



COOPERATIVE LEARNING: INDEX CARD MATCH METHOD IN INCREASING STUDENTS' ENGLISH LEARNING OUTCOME

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Abstract

English language achievement encompasses proficiency in the English language, reflecting a person's ability to effectively comprehend, communicate, read, and write in English. The Index Card Method is a cooperative learning strategy that promotes active participation and collaboration in the classroom, encourages students to engage in active learning and develop their creativity. The aims of this research was to find out whether or not Index Card Match Method of cooperative learning can significantly increase students' English achievement to the seventh grade students of SMP Negeri 6 Wonomulyo. The method used in this research is quantitative research using pre-experimental method with one group pre-test and post-test design. The procedure of collecting data involved administrating pre-test before treatment and post-test after treatment. The population of this research was seventh grade students of SMP Negeri 6 Wonomulyo academic year 2023/2024. The sample was taken by using cluster sample technique, where the researcher chose one class consisted 18 students. The result of this research showed that the mean score of students' English achievement before taught by Index Card Match method was 38.89, while after doing the treatment, the mean score was 64.00. To find out the difference between pre-test and post-test, the researcher applied t-test. The value of t-test was 14.726 greater than the value of t-table 2.110 at the level of significance 0.05 and the degree of freedom was 17. The conclusion of this research is the Index Card Match method of cooperative learning can significantly increase the students' English achievement.

Keywords: Index Card Match; cooperative learning; English achievement; learning outcome

Abstrak

Prestasi bahasa Inggris mencakup kemahiran berbahasa Inggris, yang mencerminkan kemampuan seseorang untuk memahami, berkomunikasi, membaca, dan menulis dalam bahasa Inggris secara efektif. Metode Index Card Match adalah strategi pembelajaran kooperatif yang mendorong partisipasi aktif dan kolaborasi di kelas, mendorong siswa untuk terlibat dalam pembelajaran aktif dan mengembangkan kreativitas mereka. Tujuan dari penelitian ini adalah untuk mengetahui apakah pembelajaran kooperatif Metode Index Card Match dapat meningkatkan prestasi bahasa Inggris siswa secara signifikan pada siswa kelas tujuh SMP Negeri 6 Wonomulyo. Metode yang digunakan dalam penelitian ini adalah penelitian kuantitatif dengan menggunakan metode pre-eksperimental dengan desain satu kelompok tes awal dan tes akhir. Prosedur pengumpulan data meliputi pemberian tes awal sebelum perlakuan dan tes akhir setelah perlakuan. Populasi penelitian ini adalah siswa kelas VII SMP Negeri 6 Wonomulyo tahun pelajaran 2023/2024. Pengambilan sampel dilakukan dengan menggunakan teknik cluster sample, dimana peneliti memilih satu kelas yang berjumlah 18 siswa. Hasil dari penelitian ini menunjukkan bahwa nilai rata-rata pencapaian bahasa Inggris siswa sebelum diajar dengan metode Index Card Match adalah 38,89, sedangkan setelah melakukan perlakuan, nilai rata-ratanya adalah 64,00. Untuk mengetahui perbedaan antara tes awal dan tes akhirt, peneliti menggunakan uji-t. Nilai uji-t sebesar 14,726 lebih besar dari nilai t-tabel 2,110 pada level signifikansi



0,05 dan derajat kebebasan 17. Kesimpulan penelitian ini adalah metode pembelajaran kooperatif metode Index Card Match dapat meningkatkan prestasi belajar bahasa Inggris siswa secara signifikan. **Kata Kunci:** Index Card Match; pembelajaran kooperatif; prestasi bahasa Inggris; hasil belajar

1. Introduction

Recognizing the importance of English, our government includes it in the curriculum as a required subject for students (Dwaik et al., 2015). It is taught at all levels, from junior high to university, and even in elementary school. However, the majority of Indonesian students regard English as a difficult subject (Gestanti et al., 2019). These phenomena cause some students lose their interest in learning English, which leads to a lack of English achievement. Lack of student interest and motivation in learning is one of the factors causing the low learning outcome of student learning outcomes in English subjects (Meşe et al., 2019). Besides that, the learning methods used by teachers also make students feel bored and uninteresting, making students less enthusiastic to participate in the English learning process (Kruk & Zawodniak, 2020). Improving educational quality cannot be separated from improving learning quality. Teachers are one of the deciding factors in the development of quality learning. Teachers are required to use a variety of learning methods in their efforts to create quality learning (Hammond & Hyle, 2017). The use of learning methods in delivering learning material can create a learning environment that is conducive and enjoyable, so that students are interested in following the learning process (Dörnyei & Muir, 2019).

