehend the material, both in content and meaning, by engaging both the mind and emotions throughout the learning process.

The Deep Learning approach emphasizes the full cognitive and affective engagement of students. This aligns with the principles of Deep Learning established by the Ministry of Primary and Secondary Education, which outlines three core principles: (1) Mindful Learning; (2) Meaningful Learning; (3) Joyful Learning. Each of these principles contributes to providing a comprehensive and in-depth learning experience. First, Mindful Learning refers to the holistic involvement of students in the learning process, enhancing their awareness of their thoughts, emotions, and surroundings (Kemendikdasmen, 2025). This principle requires students to be fully present at every stage of learning, rather than passively receiving information. Second, Meaningful Learning emphasizes the connection between new information and students' prior knowledge so that they can build a deeper understanding and last longer in their memory (Ausubel, 1963; Nurhasanah *et al.,* 2022; Kemendikdasmen, 2025). This principle encourages students to be more active in learning, not merely receiving information, but also building new insights through involvement, reflection, and analysis. The last, Joyful Learning prioritizes enjoyment and positive emotions in the teaching and learning process (Rahmawati *et al.,* 2024). This principle aims to foster emotions such as curiosity, enthusiasm, and motivation, which in turn encourage students to engage more deeply with the learning material (Kemendikdasmen, 2025).

Deep Learning does not always imply a serious or heavy learning process. This approach can be implemented through enjoyable activities, one of which is Cooperative Learning. As long as the activity encourages students to think more deeply, link information, and express their understanding, it can already be considered a reflection of Deep Learning practice. However, one of the challenges in implementing Deep Learning is the readiness of teachers to design learning that aligns with its principles. In addition, teachers need to shift their approach from teacher-centered to student-centered. This means that students should be given the space to ask questions, express opinions, and reflect on the material they are learning.

Cooperative Learning

Cooperative Learning refers to a variety of teaching methods in which students work in small groups to help each other learn the subject matter (Slavin, 2005). These groups are heterogeneous consisting of high, medium, and low achieving students, males and females, and individuals from different ethnic backgrounds. Within these groups, students work together to master the material presented by the teacher. They can help one another, engage in discussions, and argue to refine their understanding and close gaps in each other's knowledge. Meanwhile, Kagan and Kagan (2009) stated that Cooperative Learning is not merely ordinary group work, but rather a structured learning system designed to maximize interaction among students to improve both academic and social outcomes. These structures guide student interaction to ensure that every individual has an equal role, responsibility, and opportunity to participate. Therefore, it can be concluded that Cooperative Learning is a teaching method that encourages students to actively and collaboratively learn in a structured manner, helping one another in small groups to achieve shared academic goals.

In practice, Cooperative Learning does not simply divide students into working groups, but rather incorporates five main elements that must be present. According to Johnson and Johnson (2009), there are five main elements of Cooperative Learning, namely: (1) positive interdependence; (2) individual accountability; (3) promotive interaction; (4) social skills; and (5) group processing. First, positive interdependence emphasizes that each member must work together, as the success of one individual depends on the others. Second, individual accountability ensures that each member is responsible for their own tasks and contributions, so that no one merely relies on the work of the group. Third, promotive interaction encourages students to engage directly with one another, offering help and actively contributing to group discussions. Fourth, social skills are essential to enable students to communicate well, respect differing opinions, and resolve conflicts constructively. Lastly, group processing involves collective reflection to evaluate team performance and improve the quality of future learning experiences. These five elements ensure that each student is actively engaged in the learning process, not merely physically present in the group. Students are expected to support one another in understanding the material, including reading texts, and to be responsible for shared understanding.

The Cooperative Learning method is relevant for implementing the Deep Learning approach. Deep Learning focuses on how students understand the content of reading materials as a whole, while Cooperative Learning provides a way or method to achieve the goals of Deep Learning. Cooperative Learning can support Deep Learning because both emphasize active learning processes.

In Cooperative Learning, students do not learn alone. They are encouraged to share, explain, and help each other overcome difficulties in understanding the text. This aligns with the principles of Deep Learning, which require both cognitive and affective engagement in the learning process.

However, it should be understood that the implementation of Cooperative Learning must be carefully planned in order to be truly effective. According to Maulida (2017), teachers need to ensure that they have made good preparations before the teaching and learning process takes place. They must design clear group activities, provide structured guidance, and ensure that each student has a balanced role. Without clear direction, group activities may become unfocused and turn into casual conversations without achieving the intended learning objectives.

