vailable at http://ejournal.stkipjb.ac.id/index.php/jeel
P-ISSN 2356-5446
E-ISSN 2598-3059

Volume 10
No. 2, 2024
Page: 115-130

Article History:
Submitted:
23-01-2024
Accepted:
02-02-2024
Published:
09-02-2024

CULTIVATING REFLECTIVE THINKING SKILLS THROUGH GAMIFICATION IN STUDENT TEAMS ACHIEVEMENT DIVISION (STAD)

Ismaatul Yuniasti[1], Yunita Puspitasari[2], Dewi Indah Kusuma[3]
[1,2,3]Universitas PGRI Jombang, Indonesia
ismaatulyuniasti@gmail.com[1] , yunitapuspitasari20@gmail.com[2] ,
indahkdewi310@gmail.com[3]

URL: https://ejournal.stkipjb.ac.id/index.php/jeel/article/view/3499
DOI: https://doi.org/10.32682/jeell.v10i2.3499

Abstract

Reflective thinking enables students to become more self-aware, self-directed, and self-regulated learners, which are critical abilities for attaining success in academic and professional contexts. Students have the chance to collaborate to solve problems and apply the knowledge they learn through Student Team Achievement Division (STAD) learning models. However, STAD has inevitably drawn much criticism, such as that interdependence may have adverse effects if participants are unable to establish any relationship between participation and achievement. This research integrating gamification in STAD assumed that the manipulation put significant differences in the students' reflective thinking skills. The reflective thinking ability of 15 EFL students from Islamic Junior High School in Jombang was assessed through pre-test and post-test questionnaires designed for a single non-randomized one-group. To find out the statistically significant difference between the pre- and post-conditions, the Wilcoxon signed-rank test was used. The results showed Sig. value was 0.003, which indicated that there was a significant difference in the students' reflective thinking skills before and after the implementation of STAD. Furthermore, the mean rank value indicated an increase in the score, rising from 39.20 to 54.87. Hence, integrating gamification in STAD is suggested as an alteration strategy to enhance the quality of EFL classroom practices.

Keyword: *reflective thinking skills, Student Teams Achievement Division (STAD), gamification, Kahoot, EFL Students*

Abstrak

Berpikir reflektif memungkinkan siswa menjadi pembelajar yang lebih sadar diri, dapat mengarahkan diri sendiri, dan mengatur diri sendiri, yang merupakan kemampuan penting untuk mencapai kesuksesan dalam konteks akademik dan profesional. Siswa mempunyai kesempatan berkolaborasi untuk memecahkan masalah dan menerapkan ilmu yang dipelajarinya melalui model pembelajaran Student Team Achievement Division (STAD). Namun, STAD pasti menuai banyak kritik, seperti saling ketergantungan yang mungkin mempunyai dampak buruk jika peserta tidak dapat membangun hubungan antara partisipasi dan prestasi. Penelitian yang mengintegrasikan gamifikasi dalam STAD ini mengasumsikan bahwa manipulasi memberikan perbedaan yang signifikan terhadap kemampuan berpikir reflektif siswa. Kemampuan berpikir reflektif 15 siswa EFL dari SMP Islam di Jombang dinilai melalui kuesioner pre-test dan post-test yang dirancang untuk satu kelompok non-acak. Untuk mengetahui perbedaan yang signifikan secara statistik antara kondisi sebelum dan sesudah, digunakan uji peringkat bertanda Wilcoxon. Hasil penelitian menunjukkan Sig. nilai sebesar 0,003 yang menunjukkan bahwa terdapat perbedaan yang signifikan kemampuan berpikir reflektif siswa sebelum dan sesudah penerapan STAD. Selanjutnya nilai mean rank menunjukkan peningkatan skor yaitu dari 39,20 menjadi 54,87. Oleh karena itu, mengintegrasikan gamifikasi dalam STAD disarankan sebagai strategi perubahan untuk meningkatkan kualitas praktik kelas EFL.

Kata kunci: *keterampilan berpikir reflektif, Student Teams Achievement Division (STAD), gamification, Kahoot, EFL Students*

Introduction

The success of students' language skills is closely related to the teaching-learning strategies used. The ongoing search for and application of useful methods to improve meaningful learning experiences continues. These strategies go beyond traditional methods by exploring new areas to uncover vast knowledge to meet the various needs of students. It is critical to remember that effective learning is dependent not only on language acquisition but also on the collaboration of pedagogical approaches and a suitable learning environment. The learning environment's quality is inextricably linked to the learning process's quality. These environments promote cognitive engagement and provide

students with the scaffolding they need to solve complex linguistic problems. The path to language proficiency is essentially one of constant discovery. It is distinguished by a consistent commitment to refining and changing instructional methods to provide each student with a broad and successful learning experience.

