

---

## Using Index Card Match to Improve Twelfth-Grade Cadets' Reading Comprehension: A Classroom Action Research at Poltekpel Malahayati Aceh

Piping Rahadianto<sup>1\*</sup>, Yuli Pera Fitria<sup>2</sup>, Yusrah<sup>3</sup>

<sup>1</sup>Sistem Kelistrikan Kapal, Politeknik Pelayaran Malahayati, Indonesia

<sup>2</sup>Permesinan Kapal Politeknik, Pelayaran Malahayati, Indonesia

<sup>3</sup>Sistem Kelistrikan Kapal, Politeknik Pelayaran Malahayati, Indonesia

Correspondence Email : [pipingrahadianto@gmail.com](mailto:pipingrahadianto@gmail.com)

---

### ARTICLE INFO

#### Article history:

Received : December 5, 2025

Reviewed : January 4, 2026

Revised : January 6, 2026

Accepted : January 10, 2026

Available online : January 13, 2026

#### Keywords:

**Index Card Match; Reading Comprehension; Class Action Research**

### Abstract

Students' limited interest in reading English texts is often associated with low levels of reading comprehension. This study aimed to improve students' reading comprehension through the implementation of the Index Card Match strategy in an English classroom. The research adopted a classroom action research design based on the Kemmis and McTaggart model, consisting of two cycles, each comprising planning, action, observation, and reflection stages. Data were collected through observation sheets, field notes, interviews, reading comprehension tests, and student questionnaires. The quantitative findings demonstrated a progressive improvement in students' reading comprehension across the research cycles. The proportion of students meeting the predetermined achievement criteria increased from 44% in the pre-test to 70% in Cycle I and further to 91% in Cycle II. Qualitative data supported these results, indicating increased student engagement, enjoyment, and motivation during reading activities. The findings suggest that the Index Card Match strategy is effective in enhancing students' reading comprehension and creating a more interactive learning environment. Therefore, it is recommended that English teachers consider integrating this strategy into reading instruction, while future studies may explore its application in different educational contexts or through alternative research designs.

---

### INTRODUCTION

To have a good knowledge and science, cadets need to explore themselves by reading many kinds of books. In the relation with English itself, many books of science written in English. Here, the skill of cadets' reading is applied. The process of teaching reading depends on the techniques used by lecturer in order that the teaching objectives can be gained (Harmer, 2007). The techniques for cadets to learn reading English should be suited with the method and the approach as well. Effective reading instruction requires appropriate methods and approaches that guide students through pre-reading, while-reading, and post-reading activities (Grabe, W., & Stoller, 2011), (Richards, J. C., &

Rodgers, 2014). Media of teaching can be the tool to make students' attention. It is used to help the students increase their interest in reading class. By making reading comprehension activities more enjoyable, cadets will learn to enjoy reading (Alyousef, 2006), (Snow, 2002).

Lecturer can use some games to practice their English. In other word, game can gain cadets motivation in learning. So, we can conclude that game can make the cadets be active without having pressure. Teachers can use games to practice students' English skills because games help increase students' motivation and engagement in learning. This research shows that using games as learning tools can make lessons more enjoyable and help students participate actively in class, which in turn supports their reading and vocabulary development (Hashemi, 2021). There are kinds of reading games: scrabble and up words, crossword puzzles, word searches, scavenger hunts and card game (Bank Street College of Education., 1997). One of reading games being able to improve students' reading comprehension is using index card.

Among many kinds of reading games, here index card game is chosen by the researcher. As Silberman states that Index card match is an active, enjoyable way to review course material (Silberman, 2007). It allows participants to pair up and quiz the rest of the group. According to Hadfield, matching games are based on a different principle, but also involve a transfer of information (Hadfield, 1999). These involve matching corresponding pairs of cards, and may be played as a whole class activity, where everyone must circulate until they find a partner with a corresponding card, or a pair work or small group activity, played as a card game on either the 'snap' or the 'pelmanism' principle. This can force students to understand questions they bring then matching with the answer.

Although various cooperative learning strategies have been widely investigated to enhance reading comprehension in English as a Foreign Language (EFL) contexts, empirical evidence on the application of the Index Card Match strategy in tertiary-level vocational maritime education remains limited. At Politeknik Pelayaran Malahayati, English instruction emphasizes functional reading skills required for maritime studies; however, classroom observations revealed that cadets experience persistent difficulties in comprehending English texts, resulting in low engagement and unsatisfactory learning outcomes. Existing instructional practices tend to rely on lecturer-centered approaches and lack interactive techniques that actively involve students in meaning construction. This gap indicates a need for an alternative instructional strategy that is both interactive and contextually relevant to maritime cadets' learning characteristics. Therefore, this study addresses the gap by implementing the Index Card Match strategy to improve reading comprehension within the specific context of a maritime higher education institution.