Cooperative Learning for Teaching Reading

Cooperative Learning has various types, namely Student Teams-Achievement Division, Team Game Tournament, Jigsaw, Cooperative Integrated Reading and Composition, Team Assisted Individualization, Group Investigation, Learning Together, Complex Instruction, and Structure Dyadic Methods (Slavin, 2009). In addition, Cooperative Learning can also take the form of Think Pair Share, Numbered Head Together, Make a Match, Round Robin, Mini Group Discussion, and many others. In this article, the Jigsaw type is chosen, as previous studies have shown that this type is effective in enhancing reading skills. Carrillo *et al.,* (2019) identified several Cooperative Learning strategies that are considered the most effective in enhancing students' reading skills, one of which is Jigsaw. This article uses Jigsaw as an example to illustrate how Cooperative Learning can implement Deep Learning approaches in teaching reading.

Jigsaw was developed and named by Elliot Aronson, a graduate professor and social psychologist, in 1971 in Austin, Texas. According to Aronson (2008), the steps for implementing Jigsaw in reading learning include several stages as follows: (1) dividing students into home groups consisting of five or six people with diverse backgrounds, such as gender, ability, and ethnicity; (2) selecting one student in each group as a leader to help organize the group work; (3) dividing the lesson material into five or six parts according to the number of group members; (4) assigning each student to study one part of the material individually; (5) giving students time to read and understand their assigned part of the material at least twice; (6) forming expert groups, which are temporary groups composed of students from different home groups who study the same part of the material. In these group, students discuss key points and practice explaining the material; (7) after finishing, students return to their home groups; (8) each group member then shares the results of their expert group discussion with their home group peers; (9) the teacher circulates around the classroom, observing group work and providing assistance if there are problems, such as members being too dominant or passive; and (10) ending the activity with a quiz to evaluate students' understanding of all parts of the material. In this process, each member must work together as a team, where their success depends on the contributions of every individual.

This article uses the Jigsaw-type Cooperative Learning method in English learning for Phase E students of Grade 10 in Senior High School, with descriptive text material on the theme of athletes, and focuses on reading skills, especially in identifying specific information in descriptive texts. The learning activities are carried out using the Genre-Based Approach. In the Opening Activity stage, (1) the teacher opens the lesson by greeting and welcoming the students, (2) then appoints one of the students to lead a prayer together, (3) continues with checking student attendance, (4) and observing the condition of the class, including cleanliness, neatness, and student appearance. (5) To create a positive and enjoyable learning atmosphere, the teacher invites students to do ice breaking, namely Simon Says, (6) then explains the objectives and benefits of learning related to daily life. (7) The teacher also provides an explanation of the activities that will be carried out during the learning and the form of assessment that will be used. In the Main Activity stage, learning begins with the Building Knowledge of the Field (BKoF) stage, where (8) students are shown pictures of athlete figures such as Rizky Ridho, Greysia Polii, and Chris John. (9) The teacher then asks trigger questions such as "Who are they?", "What do they do?", and "What do they look like?" to stimulate students' thinking. (10) Students pay attention to the teacher's explanation delivered through a PowerPoint presentation regarding the material to be studied. Next, in the Modeling of the Text (MoT) stage, (11) students read an example of a descriptive text about an athlete. (12) The teacher asks several questions to dig up specific information from the text, and (13) students are asked to identify specific information from the text they have read. Then, at the Joint Construction of the Text (JCoT) stage, (14) students participate in group activities using the Jigsaw

type Cooperative Learning method. (15) They are divided into small groups of five people called home groups, and (16) each student in the group is given a number from 1 to 5 and a different descriptive text. (17) Students are given two minutes to read the text. (18) Students who have the same number from different groups form expert groups, then (19) discuss specific information from the text they have such as name, date of birth, nationality, name of sport, personality/virtues/values, height/weight/hair/skintone, and achievements. (20) After discussing, students return to their home groups and explain to each other the information they have learned from their respective expert groups, (21) then pour the results of their discussions on the worksheets provided, and (22) continue with a quiz from the teacher to check students' understanding of the information that has been discussed. At the Independent Construction of the Text (ICoT) stage, (23) students are given a worksheet containing multiple-choice questions about descriptive texts about athletes, focusing on specific information, to be completed independently. (24) They work on the individual assignment, then (25) submit their work to the teacher. The last stage is the Closing Activity, where (26) the teacher and students together conclude the day's lesson, (27) the teacher provides feedback on the learning process, and (28) the students and teacher reflect together on the learning experience that has been gone through. (29) The teacher also provides information about the next lesson material, (30) reminds students to turn off the fan and equipment that has been used such as the LCD or projector, then (31) closes the class with a farewell greeting and closing prayer. In this learning activity, the implementation of Deep Learning through Cooperative Learning is carried out at the Joint Construction of the Text (JCoT) stage. An explanation of how this process takes place is given in the next section below.