Choosing the right method may facilitate a good learning situation more enjoyable and support a smooth learning process, resulting in more motivated students (Puspitarini & Hanif, 2019). Several factors must be considered when selecting learning methods, including the material presented, its objectives, available time, the number of students, and other aspects of the learning process (Alqahani & Rajkhan, 2020). Teachers must master various methods of learning so that they do not only use the lecture method, because the lecture method is still very dominant and many students memorize the material given, causing students to become bored or uninterested in the lesson. One of learning method that can be applied in the classroom to foster student activity and participation in learning is the cooperative learning method (Gillies, 2016).

Cooperative learning has become a significant approach in the educational context in Indonesia (Sunggingwati, 2018). This approach not only allows students to learn from each other, but also promotes cooperation, communication, and joint problem solving. In Indonesia, the application of cooperative learning has evolved along with changes in the educational curriculum and the emphasis on active and collaborative learning. One of the bright spots in the use of cooperative learning in Indonesia is its integration in curriculum (Rohman, 2021). This curriculum emphasizes competency-based learning and problem solving, which is in accordance with the principles of cooperative learning (Rofik et al., 2022). Teachers are encouraged to facilitate collaboration between students in completing assignments that are relevant to real life, such as problem-based projects or small research. This not only improves students' understanding of the material, but also develops their social skills and critical thinking skills. However, challenges remain in implementing cooperative learning effectively in Indonesia (Karmina et al., 2021). One of them is teacher preparation and knowledge in managing classes with various cooperative activities, as well as the administrative support and infrastructure needed to support effective collaborative learning. The use of technology has also played an important role in changing the way cooperative learning (Qureshi et al., 2023). Online learning platforms and digital collaboration tools have enabled students to work together virtually, overcoming geographic barriers and providing more opportunities for active learning. Overall, the use of cooperative learning in Indonesia reflects efforts to improve the quality of education by activating students in the learning process (Chrisyarani & Setiawan, 2021). With this approach, it is hoped that students will not only gain academic knowledge, but also develop the social skills, critical thinking skills, and independence necessary to succeed in an increasingly complex and changing society.



Cooperative learning is an educational approach that emphasizes student collaboration, teamwork, and mutual support to achieve academic goals (Tran, 2019). In cooperative learning, students work together in small groups to complete a task or project, with each member contributing their unique skills and knowledge to the group's success (Jacobs & Ivone, 2020). This approach is based on the idea that students learn best when they are actively engaged in the learning process, and that social interaction and collaboration can enhance their understanding and retention of the material. There are several key principles that underpin cooperative learning (Dzemidzic Kristiansen et al., 2019). First, the groups should be structured to ensure that each member has a specific role or responsibility, and that everyone has an equal opportunity to contribute. Second, the tasks or projects should be designed to require active participation and critical thinking, rather than passive listening or rote memorization. Third, students should be encouraged to provide feedback and support to one another, and to share their knowledge and expertise.

Research has shown that cooperative learning can have a range of benefits for students (Baloche & Brody, 2017). For example, it can improve academic performance, increase motivation and engagement, and enhance communication and social skills. It can also promote positive attitudes towards learning and towards other students from different backgrounds or abilities (Qismullah Yusuf et al., 2019). However, effective implementation of cooperative learning requires careful planning and preparation (Erdogan, 2019). Teachers must create a supportive and inclusive classroom environment (Pérez et al., 2017), establish clear expectations and guidelines for group work, and provide opportunities for students to reflect on their learning and give feedback to one another. With these strategies in place, cooperative learning can be a powerful tool for promoting active and collaborative learning and helping students achieve their full potential (Gillespie-Lynch et al., 2017).