The learning process must be further improved to the progress of an increasingly advanced era. The era of Industrial Revolution 4.0 requires teachers to keep making changes for the betterment of their professional practice. Teachers, as agents of change in education, must play a role in selecting specific learning strategies that may be tailored to the needs of students' learning and interests, allowing learning to be more meaningful for students than just remembering content or theories. Teachers' lessons must be able to provide pupils with real-world experiences. Teachers are required to assist students in cultivating self-reliance and the ability to study throughout their lives. Furthermore, students must be able to reflect at the end of each learning session to determine what insights were gained. As a result, having reflective thinking skills is vital for enhancing their learning capacity.

Reflective thinking entails the process of deliberating about and considering what has occurred. During the learning process, students who actively engage in reflective thinking examine their present knowledge and what they need to know, as well as ideas for addressing gaps in their knowledge. Besides, students find it easier to comprehend learning when it is intertwined with their immediate environment, as they directly engage with and experience the subject matter. Successful learning must be linked to the broader context of learning, which may be achieved by exhibiting reflective thinking skills. According to Santrock (2010), students with reflective thinking skills are more likely to be able to recall structured information, read with comprehension and interpretation, solve problems, and make decisions. They are probably going to think more deeply about their responses and give more accurate answers. Students who receive support in developing their reflective thinking are better able to solve problems, engage in conceptual thinking, draw connections between new information, and apply strategies created especially to tackle novel challenges.

Reflective thinking abilities may be cultivated through an appropriate teaching strategy that involves the process of aligning current knowledge with new knowledge. The reflective learning process can be carried out with steps, encompassing of the introduction of context, presentation of experience,

reflection, action, and evaluation so that students can actively reflect on their learning experiences to explore in depth the material being taught. Asshabi *et al.,* (2022) stated that reflective thinking skills consist of six aspects of skills. Among the six components of reflective thinking skills is cognitive skills, a class of mental learning exercises that include questioning the instructional procedures and conceptualizing learning experiences through critical thinking. A deeper understanding and improvement of the learning process are fostered by addressing challenges in the evaluation of the English language learning experience through evaluative skills. Metacognitive skills are concerned with enhancing subsequent learning experiences in order to strengthen learned values and beliefs. Group discussions, teamwork, and active engagement in educational activities—including probing questions to make sure you understand the material completely—are examples of how interactional skills are demonstrated. Reflective journaling is the practice of students recording their experiences both inside and outside of the classroom in a notebook or journal. In addition, when students think back on their experiences, make connections between new information and past knowledge to improve learning, notice differences, and periodically consult earlier notes to improve their learning process, they are using their retrospective skills.

The six aspects of reflective thinking skills are assumed to contribute to student learning in schools. However, English Language Learning is commonly presented in three phases i.e., Presentation Practice and Production (PPP). It is a logical, teacher-centered method that focuses primarily on accuracy through drilling practice (Pratista, 2023). This particular learning method has been assumed to fail in optimizing students' capacity for reflective thinking. One of the good learning models to enhance students' reflective thinking skills is cooperative learning. According to Supartayasa (2014), cooperative learning model is a very important method to develop students' constructive thinking ability, and among various models in cooperative learning, STAD is one of the most prominent. STAD, a teaching method that consists of five main components that influence the level of students' reflective thinking ability. These key components include initial grouping of four or five students in each group. After that, the teacher organizes a class presentation, providing collaborative learning topics for the teams to work on collectively. They must collaborate with their group to make sure that everyone has understood the material in teamwork. All students are encouraged to cooperate and support each other through various

learning resources, such as digital platforms, mobile learning apps, books, and maps. These tools aim to foster creativity among students and improve group discussions (Teemuangsai & Tiantong, 2013). Afterward, they will be quizzed individually on the topics that they have studied from the previous task with their teams. This is an evaluation that is done individually without collaboration with team members. Test scores and baseline scores are used to calculate individual progress scores. Team recognition, which rewards the team's work during the learning process, comes last. The team will receive a certificate or other reward if, after individual and group scores are calculated, the average score of the group meets predetermined criteria. By the end of the assignment, teams can receive rewards if they meet certain criteria.

