

Enhancing Indonesian Vocabulary Learning through Index Card Match Media: Insights from a Lower Elementary Classroom Case Study

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ABSTRACT: This study investigates the effectiveness of Index Card Match (ICM) media in enhancing Indonesian vocabulary achievement by lower elementary school students. An exploratory qualitative case study design was employed. Data were collected through triangulation, including analysis of instructional documents, classroom observations, and in-depth semi-structured interviews with 24 purposively selected participants. The data were analyzed using a thematic analysis supported by NVivo version 14. The findings shows that the implementation of ICM across three instructional stages generated several significant outcomes, including improved vocabulary comprehension, identification of conceptual errors and corresponding follow-up actions, comparative analysis of group performance, students' cognitive development, and the creation of meaningful and enjoyable learning experiences. Although initial unfamiliarity with the media was observed, it gradually gave rise to students' curiosity and enthusiasm, fostering active and collaborative classroom interactions and highlighting the teacher's role in effective classroom management. This study offers a more comprehensive theoretical contribution than previous research by holistically capturing all stages of ICM utilization, rather than focusing solely on partial or quantitative learning outcomes. We support the adaptability of ICM for vocabulary development across diverse basic education contexts worldwide. Further research employing a quasi-experimental design is recommended to empirically test and strengthen these findings.

Keywords: case study, elementary school, learning method, learning of Indonesian language, vocabulary learning.

ABSTRAK: Penelitian ini menginvestigasi efektivitas media Index Card Match (ICM) dalam meningkatkan penguasaan kosakata bahasa Indonesia di kalangan siswa sekolah dasar kelas bawah. Desain studi kualitatif eksploratif digunakan. Data dikumpulkan melalui triangulasi, termasuk analisis dokumen instruksional, pengamatan kelas, dan wawancara semi-terstruktur mendalam dengan 24 peserta yang dipilih secara purposif. Data dianalisis menggunakan analisis tematik yang didukung oleh NVivo versi 14. Hasil penelitian menunjukkan bahwa implementasi ICM pada tiga tahap instruksional menghasilkan beberapa hasil signifikan, termasuk peningkatan pemahaman kosakata, identifikasi kesalahan konseptual dan tindakan tindak lanjut yang sesuai, analisis perbandingan kinerja kelompok, perkembangan kognitif siswa, serta penciptaan pengalaman belajar yang bermakna dan menyenangkan. Meskipun awalnya terdapat ketidakfamiliaran dengan media tersebut, hal ini secara bertahap memicu rasa ingin tahu dan antusiasme siswa, mendorong interaksi kelas yang aktif dan kolaboratif, serta menonjolkan peran guru dalam manajemen kelas yang efektif. Studi ini memberikan kontribusi teoretis yang lebih komprehensif dibandingkan penelitian sebelumnya.

dengan menangkap secara holistik semua tahap penggunaan ICM, daripada hanya fokus pada hasil belajar parsial atau kuantitatif. Kami mendukung fleksibilitas ICM untuk pengembangan kosakata di berbagai konteks pendidikan dasar di seluruh dunia. Penelitian lebih lanjut dengan desain quasi-eksperimental direkomendasikan untuk menguji dan memperkuat temuan ini secara empiris.

Kata Kunci: metode pembelajaran, pembelajaran bahasa indonesia, pembelajaran kosakata, sekolah dasar, studi kasus.

INTRODUCTION

Language is a fundamental aspect of human life. As social beings who need the help of others, language facilitates communication between humans (Fransisca, 2023). Language acquisition begins at birth through the mother tongue. The process of language acquisition is a long one, starting from when a child is not yet familiar with a language until they achieve fluency. This acquisition process occurs in the child's brain as they learn their first language or mother tongue (Syaprizal, 2019)

Sugiyanto et al. (2025) stated that mother tongue is acquired from the immediate environment, which is the first environment in which a person grows up. Therefore, mother tongue refers to the natural language acquired from family, environment, and diverse regions such as Javanese, Madurese, Sundanese, Minang, and other regional languages (Sugianto, 2018). In Indonesia, Indonesian language is a unifying medium of communication that accommodates the diversity of regional languages (Efendi et al., 2024). Therefore, Indonesian language proficiency is a necessary.

Elementary school, as one of the formal education levels for students, plays an important role in developing Indonesian language proficiency (Maritim, 2023). Through this competency, students can communicate effectively and become lifelong learners in a multilingual society (Jummai, 2012). To demonstrate the function of SD in developing this language competency, the teaching and learning process must be effective in all subjects, especially in Indonesian language (Suparlan, 2020). A study aimed to equip students with four aspects of competence, including reading, writing, listening, and speaking. In these aspects, vocabulary mastery is very valuable. The richer the students' vocabulary, the easier it is for them to understand the lessons and express their ideas clearly (Narayan & Goundar, 2024).