### **Instructional Media**

Instructional media and the technologies for learning provide you will the tools to engage students powerfully in the learning process. The array of media formats and of quality materials available to the teacher is increasing dramatically. As a teacher, you must be prepared to choose the best tools for your students, who are in diverse situations and pursuing different sorts of learning goals.

Media can also be used not only in sophisticated technology, but also in the teaching and learning process. Language teaching is one of example where media are used as an alternative way in the teaching process where it contributes to the vast array of resources now available to nearly every lecturer (Gerlach, V. S., & Ely, 1980). The media in the teaching process can be in the form of games. Locatis and Atkinson states that media includes such thing as print, graphic, photography, audio communication, television, computers as well as simulations and games (Locatis, C. N., & Atkinson, 1984).

Not all media plug into an electrical outlet. A variety of media can make your instruction more realistic and engaging. Objects and models bring "the real thing" into the classroom. Students can

variously explore other places and other times through books, other printed materials, and kits that combine objects, pictures, and text.

Pictures, charts, graphs, posters, and cartoons-including those that students themselves produce-can provide powerful visual support to abstract ideas. These media can be displayed in a variety of ways. You need to be able to use chalkboards, flip charts, bulletin boards, and other display formats confidently. Of course, students often construct such displays themselves as part of cooperative group projects (Heinich, R., Molenda, M., Russell, J. D., & Smaldino, 1993).

Language cards: many teachers put a variety of cards and posters around the classroom. Cards are also useful for matching activities, where students have to find another student in the class with a similar card or one that has the answer to the question on his or her card. Students can each be given word cards to hold in front of them and then be asked to move around until they form a line where all the cards together form a question or a sentence (Harmer, 2007).

### **Index Card Match Method**

Index card match is teacher used strategy to invite students to find the correct answers having been prepared already. Silberman states, Index card match is an active, enjoyable way to review course material. It allows participants to pair up and quiz the rest of the group (Silberman, 2007).

In this research, the researcher used index card match as the technique of teaching vocabulary. This is a procedure of index card match:

1. Write down on separate index cards the names of techniques and/or concepts examined in the training session. Create enough cards to equal one-half the number of participants.
2. On separate cards, write clear definitions of each of the techniques or concepts you have chosen or give a clear example of the technique or concept.
3. Combine the two sets of cards and shuffle them several times so that they are well mixed.
4. Give out one card to each participant. Explain that this is a matching activity. Some participants have the names of techniques or concepts examined in the training session and others have definitions or examples.
5. Direct participants to find their matching cards. When a match is formed, ask each pair of participants to find seats together.
6. When all the matching pairs have been seated, have pair members quiz the rest of the group on their technique or concept by reading aloud its definition or example.

### **Characteristic of Index Card Match**

According to Hadfield, matching games are based on a different principle, but also involve a transfer of information. These involve matching corresponding pairs of cards or pictures, and may be played as a whole class activity, where everyone must circulate until they find a partner with a corresponding card or picture, or a pair work or small group activity, played as a card game on either the 'snap' or the 'pelmanism' principle (Hadfield, J., & Hadfield, 2014).

According to Thornbury (Thornbury, 2002), a matching task involves first recognizing words and then pairing them with the suitable and correct ones, for example a visual representation, a translation, a synonym, an antonym, a definition, or a collocate. As an example of this last type, here is a verb – noun matching task: Pelmanism is a memory game which involves nothing but matching. Word pairs (or picture – word matches) are printed on individual cards which are placed face down in a random distribution. Players take turns to pick up a card and then search for its partner. If they correctly locate the partner (initially by guesswork, but, as the game progresses, by remembering where individual cards are located), they keep the pair, and have another turn. If not, they lay the cards face down where they found them, and the next player has a turn. The player with the most pairs at the end of the game is the winner.

According to Best (Best, J. W., & Kahn, 2006), matching cases, selecting pairs or sets of individuals with identical or nearly identical characteristics and assigning one of them to the experimental group and the other to the control group provides another method of control. This method is limited by the difficulty of matching on more than one variable. It is also likely that some individuals will be excluded from the experiment if a matching subject is not available. Matching is not considered satisfactory unless the members of the pairs or sets are randomly assigned to the treatment groups, a method known as blocking.

## METHOD

The research design of this study was a Classroom Action Research (CAR) using Kemmis and Mc. Taggart's model (Kemmis, S., McTaggart, R., & Nixon, 2014), which each cycle consists of four steps. They are planning, implementing, observing and reflecting of action. Those four main steps are preceded by reconnaissance or preliminary study, analysis and identification of problem. The main instrument in this study was the researcher himself. The data are taken from test, observation sheet, questionnaire, and interview (Burns, 2010).