A large body of research has highlighted STAD's potential. For instance, Serjali & Halim (2020) conducted a study on the influence of STAD on students' learning outcomes, using a quasi-experimental quantitative methodology, and found that STAD affected students' achievement. In addition, Aldila *et al.,* (2018) with the same research design, investigated the students' cognitive attitudes in secondary school after being treated with STAD. According to the study, there was a significant distinction in cognition and attitude before and after the treatment. Munawar (2019) also found that STAD can increase students' motivation and learning outcomes. However, STAD has inevitably drawn much criticism, such as that interdependence may have adverse effects. According to Johnson and Johnson (2009), interdependence may have detrimental consequences if individuals are unable to see a relationship between involvement and outcome. The Cooperative Learning approach advocates teachers to divide students into groups depending on criteria like second language competency. Individual differences may cause discomfort for students who are still struggling with the second language, limiting their collaboration with more skilled students (Jacob *et al.,* 1996). Furthermore, they suggested that STAD will be ineffective if participants feel alienated and disregarded during the task. Another drawback is the fact that if competent groups surpass their peers, the attention paid to the better groups might deter other groups, who risk becoming sidelined (Johnson & Johnson, 1979). Further, Jolliffe (2007) also highlights the possible downsides of STAD for teachers, such as its evolutionary nature, which may confound practitioners. Teachers sometimes lack a clear knowledge of the process. They may also face criticism from more proficient students who are hampered by classmates, whilst less capable students are

sometimes discriminated against unfairly due to their poor self-esteem and accomplishment. The difficulty is exacerbated when both of these groups are requested to share ideas, resulting in subjective peer assessments and escalating hostility. Without effective peer review, learning within a STAD group stagnates (Lew *et al.,* 1986). STAD may turn futile when the lesson is not precisely tailored and the teacher is not determined resulting in failures or superficial achievement (McCafferty *et al.,* 2006). Therefore, a manipulation should be made to minimize the drawbacks of the cooperative model.

Kahoot! has been demonstrated to be an excellent gamification tool for improving students' reflective thinking abilities. Kahoot is a game-based student response platform that has been reported to increase student engagement, improve the dynamics of the classroom, and enhance students' whole learning experiences. Kahoot is intended to assist children gain new abilities such as literacy, numeracy, social-emotional, and cognitive skills, and to provide them with an opportunity to implement their acquired knowledge in a variety of circumstances. In addition, Kahoot! can be applied as a gamified formative assessment instrument to enhance students' learning. Kahoot! can also be used to strengthen students' critical thinking skills hrough enabling them to create their own Kahoot!s. Licorish *et al.* (2018) conducted a study on students enrolled in a course on Information Systems Strategy and Governance at a research-intensive teaching university in New Zealand. The study found that encouraging classroom dynamics, motivation, and an all-around better learning experience are just a few of the ways that Kahoot! enhances student learning in the classroom. It may be possible to improve teaching and learning outside of the traditional classroom setting by incorporating educational games into the classroom and reducing distractions. Improvements in student learning can also be attributed to the creation and incorporation of pertinent content in Kahoot!, prompt feedback to learners, and the application of game-playing techniques (gamification). Kahoot and STAD are two excellent alternative endeavors for encouraging students' reflective thinking. Kahoot can be used to increase student engagement, improve classroom dynamics, and enhance the whole learning experience, whereas STAD can be used to promote reflective thinking skills in students by assisting them with reflective activities through analyzing and evaluating their learning experiences. Integrating Kahoot! as a gamification platform in STAD, the present research probes if there are any differences in

students' reflective thinking by integrating Kahoot! with STAD. The following is the research question:

Is there a significant difference in the students' reflective thinking skills before and after they were taught using STAD integrating with Kahoot!?

Research Method

Design

In this study, a one-group pre-test post-test design was utilized along with a pre-experimental quantitative method. This design involved administering a pre-questionnaire of reflective thinking skills to the respondent before and after applying the experimental treatment, the post-questionnaire was administered to the respondent (Creswell, 2012).

Participants

The participants of this present research were eight grades of Islamic private junior high school. They were selected using accidental sampling. It is a sampling technique that uses coincidence based on the availability of respondents who happen to be found suitable as data sources (Sugiyono, 2016: 124). Respondents of the present research involved 15 students, 11 girls (73 %) and 4 boys (27 %) aged approximately 13-14 years.

Instrument

Aiming to answer the research question, two questionnaires were used to obtain students' skills of reflective thinking. The preliminary questionnaire was administered before the treatment was given, and the post-questionnaire on skills for reflective thinking was given after the treatment was conducted. Both questionnaires major six reflective thinking skills adapted from Asshabi *et al.* (2022). They are cognitive skills, evaluative skills, metacognitive skills, interactional skills, reflective journaling skills, and retrospective skills.