In Indonesian language learning, teachers need to have effective strategies to provide memorable learning experiences for students (Mubin & Aryanto, 2024) and successfully guide students to achieve learning objectives (Devi et al., 2021). One strategy that is believed to be effective is using an interactive learning model. This model is able to increase student engagement and communication, foster critical thinking and collaborative skills (Setyaningsih & Sriyanto, 2025). By utilizing methods such as case discussions, multimedia presentations, and game-based activities, students are able to participate actively. This leads to a deeper understanding and improved learning outcomes (Huang & Liu, 2014).

In addition to methods, the selection and use of media in the learning process also plays an important role. This is because the use of appropriate media

can increase students' enthusiasm for learning and help them understand various subjects more easily (Risky, 2019). At the same time, the use of innovative media that suits students' needs can be a key strategy for improving the effectiveness of vocabulary teaching in the classroom (Ardhani, 2024).

On the other hand, a preliminary study at SDN Penggung on November 18, 2024, revealed that the vocabulary development of students had stagnated. First-grade teachers admitted that they had difficulty in expanding their students' vocabulary. This situation threatened the students' ability to communicate effectively, escalating dialogue difficulties and lifelong learning barriers.

Regarding similar issues, Lestari (2022) provides a theoretical contribution that offers a solution. According to them, the Index Card Match (ICM) media can be an effective strategic alternative in improving vocabulary skills. By involving children in matching words, picture objects, and letter cards with their meanings, it can improve textual understanding and communication. In line with the contribution of Lestari (2022), Seliani et al. (2022) also promote the effectiveness of ICM. They emphasize the significance of ICM in improving vocabulary mastery, as it is a visual aid and interactive element to engage students.

However, two limitations in their research necessitate further study. The context of Lestari's (2022) research is still theoretical, so it does not provide a sufficient overview for adaptation in the field. Meanwhile, Seliani et al. (2022) have not demonstrated the latest applicable curriculum. These two limitations represent a theoretical gap that this study aims to fill. Thus, This study investigates the effectiveness of Index Card Match (ICM) media in enhancing Indonesian vocabulary mastery among lower elementary school students. Through a field research approach, this study offers significance at a much higher level, as it will accommodate evidence-based research results.

If this research is not conducted, the failure to improve vocabulary in Indonesian language learning, which still occurs frequently, will be ignored. This creates an urgency to achieve the objectives of this study. To achieve this, three research questions were formulated: 1) How is ICM Media Planning in Indonesian Vocabulary Learning? 2) How is the implementation of ICM Media in Indonesian Vocabulary Learning? 3) What are the results of using ICM Media in expanding Indonesian vocabulary?

RESEARCH METHOD

Research Approach

This study uses a qualitative approach (Lim, 2025), a case study model (Tiwari et al., 2016) of the exploratory type (Minniti et al., 2017). This approach was chosen because of its suitability to the research objectives (Creswell et al., 2022; Dahal, 2025), the types of data, and its relevance to the research questions, which sought to investigate the process of planning, implementation, and results of using ICM media to increase Indonesian vocabulary in Indonesian language learning for elementary school students.

Research Location and Data Compilation

This study was conducted at Penggung State Elementary School, Taktakan District, Serang City, Banten Province, Indonesia. The location was chosen based on empirical problems that arose at the school and student competency targets. The research focused on 23 first-grade students and one teacher. Considering that this number was relatively small as a population and could be reached by the researcher, all 24 individuals were involved as research participants.

The data in this study consisted of events that could be observed by the senses, as contextual phenomena in certain cases (Baker et al., 2018; Riyannie, 2024) which described the use of ICM media in Indonesian language learning activities. The effectiveness of the use of these media needs to be examined through various types of data. Therefore, the triangulation model was adopted as a data collection technique (Vivek & Nanthagopan, 2023), including observation of learning activities, collection of learning stage documents (Undang-Undang Republik Indonesia Nomor 14 Tahun 2005 Tentang Guru Dan Dosen, 2005), and semi-structured in-depth interviews (Bingham, 2023) with teachers and students. This technique was adopted in line with (Dahal, 2025) statement emphasizing that triangulation is suitable for qualitative research.

The interview instrument was initially developed based on effectiveness indicators modified from the opinions of Lanuza-Quimson & Vadil (2024) and Cameron (2015), which were combined into five indicators: 1) Goal Achievement, which is the extent to which an organization or individual can achieve predetermined goals. 2) Productivity, which refers to the efficiency in using resources to produce the desired output. 3) Adaptability, which is the ability of an entity to adapt to changes in the internal and external environment. 4) Stakeholder Satisfaction, which is the level of satisfaction of the parties involved with the results achieved by an organization or individual, and 5) Innovation and Continuous Improvement.