Cooperative learning is a teaching strategy in which students work together to achieve a goal (Gillies, 2016). Within cooperative learning, students maximize their own knowledge while also learning from one another, with members competing for membership benefits. This method is characterized by simultaneous interaction, positive interdependence, and joyful (Zheng & Zhou, 2022). Cooperative learning allows students to interact with one another. This relationship is critical in this method because the influence of friends can be used to achieve our goals in the learning process. As a result, the teacher must employ some strategies to create a learning environment that improves student interaction in the classroom. Students are expected to share their problems in group discussions during the teaching learning process in order to solve the problem. In this case, Index Cards Match is one of cooperative method gives emphasis on usage of certain instructional design to influence the students' interaction behavior. This is an effective method to change the discourse behavior in the classroom.

Index Card Match method is one active learning instructional approach for reviewing previously taught material (Pahlawan & Tambusai, 2022). Index Card Match method is an engaging and enjoyable method of helping students remember the subject. Students are required to work in pairs to solve the questions given. The Index Card Match method encourages students to engage in active learning, develop their creativity, and have an independent spirit while studying (Hidayati, 2023). It was an engaging and enjoyable method to go through the content.

The Index Card Method is a cooperative learning strategy that promotes active participation, collaboration, and student engagement in the classroom (Jumainah et al., 2023). This approach involves the use of index cards to facilitate communication and interaction among students. It is particularly effective in fostering a positive learning environment and encouraging students to take responsibility for their own learning (Tran, 2019). To implement the Index Card Method, each student is provided with an index card at the beginning of a lesson or discussion. The cards serve as a tool for students to contribute their thoughts, questions, and ideas throughout the class. This method can be adapted to various subjects and activities, making it versatile for different teaching scenarios. One key advantage of the Index Card Method is its inclusivity. All students, regardless of their comfort level with speaking in front of the class, can participate by writing on their index cards. This helps to ensure that every



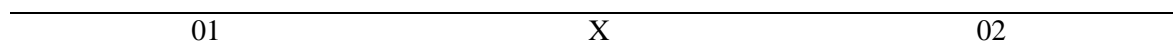
student has a voice in the learning process. Students can fulfill their learning objectives by working in groups only. Working in two minds is better than in one because student can help each other to understand the instructional options (Nur, 2021). Additionally, it allows for more thoughtful and reflective responses, as students have the opportunity to carefully compose their thoughts before sharing them with the class.

Furthermore, the Index Card Method promotes peer interaction and collaboration. Students can be instructed to exchange cards with classmates, read each other's responses, and provide feedback. Peer participation provides thoughts and comments, allowing students to gain feedback from their counterparts. This not only encourages teamwork but also enhances critical thinking skills as students consider and respond to their peers' perspectives. The method also facilitates formative assessment (Pitaloka et al., 2023). Teachers can collect and review the index cards to gauge students' understanding of the material, identify common misconceptions, and tailor future instruction accordingly. This real-time feedback loop supports personalized learning and allows educators to address specific needs within the classroom. Moreover, the Index Card Method promotes a sense of ownership over the learning process. Students actively contribute to the discussion and take responsibility for their own understanding of the material. This autonomy fosters a positive and collaborative learning environment, where students feel empowered to share their insights and learn from one another. Index Card Method is a valuable cooperative learning strategy that enhances student engagement, encourages active participation, and provides a platform for inclusive communication (H. F., 2018). By leveraging index cards as a tool for expression and collaboration, educators can create a dynamic learning environment that caters to diverse learning styles and promotes a sense of community within the classroom.

The application of cooperative learning has been widely carried out in schools using various methods. However, the implementation of cooperative learning using the Card Math Index method is still much underused for junior high school students specifically in the Polewali Mandar. Therefore, researcher tries to implement cooperative learning using the Card Match Index method. This research aims to find out whether cooperative learning using the Index Card Match method is able to improve students' English learning outcomes, especially for grade 7 students at SMP Negeri 6 Wonomulyo. The findings of this research is expected to be a piece of useful information for teaching and learning process at school. Where, the English language learners can work together with all level of students and perhaps students will be enthusiastic in learning English so it is expected to get the better learning outcome.