Table 1. Data Description and Measurement

No.	Variable	Data	Source	Instrument
1.	Independent Variable: Student Team Achievement Divisions (STAD)	-	-	-
2.	Students' English Learning Reflective thinking skills	Reflective thinking skills score	Students of Islamic private junior	Questionnaire

high school

The researcher adapted the statements proposed by Asshabi *et al.* (2022) to encompass the six aspects of reflective thinking skills. The adaptation made was in terms of translating and omitting several items that were not valid. The researcher found that fourteen valid item numbers of the preliminary questionnaire in reflective thinking are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 19, and 22. The post-questionnaire determined that the sixteen item numbers were valid in reflective thinking, the numbers are 1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, and 23. The result of the SPSS programs reveals that the Cronbach Alpha score preliminary questionnaire of reflective thinking skills score is 0.935 and the questionnaire of reflective thinking skills score is 0.967. Thus, it can be determined that both of the instruments are reliable.

Procedures of the Experiment

The experiment was done with the researcher performing the manipulated strategy, i.e., STAD integrating with Kahoot! There were four meetings for the experiment. In the first and second meetings, the strategy was conducted to teach language features of recount text. The strategy was used in the third and fourth meetings to teach the social function and generic structure of recount text. The teaching procedure of the strategy conveyed class presentation, teamwork, quiz, and team recognition. During the class presentation, the teacher guided the students in using reflective questions and encouraged them to ask questions about anything that was not quite clear. The teamwork was executed by the students doing the task in groups. These tasks were not only about comprehending recount text but some reflective questions must be completed as quickly as possible (in a short time). Once completed, student groups gave the results of their tasks to other groups and presented the results in front of the class to be assessed by other groups or peers. The fourth STAD step generates teachers' progress scores based on the baseline and test scores. The base score is the student's final score combined with retrospective reflective thinking skills. Team recognition of the teacher's learning process provides three additional points: teamwork score, individual score, and retrospective reflection score. Figure 1 shows how to teach. After the lesson ends, the teacher asks students to look at their pre-written notebooks and summarize the topics they have learned. The teacher also encouraged students to continue the lesson at the next meeting. The lesson was closed with a greeting.