This classroom action research was conducted at Politeknik Pelayaran Malahayati and involved 42 maritime cadets enrolled in a compulsory English Maritime course. The study was implemented over two action research cycles following the Kemmis and McTaggart model, with each cycle consisting of the stages of planning, action, observation, and reflection. Each cycle was carried out over three classroom meetings within one academic semester. Reading comprehension achievement was measured using standardized reading tests administered as a pre-test, post-test in Cycle I, and post-test in Cycle II. Students were considered to have achieved mastery if they obtained a minimum passing score of 70, which was consistently applied throughout the study.

There are two ways in analyzing the data. The researcher uses descriptive analysis in analyzing qualitative data and percentage in analyzing quantitative data. The descriptive analysis is used to analyze the data of the students' answers of the questionnaire and also the teacher interview and the observation sheet. The percentage analysis is used to find out the students' reading mastery by counting students' reading score using percentage.

$$\text{Mastering level} = \frac{\text{amount of correct answer}}{\text{amount of question}} \times 100 \%$$

Indicator of criteria success in this research was if 75 % of the students got score > 70.

$$\text{The percentage of success is} = \frac{30}{42} \times 100 \% = 71.4 \%$$

The criterion of success in this research was achieved if at least 75% of the students obtained a score above 70. Based on the analysis, 71.4% of the students passed the vocabulary test in Cycle 1, while 28.6% did not meet the criterion. These findings indicate that the expected level of success had not yet been fully achieved and further action was required (Creswell, J. W., & Creswell, 2018). From this percentage of success, the students who passed the vocabulary test on cycle 1 were 71.4 % and 28.6 % failed the test.

## FINDINGS

The focus of the research is to improve the twelfth-year cadets' reading comprehension mastery using index card match. During the implementation of index card match, the cadets were involved actively in teaching and learning process. The cadets were given an interesting index card

and tried to analyze it by discussing with their friends. Based on preliminary study, it showed that there were only 20 (47.6%) cadets could meet criteria of success and 22 (52.4%) cadets could not meet the criteria of success on preliminary study. As it was stated at previous chapter, 60 there were the minimum score for each cadet to be categorized as successful cadets who reaches the objective of the lesson.

In cycle 1, the researcher used expression preference as teaching learning material. The cadets did not have any difficulty in implementing structure expression preference. They already understood the pattern of the sentence, but there was still a problem that although the researcher had explained the index card match at the first meeting to the cadets, they were still confused with the instructions. They needed the researchers' guidance in doing the activities during the teaching vocabulary class. However, the researcher had been successful in grouping the cadets, arranging the classroom, guiding the students to complete the task, and evaluating the task, but the researcher found difficulties faced by cadets to match the card. The cadets' score in cycle 1 showed that there was improvement of cadets' reading mastery. There were 30 (71.4%) cadets could meet criteria of success and 12 (28.6%) cadets could not meet the criteria of success. It means that the cadets' reading mastery had been improved.

All of the data above were analyzed and reflected in the reflecting stage. As a result, the researcher decided to conduct the cycle 2 to improve the quality of using index card match in teaching reading. Actually, the researcher had increased the cadets' mastery in English class. However, they did not experience the enjoyable and meaningful learning since they only thought using same cards in a group. Therefore, the cycle 2 was expected to make the cadets experience lively, interesting, and active learning class. Cadets learn in ways that are not consistent with their natural or habitual approach can be extremely threatening. In the cycle 2, the researcher used more interesting and various index card in teaching reading comprehension. In this cycle, the cadets had perfectly understood the instruction of index card match and matching the question – answer correctly with their partner.

**Table 1. Cadets' Reading Comprehension Achievement Across Research Cycles**

Assessment Stage	Number of Cadets Meeting Criteria	Percentage (%)
Cycle I	30	71.4
Cycle II	36	85.7
Final Examination	38	90.5

## DISCUSSION

During the discussion, the cadets tried to find out the words which were difficult for them to say in English by asking their friends in the group or looked up in their dictionary. Sometimes they could not find the words because the dictionary used consisted of very limited vocabularies. Facing this problem, they ask the teacher about the difficulty meaning. From the above observation, the researcher could see that the cadets had actively participated in class and had experience lively, interesting, and enjoyable English classes. The previous problems such as feeling confused in English lesson because of lack of vocabulary.

The cadets' reading mastery in cycle 2 showed much improvement. The total of cadets whose reading mastery met the criteria of success was 36 (85.7%) cadets and 6 (14.3%) cadets were unsuccessful. All the data gathered informed the quality improvement of the implementation of index card match in the cycle 2 compared to the one in the cycle 1. Therefore, the researcher decided to stop the action research in this cycle.