How Cooperative Learning Implements Deep Learning

Mindful Learning

One of the principles of Deep Learning is mindful learning, which emphasizes the full presence of students in the learning process. In reading learning, this full presence means that students do not merely see a series of words in the text or read to complete an assignment, but are truly aware of what they read, understand its meaning, and reflect on their thinking process when interacting with the text. In line with this, Montoya *et al.,* (2018) stated that mindfulness and Cooperative Learning are effective and comprehensive approaches to developing skills such as self-awareness, emotional management, interpersonal skills, tolerance, respect, and critical reflection. This is an important part of mindful learning which emphasizes awareness of the individual's role within a social context.

In this case, Jigsaw, as a representation of Cooperative Learning, encourages students to be fully present in the learning process, aligning with the principle of mindful learning in Deep Learning. This is because each student has the task and responsibility to study, understand, and master a specific section of a text, and in expert groups, they collaborate with other students who have studied the same section to collectively and comprehensively understand it. This process stimulates students' cognitive awareness of the reading content, as they must comprehend, reorganize information, and prepare explanations for their home group members. This aligns with the findings of Barbosa *et al.,* (2020), who noted that in Jigsaw, students do not just read passively, but actively use their comprehension and analysis skills to organize information and solve problems together. Students intensively exchange ideas in groups and work together to form a complete understanding of the text. This process reflects the essence of mindful learning, where students do not merely memorize the content of the reading, but truly understand the meaning and construct it through meaningful interaction.

Mindful learning is concretely demonstrated when students show full awareness of their responsibilities. For example, a student who receives a text section about an athlete's physical descriptions, such as "height, weight, hair, and skin tone," will read more carefully as they are expected to master and explain this information. They are motivated to understand the content and convey it clearly and accurately to other group members. The awareness that their understanding influences the entire group’s comprehension makes students more careful, focused, and engaged in the reading process, preventing superficial reading. This sense of responsibility creates learning conditions that promote deep cognitive engagement and drives intrinsic motivation to read thoroughly, rather than merely to complete a task. Students' full awareness of their roles in this process is the foundation of mindful learning, which contributes to enhanced reading skills.

Furthermore, discussions in expert groups provide students with the opportunity to validate and deepen their understanding of the reading material with peers who share similar responsibilities.

They match each other with information found in the text, ensure that all members comprehend the same part, and help one another in identifying any missed details. Students do not passively receive information, rather actively reflect on how they understood the text and how to explain it accurately to their home group. Upon returning to their home groups, the re-teaching activity trains students to reorganize information, communicate effectively, answer peers' questions, and evaluate how well the message of the text has been understood. This process not only strengthens information retention but also cultivates communication and thinking skills, both key indicators of reading proficiency. Thus, Jigsaw, as a representation of Cooperative Learning, effectively implements the principle of Deep Learning, namely mindful learning, and directly contributes to the enhancement of reading skills.

Meaningful Learning

Meaningful learning in reading occurs when students are able to connect new information obtained from a text with the knowledge, experiences, and insights they already possess. Cooperative Learning can foster this process because it provides opportunities for students to exchange views, link the content of the text to personal experiences, and construct shared meaning. Through collaboration in Cooperative Learning that involves students' personal experiences, they are encouraged to connect what they already know with newly acquired information, thereby creating learning that is more relevant and easier to understand (Fernández & Espinoza, 2022). This makes the reading feel more relatable, relevant, and comprehensible.

The use of Jigsaw, as a representation of Cooperative Learning supports the implementation of meaningful learning because students do not merely memorize information from the text, rather they understand and relate it to the prior knowledge. When students are in an expert group discussing the same section of the text, they exchange understanding and begin connecting the information with personal experiences, prior learning, or even broader social contexts. This is in line with research by Barbosa *et al.,* (2020), which found that Jigsaw encourages students to relate the information they read to the knowledge and experiences they already have.

For example, when students read a text about an athlete, they may relate the information to their experiences of watching sports matches, recognizing famous athletes through the media, or understanding values such as perseverance and hard work. This process makes the text's content more contextual, relevant, and meaningful in students' real lives. This reflects the essence of meaningful learning, learning that is rooted in experience and not easily forgotten.

The activity of re-teaching parts of the text to home group members also reinforces meaningful learning. This is because each student has the responsibility to understand the given section and be able to convey it clearly to other group members. The majority of participants in Hasanah's (2023) study agreed that they felt a responsibility to share and explain information, both in the expert group and in the home group. During the re-teaching process, students process the information in their own words, reorganize it according to their logical flow, and respond to questions from peers. This process helps deepen meaning and makes the information more likely to be retained in long-term memory. Students do not simply recall information but genuinely understand and interpret it. In this way, students' reading skills can be enhanced.