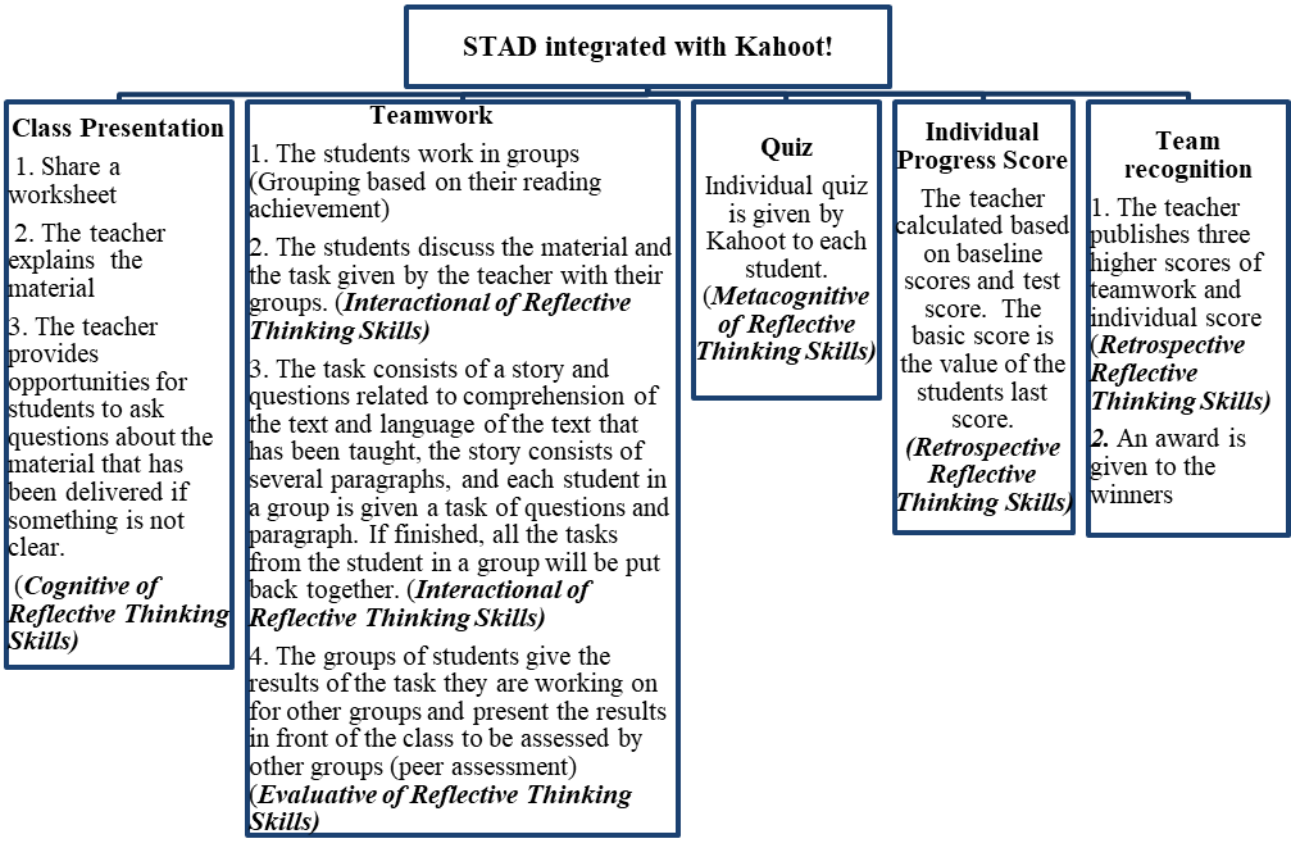

Figure 1. The Teaching Procedure

Data Analysis

Wilcoxon signed ranks test by SPSS was the statistical test used in the data analysis of this study, because the normality assumptions was not met. Additionally, a Likert scale instrument was used to take the characteristics of this study, so that it was assumed that the data was the ordinal type and the small sample size of less than thirty respondents. These reasons also became the basis for the selection of the Wilcoxon signed ranks test statistical analysis.

Results and Discussion

Results

To determine the presence of a significant difference before and after using the treatment with the Student Team Achievement Division (STAD) learning model, the Wilcoxon signed ranks test was utilized. The result is presented below:

Table 2. Wilcoxon Signed Ranks Test

	After Treatment – Before Treatment
Z	-2.983[a]
Asymp. Sig. (2-tailed)	**.003**

Basis of decision result:

1. If the value of Sig. (2-tailed) lower than Alpha research (< 0.05), then Ho is rejected, then it can be concluded that there is a significant difference between reflective thinking skills before and after the treatment is given.
2. If the value of Sig. (2-tailed) higher than Alpha research (> 0.05), then Ho cannot be rejected, then it can be concluded that there is no significant difference between reflective thinking skills before and after the treatment is given.

Consulting to Table 2, the observed value of the data analysis on the Wilcoxon signed ranks test, showed that the obtained Asmp Sig. value was 0.003. This value was below the significance level, i.e., 0.05. The hypothesis testing revealed that the null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted. In other words, it can be concluded that there was a statistically significant difference in the students' reflective thinking skills before and after the use of STAD integrated with Kahoot!

Table 3. Summary Results of Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Before Treatment	15	39.20	9.017	21	53
After Treatment	15	54.87	9.471	34	64

Referring to Table 3, the table of Summary Results of Descriptive Statistics above showed the total of respondents (N) and between two variables, before and after treatment with STAD (Student Team Achievement Division), it can be seen that there is a significant difference in the mean rank score of students' reflective thinking skills. The mean rank score has increased by 15.67 from 39.20 before treatment to 54.87 after treatment.

Discussion

The STAD particularly integrated with Kahoot! was found effective for reflective thinking skills because students have the opportunity to collaborate with their friends to solve problems assigned by the teacher. This is reinforced by Slavin (2005), who emphasized that the primary goal of STAD is to inspire students to collaborate and assist each other in mastering the content presented by the teacher. This implies that students can acquire knowledge not only from the teacher but also from their peers within the group. According to Sutinah (2017), the STAD cooperative learning model places a strong emphasis on student engagement and communication. As a result, students are more motivated and are better able to understand the material. In the end, this leads to the best possible academic performance. This viewpoint is consistent with the findings of Nikmah (2019), who highlighted the collaborative aspect of the STAD model, which promotes mutual encouragement by allowing students to express their thoughts and experiences. There is no denying the benefits of group collaboration because it introduces a fresh perspective to the learning process and enables students to meaningfully interact with one another. Furthermore, The Kahoot-assisted Student Team Achievement Division (STAD) learning paradigm encourages students to take an active role in learning. Kahoot-assisted quizzes that are incorporated make students excited to follow learning in the form of games, since Kahoot as an entire process cooperates with all students in learning, ensuring that all students are actively learning (Izzah, 2023). This cooperative setting is very beneficial to lower-ability students because it gives them the chance to learn from and gain insight from peers who possess higher skill levels. Cooperative learning has positive impacts on academic achievement and social skill development is further reinforced by Karacop's (2017) perspective. As mentioned by Andrian (2020), the STAD gamification model is a great option as students are encouraged to work together actively. This is because this model promotes free discussion and encourages students to collaborate. This STAD model of cooperative learning uses collaborative dynamics to enhance overall student development. This makes it an effective and suitable approach for educational environments.