2. Method

The method employed in this research is pre-experimental research design. It aims to find out whether or not Index Card Method can significantly increase the students' English achievement. The design of this research was one group pre-test and post-test design. The design involves one group which is pre-test (O1), exposes to treatment (X) and post-test (O2). The schematic representation for the design might be:



This research consists of two variables, namely independent variable and dependent variable. The Independent variable is the implementation of Index Card Match as one of cooperative learning method provides instructional activity in the classroom. The dependent variable is the students' English achievement. The population of this research is SMP Negeri 6 Wonomulyo. The researcher use the cluster sampling technique and take one class as the sample. The chosen class was class 7B consists of 18 students. It was assumed that almost all of them were faced many problems in learning English.

The data was collected using tests, they are pre-test and post-test. The pre-test is aimed to find out the prior level of the students' language skills, while the post-test is aimed to find out the effectiveness of the treatment. The procedure of collecting data as a pre-experimental design followed the chronological steps. Firstly, the researcher administered the pre-test to the students before giving

them the treatment. Secondly, before giving the students post-test, the researcher gave them explanation and instruction of the teaching material and asked them to practice it during the research by using Index Card Match Method. The research is conducted four meetings and each meeting take 80 minutes (2 x 40 minutes). Lastly, after giving the treatment for the students, the researcher administered the post-test, it is administered to value the treatment using Index Card Match Method. The test given is the same as the given test before.

The data found is then analyzed to answer the research questions. Since this research is used pre-experimental research design, the researcher carries out several activities to make easy in analyzing the data collected. The researcher computes the data collected to find out the individual scores, mean score, standard deviation, and the value of t-test.

3. Result and Discussion

Finding data was obtained from the English test given to students during the research process which consisted of a pre-test and post-test. The pre-test is given to respondents before the treatment carried out, and the post-test is given to respondents after the treatment carried out.

3.1 The Students' Pre-test and Post-test Classification

The findings of the research deals with the students' pre-test and post-test classification, the students' mean score and standard deviation, and hypothesis testing.

Table 1 *Frequency and Percentages of Students' Pre-test*

No	Classification	Range	Frequency	Percentage (%)
1	Very Good	91-100	-	0%
2	Good	76-90	-	0%
3	Fair	61-75	-	0%
4	Poor	51-60	2	11%
5	Very poor	< 50	16	89%

The table 1 shows the frequency and percentage of the students' pre-test score of English achievement. It can be seen that there are 2 students (11%) of 18 students get poor score, there are 16 students (89%) get very poor score, and neither of them get fair, good, and very good score

Table 2 *Frequency and Percentages of Students' Post-test*

No	Classification	Range	Frequency	Percentage (%)
1	Very Good	91-100	-	0%
2	Good	76-90	2	11%
3	Fair	61-75	10	56%
4	Poor	51-60	6	33%
5	Very poor	< 50	0	0%

From the table 2, it can be seen that there are 2 students (11%) of them get good score, there are 10 students (56%) get fair score, there are 6 students get poor score, and none of them get very good score and very poor score.

3.2 The Students' Mean Score of Pre-test and Post-test, and Standard Deviation

After computing the result of the students' pre-test and post-test, the researcher then calculating the mean score and standard deviation of pre-test and post-test using Statistical Program for Social Science (SPSS). The mean score and standard deviation are presented in the following table:

Table 3 Mean Score and Standard Deviation

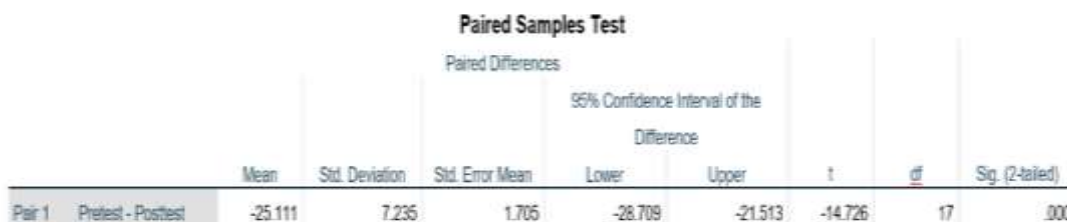
Test	Mean Score	Standard Deviation
Pre-test	38.89	2.328
Post-test	64.00	1.829

The table above shows that the mean score of pre-test is 38.89 and mean score of post-test is 64.00. It shows that mean score of post-test is greater than the mean score of pre-test. While, the standard deviation of pre-test is 2.328 and standard deviation of post-test is 1.829. It shows that standard deviation of pre-test is less than standard deviation of post-test.