Joyful Learning

One of the important principles of Deep Learning is creating a joyful learning atmosphere, where students feel happy, comfortable and enthusiastic about learning. Cooperative Learning provides a strong foundation for this, as it places social interaction and teamwork at the heart of the learning process. When students learn with their peers, the learning atmosphere becomes more lively. Student involvement in Cooperative Learning encourages the emergence of positive emotions because they learn in an atmosphere of togetherness (Pangantihon & Tantiado, 2024). A joyful learning environment encourages positive emotions, such as joy, confidence, and enthusiasm, which can enhance students' reading skills. When students are in a positive psychological state, they become more receptive to the material, can concentrate more easily, and apply reading strategies more effectively.

Jigsaw, as a representation of Cooperative Learning, provides a fun learning experience because students are actively involved and feel valued in the learning process. They no longer simply listen to the teacher or read the text individually, but take on the role of "experts" who bring important information to their peers. This role as a text "expert" increases students' sense of

responsibility and self-esteem, and builds their motivation to truly understand the texts they read. Abdillah *et al.,* (2023) noted that students feel happy and supported when learning through the Jigsaw method because they understand the text better in an engaging and participatory way. This role generates self-confidence and satisfaction, as students have something meaningful to share. When students feel valued, the learning atmosphere becomes more positive and enjoyable.

The social interactions that occur in expert and home groups also create more dynamic classroom environments. Students learn to listen to one another, share ideas, and solve problems together. This atmosphere not only fosters togetherness but also makes the learning process into an enjoyable experience. Nurbianta and Dahlia (2018) emphasized that the interactions built through Jigsaw increase students' social engagement, making them feel more comfortable and confident when reading and discussing in groups. When students learn in groups, they tend to show greater interest in discussion and feel more confident in the learning process. This is due to the enjoyable atmosphere, which makes learning activities more joyful. This sense of comfort, confidence, and enjoyment is essential to increasing students' intrinsic motivation, which ultimately strengthens their overall learning outcomes. This aligns with research by Barbosa *et al.,* (2020), which shows that Jigsaw creates a joyful learning experience because students feel enthusiastic and motivated when reading. They enjoy the process of discussion and collaboration. The classroom atmosphere also becomes more vibrant, as learning not only focuses on understanding the content of the text but also brings joy to the process itself.

In addition, learning activities using Jigsaw provide a refreshing variation from conventional learning. Students feel more enthusiastic and motivated when learning English through Jigsaw because it presents a new atmosphere that makes them to feel freer and more creative (Hoerunnisa & Suherdi, 2017). Activities such as group formation, interactive discussions, and quizzes keep students actively engaged and not bored. In this kind of learning atmosphere, students are more likely to experience a state of flow, a condition in which they are so immersed in learning activities that they forget about pressure or the fear of making mistakes. This is the essence of joyful learning, when learning becomes an enjoyable activity rather than a burden.

CONCLUSION

Based on the findings and discussion, Cooperative Learning can be used to implement Deep Learning in enhancing students' reading skills. In this article, the Jigsaw type is chosen to represent how Cooperative Learning encourages the implementation of Deep Learning. By dividing learning responsibilities into expert groups and home groups, students are required to actively understand specific information from the text, explain it in their own words, and contribute to the group learning process. This process aligns with the characteristics of mindful learning, which emphasizes full attention and cognitive awareness in the learning process. Furthermore, Jigsaw also fosters meaningful learning through elaborative activities, deep information processing, and connecting textual information with students' personal experiences or real-world contexts. Students not only retain information but also construct new knowledge structures that integrated with prior knowledge. Lastly, social involvement within groups, a sense of mutual need, the opportunity to contribute, and being appreciated by peers make the learning process more enjoyable, thus supporting joyful learning. These three principles show that Jigsaw, as a representation of Cooperative Learning, can use as a method for implementing the Deep Learning approach to enhance students' reading skills.

The implementation of Deep Learning through the Cooperative Learning method not only provides practical solutions for teachers in optimizing teaching reading, but also opens up opportunities for future research. The findings may serve as a foundation or inspiration for subsequent empirical studies. Future researchers may investigate how students' attitudes and learning outcomes change when they learn to read using a Deep Learning approach through Cooperative Learning. Additionally, teachers are encouraged to begin integrating the principles of Deep Learning into reading learning though the Cooperative Learning methods. It is important to note that Cooperative Learning is not merely about placing students in groups, it also requires a clear structure, defined roles, and specific objectives to ensure that the learning process is purposeful and does not devolve into casual conversation.

This article has certain limitations, as it focuses solely on Jigsaw as a representation of the Cooperative Learning. It does not explore other types such as Cooperative Integrated Reading and Composition (CIRC), Numbered Heads Together (NHT), or Student Teams–Achievement

Divisions (STAD), which may also promote Deep Learning in different ways. Furthermore, this article does not include empirical classroom data. The insights provided are based on theoretical foundations and conceptual illustrations, which may not fully capture the complex dynamics of real-world classroom settings. Therefore, further empirical research is needed to examine the implementation of Deep Learning through Cooperative Learning in a more concrete and comprehensive manner.

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