The active search for learning resources with peers is one of the features of the STAD cooperative model that is in line with the ideas of team learning. As emphasized by Primandari (2019) and corroborated by Susanti (2017), the STAD model satisfies the requirements of student-centered thematic learning. Interactive cooperative learning facilitates dynamic student interactions.

Students' learning activities improve as a result. It is well known that when students actively engage in group activities, they learn more effectively. Incorporating a reward system into the STAD model not only enhances learning results but also increases students' sense of personal accountability. Purwanto in Ernata (2017: 784) stated that by praising and encouraging children's efforts, rewards have an impact on behavior and raise happiness levels in kids. According to Nugroho in Rosyid (2018: 8), who highlights the motivational aspect of rewards, these kinds of incentives push individuals to actively better themselves, which enhances performance and learning objectives. Therefore, adding a reward system to the STAD cooperative learning model is a beneficial way to boost students' motivation and positively influence their academic performance.

Many studies have shown that the STAD method has an impact on how students learn. For instance, when the STAD (Student Team Achievement Division) model was used, Munawar's (2019) study discovered that students' learning outcomes improved and they were more motivated to learn. The findings of Yunita *et al.*'s (2018) study, which demonstrate that STAD cooperative learning enhances math learning outcomes, corroborate these conclusions. The STAD model's potential to enhance science learning outcomes was the subject of study by Dewi *et al.* (2020). In comparison to the group of students who were not taught using this method, the findings of this study demonstrate that the group of science students who were taught using the STAD cooperative model produced better learning outcomes. These findings overall suggest that the STAD model works across a range of disciplines and can positively change students' learning experiences and outcomes. Whereas, this study proves that its impact extends beyond just influencing students' academic achievements, but also involves the enhancement of reflective thinking skills. Despite distinctions in the field between this study and previous research, they both employed the STAD technique, underscoring its effectiveness.

As described by Stevens and Cooper (2009), reflection is a transformative process that allows people to provide in-depth commentary on their experiences and restructure their lives. Dewey's (1933) perspective on reflective thinking, as cited in Rodge (2002), it means examining beliefs or types of imagined knowledge actively, seriously, and carefully. Not only are the grounds that support this information examined but also the conclusions drawn from this information are examined in this inquiry. Reflective thinking is essential to foster a sense of responsibility for decisions made. In addition, according to McCollum

(2002), reflective thinking is an ever-changing cognitive ability that goes beyond the immediate learning environment. This ability allows people to reflect on events and phenomena that occur during and after education, which helps them make subtle changes in this frame of mind. With its many facets, the nature of reflective thinking makes it the basis for building critical thinking skills and a proactive, self-directed approach to learning.

Critical thinkers who are always looking for new ways to learn are known as reflective thinkers. Reflective thinking in this context is a deep cognitive procedure that calls for an individual to consider all of their acts and behaviours to rearrange a situation that is deemed deficient or imperfect. Those in this situation feel more accountable for their actions. According to Genç (2016), reflective thinking helps students to think critically during class, which helps them to connect what they already know to what they are learning. Consequently, it enables the experience to be applied in real life. In this case, reflective thinking develops students' conceptual mother tongue and improves their thought processes. Reflective thinking is always the driving force behind individual activities. Individuals with experience in a particular field think back on their experiences and can make seemingly awful situations better. According to this viewpoint, people can solve their problems by continuing to think reflectively throughout a cycle of processes. Reflective thinkers can test out their experiences on various problems during this process.

The present research has revealed that the use of STAD integrated with Kahoot! put effect on the students' reflective thinking skills. The present study also in line with Erdogan's (2019) reporting that cooperative learning incorporated with reflective thinking exercises promoted seventh-grade students' critical thinking skills. A 5-week study of 66 students in the tenth grade discovered that cooperative learning is considerably and potentially more effective on their dispositions and reflective thinking skills than conventional strategies (Kuuk & Arslan, 2020). Furthermore, the present study supported a study by Kim *et al.* (2013) explored cooperative learning and how the instructional strategy, featuring reflection activities such as sharing, talks, and discussions regarding prompt and ongoing learning content in the virtual realm of SNS, influences students' learning. Adapting Asshabi *et al.*, (2022), reflective thinking skills were found enhanced in six aspects: interactional of reflective thinking skills, retrospective reflective thinking skills, evaluative reflective thinking skills, cognitive reflective thinking skills, metacognitive reflective

thinking skills, and journal reflective thinking skills. The acquisition of reflective thinking skills is vital for students, because they allow them to rethink how they solve problems and how various problem-solving strategies can help them achieve their goals. In the teaching learning in which teaching strategy was manipulated with gamification, this is evident in the enhancement observed in the mean score both prior to and following the treatment. Accordingly, it revealed that the application of the STAD integrated with Kahoot! had a positive impact on the reflective thinking of students, particularly in the eighth grade of Islamic private junior high school.