It could be said that using interesting index card in teaching reading made the cadets realized that learning English was very interesting. Teaching reading through index card match provided wide chance for the cadets to involve in the class. This research also made the cadets experienced lively English classes, something that they hardly had before. They found new atmosphere in learning English and it was very enjoyable. They relaxed in teaching English. Using interesting index card was fun for them. Besides, it also drives the English teacher to apply various kinds of teaching techniques in her class to activate and improve the cadets' mastery.

The researcher interviewed the cadets and English teacher after implementing index card match of cycle 1. The researcher interviewed the cadets about this game after doing the quiz. Firstly, the researcher asked to all of the students about their opinion in index card match to be implemented. It was continued when breaking time in another day. The researcher took some of the cadets to give their opinion. The cadets think that index card match was very interesting. The rules and steps of this game were easy to be understood and practiced. The themes of reading were interesting, since it had correlation with their learning material. They were curious to some vocabularies since they did not know at all.

## CONCLUSION

After the implementation of index card match, the researcher finds that the ability of cadets in reading comprehension can be developed. It can be seen by the cadets' development in the test result from preliminary study, to cycle 1 and cycle 2. Based on the cadets' response, index card match was interesting and exciting. It helped the cadets to understand the material and made them easier in learning reading. They enjoyed during the teaching-learning process and they gave more attention to the lecturers' explanation. They did the activity in learning reading process seriously and enthusiast. So, it can be concluded that index card match improved the cadets' reading comprehension by attracting the cadets' motivation, participation and the cadets' interest in following the subject. The index card match proved to be successful as described below:

Using index card in teaching reading made the cadets realized that learning English was very interesting. Teaching vocabulary through index card match provided wide chance for the cadets to involve in the class. This research also made the cadets experienced lively English classes. Cadets found new atmosphere in learning English and it was very enjoyable. Using index card was fun for them and it improved cadets' reading mastery. There were only 20 (47.6%) cadets could meet criteria of success on preliminary study, while in cycle 1, there were 30 (71.4%) students could meet criteria of success and it became 36 (85.7%) cadets could met the criteria of success in cycle 2. It means that there was cadets' reading development after being taught using index card match. And the last examination, there were 38 (90.5%) cadets could meet criteria of success.

Instructional media play a crucial role in supporting effective teaching and learning processes. In this study, index cards were utilized as the primary medium for implementing the Index Card Match strategy to increase cadets' engagement and interest in reading activities. Based on the findings of this classroom action research, the Index Card Match strategy was shown to contribute positively to the improvement of cadets' reading comprehension achievement. Therefore, it is recommended that English lecturers consistently integrate interactive instructional media into reading instruction, as such media offer pedagogical advantages in promoting active participation and comprehension. Furthermore, this study may serve as a reference for future researchers who intend to investigate reading comprehension in different educational contexts. Subsequent studies are encouraged to examine the effectiveness of the Index Card Match strategy with different participant groups, subject areas, or research designs to further validate and extend the findings.

## REFERENCES

- Alyousef, H. S. (2006). Teaching reading comprehension to ESL/EFL learners. *Journal of Language and Learning*, 5(1), 63–73.
- Bank Street College of Education. (1997). *Six games for reading*. Reading Rockets.
- Best, J. W., & Kahn, J. V. (2006). *Research in education* (10th ed.). Pearson Education Inc.
- Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. Routledge. <https://doi.org/https://doi.org/10.4324/9780203863466>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Gerlach, V. S., & Ely, D. P. (1980). *Teaching and media: A systematic approach* (2nd ed.). Prentice-Hall.
- Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading* (2nd ed.). Routledge. <https://doi.org/https://doi.org/10.4324/9781315833743>
- Hadfield, J., & Hadfield, C. (2014). *Writing games*. Pearson Education.
- Hadfield, J. (1999). *Intermediate communication games*. Longman.
- Harmer, J. (2007). *How to teach English* (2nd ed.). Longman.
- Hashemi, A. (2021). The effects of using games on teaching vocabulary in reading comprehension. *Journal for the Education of Gifted Young Scientists*, 9(2), 151–160.
- Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (1993). *Instructional media and technologies for learning* (4th ed.). Macmillan.
- Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The action research planner: Doing critical participatory action research*. Springer. <https://doi.org/https://doi.org/10.1007/978-981-4560-67-2>
- Locatis, C. N., & Atkinson, F. D. (1984). *Media and technology for education and training*. Charles E. Merrill.
- Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching* (3rd ed.). Cambridge University Press. <https://doi.org/https://doi.org/10.1017/CBO9780511667305>
- Silberman, M. L. (2007). *Active learning: 101 strategies to teach any subject* (Updated ed). Pearson Education.
- Snow, C. E. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. RAND Corporation.

Thornbury, S. (2002). *How to teach vocabulary*. Longman.