3.3 Hypothesis Testing

In order to know whether or not the difference between pre-test and post test result is statistically significant, the researcher computing the t-test statistical analysis using Statistical Program for Social Science (SPSS). The result of t-test is 14,726.

Table 4 Paired Sample Test



		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pretest-Posttest	-25.111	7.235	1.705	-28.709	-21.513	-14.726	17	.000

T-test	T-Table
14.726	2.110

For the level significant 0.05 and degree of freedom (df) 17, the value of t-table is 2.110, while the value of t-test is 14.726. It shows that the result of t-test is greater than the value of t-table (14.726 > 2.110). It signifies that there is a significant difference between the pre-test and post-test scores of students who were taught English using the Index Card Match method. In other words, the Index Card Match method is a wonderful way to improve students' English learning outcome.

Based on data analysis as explained above, it shows that students' English learning outcomes have increased. It was supported by the frequency and rate percentage of the result of the students' pre-test and post-test score. The students' score after doing treatment is better than before the treatment given to the students. It is in line with the research conducted by Ariani entitle "The Effectiveness of Using Index Card Match in Teaching Vocabulary", She stated that the contribution of vocabulary flash card is effective to increase the students' vocabulary mastery (Ariani & Setianingsih, 2018). While, Elissa in her research stated that by implementing the Index Card Match Method can significantly increase the students' skills in writing descriptive text (Tambunan, 2017). The Students' English learning outcomes can be increased by using the Index Card Match method, this occurs because the use of the Index Card Match method makes students enthusiastic and motivated in participating in learning (Jumainah et al., 2023). Index Card Match gives students the opportunity to be more creative, more enthusiastic, and more enjoy in learning, if the learning atmosphere is pleasant, it will influence student learning outcome. To increase students' learning outcomes using Index Card Match method is influenced by student activities and interactions during the learning process (Zainal et al., 2024). In learning process, cognitive activities force students to think more critically and students are actively involved in the learning process so that they can increase their motivation and involvement (Hidayati,



2023). Besides that, collaboration in matching cards can improve their understanding because they are involved in discussions between students (Pitaloka et al., 2023).

4. Conclusion

The Index Card Match method is a learning technique that involves using cards to match the information or questions in the classroom learning process. In the context of learning English, this method helps students to strengthen their understanding of vocabulary, sentence structure, or grammar concepts in an interactive and fun way. By practicing matching these cards, students can improve their English skills effectively. This method also encourages collaboration and interaction between students, promoting active learning and the formation of deeper understanding. Learning activities in this method promote the formation in-depth understanding and better retention of information because they involve repeated use of learning materials. The activity of matching cards builds cognitive skills such as analysis, evaluation, and synthesizing information in English language learning

Based on the findings and discussion of this research, the researcher can conclude that there is a significant difference between the pre-test and post-test of the students after being taught English by using Index Card Match method. In other words, Index Card Match method is an effective way to increase the students' English Achievement for seventh grade student of SMP Negeri 6 Wonomulyo. In implementing the Index Card Match method of cooperative learning, the student is more active and more understood the material. After conducting this method, the students get better result than before in learning English. It can be seen in the students' mean score of post-test (64.00) is greater than students' mean score of pre-test (38.89). The implementation of The Index Card Match method in learning English can effectively increase students' English learning outcomes. Thus, the researcher suggests for the English teacher to choose the Index Card Match method as one strategy in teaching English. And for further research, it is very suggested to conduct a research to know the perception and motivation of the students in learning English using Index Card Match method.

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