Conclusion

The findings showed there is significant distinction before and after the treatment. The findings lead to the conclusion that the researcher discovered that incorporating gamification with cooperative learning, STAD, had an impact on the reflective thinking skills of students. This is a noteworthy advancement in academic discourse. Teachers need to consider that using the STAD strategy only might fail to help the students enhance their reflective thinking skills. Teachers may help students prepare for lifetime learning by utilizing the STAD combined with Kahoot! In this context, the STAD strategy is useful because it teaches students more about how to apply their knowledge, instils a foundation for continuous learning, and helps them adapt to their educational environment. The national education system enables teachers to view the STAD strategy as a workable and successful option despite these recommendations. The STAD strategy is helpful in this situation because it gives students an enhanced comprehension of the application of their acquired knowledge, establishes a foundation for lifelong learning, and aids in their environment adaptation.

References

Aldila, M., Tapilouw, F. S., Sanjaya, Y. (2018). Student's cognitive and attitude of secondary school in learning global warming using student team achievement division (STAD) based on gender. Journal of Science Learning 1(3):104. DOI:10.17509/jsl.v1i3.11793

Andrian, D., Wahyuni, A., Ramadhan, S., & Novilanti, F. R. E. (2020). Pengaruh pembelajaran kooperatif tipe STAD terhadap peningkatan hasil belajar, sikap sosial, dan motivasi belajar. INOMATIKA, 2(1), 65-75.

Asshabi et al., (2022). Developing reflective language learning model: structural equation modeling. Department of Foreign Languages, Faculty of Literature, Humanities and Social Sciences; Science and Research Branch, Islamic Azad University, Tehran, Iran.

Creswell, J. W. (2012). Educational research: planning, conducting, and evaluating quantitative and qualitative Research (4th Ed). Boston: Pearson Education, Inc.

Dewey, J. (1933). How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process. Boston: D.C. Heath & Co Publishers.

Dewi, L.S.M., Wibawa, I.M.C., & Agustiana, I.G.A.T (2020). Improving science learning outcomes through student team achievement division (STAD). Universitas Pendidikan Ganesa.

Erdogan, F. (2019). Effect of cooperative learning supported by reflective thinking activities on students' critical thinking skills. Eurasian Journal of Educational Research, 19(80), 89-112. https://eric.ed.gov/?id=EJ1211625

Ernata, Y. (2017). Analisis motivasi belajar siswa melalui pemberian reward dan punishment di SDN Ngaringan 05 kec. gandusari kab. blitar. Jurnal Pemikiran dan Pengembangan Sekolah Dasar (JP2SD), 5(2), 781-790.

Genç, M. A. (2016). Evaluation of gifted and talented students' reflective thinking in a visual arts course. Universal Journal of Educational Research, 4(9), 2039- 2048.

Ghaith, G. (2004) Correlates of the Implementation of the STAD Cooperative Learning Method in the English as a Foreign Language Classroom, International Journal of Bilingual Education and Bilingualism, 7:4, 279-294, DOI: 10.1080/13670050408667813

Izzah, A.N. (2023). Penerapan Model Pembelajaran Kooperatif Student Team Achievement Division (STAD) Berbantuan Kahoot untuk Meningkatkan Keaktifan Belajar Siswa Kelas XI SMA Al Islam 1 Surakarta. Journal on Education,06, (01), pp. 8355-8365. E-ISSN: 2654-5497, P-ISSN: 2655-1365

Johnson, D. W., & Johnson, R. T. (2009). An Educational Psychology Success Story: Social Interdependence Theory and Cooperative Learning. Educational Researcher, 38, 365-379. https://doi.org/10.3102/0013189X09339057

Johnson, D. W., & Johnson, R. T. (2014). Cooperative Learning in the 21st Century. Anales de Psicología, 30, (3)pp. 841-851. http://dx.doi.org/10.6018/analesps.30.3.201241

Jolliffe, W. (2007). Cooperative Learning in the Classroom: Putting It into Practice. London: Paul Chapman Publishing.

Karacop, A. (2017). The effect of using jigsaw method based on cooperative learning model in the undergraduate science laboratory practices. Universal Journal of Educational Research, Vol. 5, No. 3 (him. 420-434)

Licorish, S.A., Owen, H.E., Daniel, B. et al. (2018). Students' perception of Kahoot!'s influence on teaching and learning. Research and Practice in Technology Enhanced Learning, 13, (9). https://doi.org/10.1186/s41039-018-0078-8

Marsaulina, A. T. (2018). Meningkatkan kemampuan berpikir reflektif dalam pembelajaran ips melalui penerapan pendekatan problem-based learning pada siswa kelas V SD Negeri Bendungan Hilir 01 Pagi Jakarta Pusat (Penelitian Tindakan Kelas). Sarjana Thesis, Universitas Negeri Jakarta.

McCollum, S. (2002). Reflection: a key for effective teaching. Teaching Elementary Physical Education. 6- 7.

McCafferty, S. G., Jacobs, G. M., & Iddings, A. C. D. S. (2006). Cooperative Learning and Second Language Teaching. Cambridge: Cambridge University Press.

Munawar, M. (2019). The application of the stad-cooperative learning model: efforts to increase motivation and learning outcomes of students in class 5 SD N 07 Ledok Salatiga in Mathematics subject in Folding Symmetry and Rotating Symmetry topics.

Nikmah, E. H., Fatchan, A., & Wirahayu, Y. A. (2016). Model Pembelajaran Student Teams Achievement Divisions (STAD), Keaktifan dan Hasil Belajar Siswa. Jurnal Pendidikan Geografi, 3(3), 1-17.

Pratista, G.A. (2023). Presentation Practice Production Vs Task-Based Language Teaching: A Comparison Of Two Teaching Templates. Jurnal Edupedia. 7 (1), 1-13. https://doi.org/10.24269/ed.v7i1.1726

Primandari, P. A., Sulasmono, B. S., & Setyaningtyas, E. W. (2019). "Perbedaan Pengaruh Model Kooperatif Tipe TGT Dan STAD dengan Multimedia Interaktif Ceria Terhadap Sikap Sosial

Dan Hasil Belajar Kognitif Pada Pembelajaran Tematik Kelas 5 SD". Jurnal Basicedu, 3(1), 83-91.

Rodgers, C. (2002). Defining reflection: another look at John Dewey and reflective thinking. Teachers College Record, 104(4), 842–866.

Rosyid, M. Z. (2018). Reward & punishment dalam pendidikan. Malang: Literasi Nusantara.

Santrock, J. W. (2010). Psikologi pendidikan (3rd ed.). Kencana Prenada Media Group.

Serjali, N. A., & Halim, H. A. (2020). The effectiveness of student team achievement divisions (STAD) model towards students' achievement in the principles of accounting subject. International Business Education Journal, 1-14. https://doi.org/10.37134/ibej.vol13.sp.1.2020

Slavin, R. E. (2015). Cooperative learning. Bandung: Penerbit Nusa Media.

Stevens, D. D. & Cooper, J. E. (2009). Journal keeping: How to use reflective writing for effective learning, teaching, professional insight, and positive change. Virginia: Stylus Publishing, LLC.

Sugiyono. (2016). Metode penelitian kuantitatif, kualitatif dan r&d. Bandung: PT Alfabeta.

Supartayasa, I. G. M. 2014. Implementasi model pembelajaran kooperatif tipe student teams achievement division (STAD) dalam meningkatkan keterampilan proses dan berpikir kritis tentang ipa pada siswa kelas VI SDN 01 Kalukubula. Catatan Sains Dan Teknologi Tadulako, 3, 91–99. http://ejournal.radenintan.ac.id/index.php/tadris/article/download/2535/pdf

Susanti, Y., Wahjoedi, W., & Utaya, S. (2017). Aktivitas Belajar Tematik Siswa Kelas V Sd Melalui Model Pembelajaran Kooperatif Tipe STAD. Jurnal Pendidikan Humaniora/Sains.

Sutinah, S., & Degeng, N. S. (2017). Model Pembelajaran Kooperatif Tipe Students Team Achievment Devision (STAD). In Prosiding Seminar Nasional Mahasiswa Kerjasama Direktorat Jenderal Guru dan Tenaga Kependidikan Kemendikbud 2016.

Teemuangsai, S. & Tiantong, M. (2013). Student team achievement divisions (STAD) technique through Moodle to enhance learning achievement. International Education Studies, 6(4), 85–92.

Yunita, I, Juneau J.L., Stefanus C. Relmasira, S.C. (2018). Increasing learning outcomes using cooperative learning type student team achievement division (STAD) methodology with fifth grade second semester students at SD Negeri Sumogawe 1 Kec. Getasan, Kab.Semarang 2017/2018.