After the initial version of the interview instrument was compiled, it was then discussed by the authors with the guidance of an educational research expert. Although there were debates during the instrument development process, an agreement was reached. Once the instrument was agreed upon, it was tested on teachers and students at other schools to measure its reliability before implementation.

Data Analysis

The data compilation process has successfully collected documents on the stages of learning, observation notes, and interview transcripts with participants. For these three types of data, thematic analysis techniques were adopted with reference to the guidelines proposed by Ahmed et al. (2025). The thematic analysis consists of six steps, namely: 1) Data Familiarization, 2) Initial Coding, 3) Theme Searching, 4) Theme Review, 5) Theme Determination and Naming, 6) Report Writing. In steps two to five, the Nvivo version 14 was used as a data analysis support tool (Allsop et al., 2022; Edwards-jones, 2014).

The data collection and analysis process was carried out in an integrated and iterative manner until the data reached saturation. This study was conducted over

a period of 47 days, from November 21, 2024, to January 6, 2025. A total of 31 days were spent on data collection and analysis, and 16 days on writing the research report.

Ethical Clearance

Ethical standards in educational interview research include consent, confidentiality, voluntary participation, and respect for the autonomy and dignity of participants, which are guaranteed throughout all stages of the research (Bredal & Stefansen, 2024). Researchers ensure honesty, protect vulnerable groups, and promote equality and inclusivity throughout the research process (Torlone, 2023). Thus, the real names of participants are anonymized, replaced with the terms “P1” for participant 1, “P2” for participant 2, and so on. Ethical compliance is also evident in the interview and observation process, which is conducted only at the agreed-upon time.

RESULT AND DISCUSSION

ICM Media Planning in Improving Indonesian Vocabulary Learning

Based on the results of the investigation at the beginning of the research process, it was found that the Indonesian vocabulary capacity of lower grade students was still limited to the letter “G”. This information became the basis for teachers in developing appropriate ICM media. P1 said, “My students, until yesterday after being assessed and observed carefully, still had very limited vocabulary” (Interview with P1, November 31, 2025).

P1's statement shows reflective efforts and attempts to develop learning plans based on the objective conditions of students' prior abilities related to the learning objectives of increasing Indonesian vocabulary. The practice of planning the use of ICM media to improve vocabulary mastery carried out by teachers includes four stages.

First, Reviewing Textbooks. At this stage, teachers look for lower grade Indonesian language textbooks that are in line with the curriculum implemented by the school and are appropriate for the students' initial abilities. Teachers only focus on the letters “G”, “H”, “I”, “J”, “K”, and “L”. This ensures that the parts of the book to be used are truly in line with the students' needs in expanding their Indonesian vocabulary.

Second, Selection of Teaching Materials. At this stage, teachers collect new vocabulary based on the letters that have been determined. The vocabulary collected is limited to three categories: animals, fruits, and objects. The new vocabulary shown to students is shown in Table 1.

Table 1. New Vocabulary in Instructional Planning (Research observation)

No.	Huruf	Indonesian Vocabulary	English Vocabulary
1	G	<i>Gajah</i>	Elephant
2	G	<i>Gunting</i>	Scissors
3	G	<i>Gurita</i>	Octopus

4	H	<i>Hamster</i>	Hamster
5	H	<i>Handuk</i>	Towel
6	H	<i>Harimau</i>	Tiger
7	H	<i>Hiu</i>	Shark
8	I	<i>Ibu</i>	Mother
9	I	<i>Itik</i>	Duck
10	J	<i>Jagung</i>	Corn
11	J	<i>Jaket</i>	Jacket
12	J	<i>Jambu</i>	Guava
13	J	<i>Jangkrik</i>	Cricket
14	J	<i>Jendela</i>	Window
15	J	<i>Jerapah</i>	Giraffe
16	J	<i>Jeruk</i>	Orange
17	K	<i>Kelapa</i>	Coconut
18	K	<i>Kipas</i>	Fan
19	K	<i>Koala</i>	Koala
20	K	<i>Kucing</i>	Cat
21	K	<i>Kuda</i>	Horse
22	K	<i>Kuman</i>	Germ
23	L	<i>Lalat</i>	Fly
24	L	<i>Lampu</i>	Lamp
25	L	<i>Lebah</i>	Bee
26	L	<i>Lemari</i>	Cupboard
27	L	<i>Lemon</i>	Lemon
28	L	<i>Lipán</i>	Centipede

After selecting teaching materials and determining new vocabulary, the planning stage continues to the third step, which is Word Card Design. At this stage, teachers create word card designs using the Canva application. This creation stage is aimed at organizing card designs into two categories: 1) Picture cards, which display attractive illustrations that correspond to the initial letters of the alphabet being studied. 2) Word cards, displaying words that correspond to the pictures.

Next, print the word cards. At this stage, teachers print the designed cards and ensure that the paper and size are suitable for students to hold. See Figure 1.

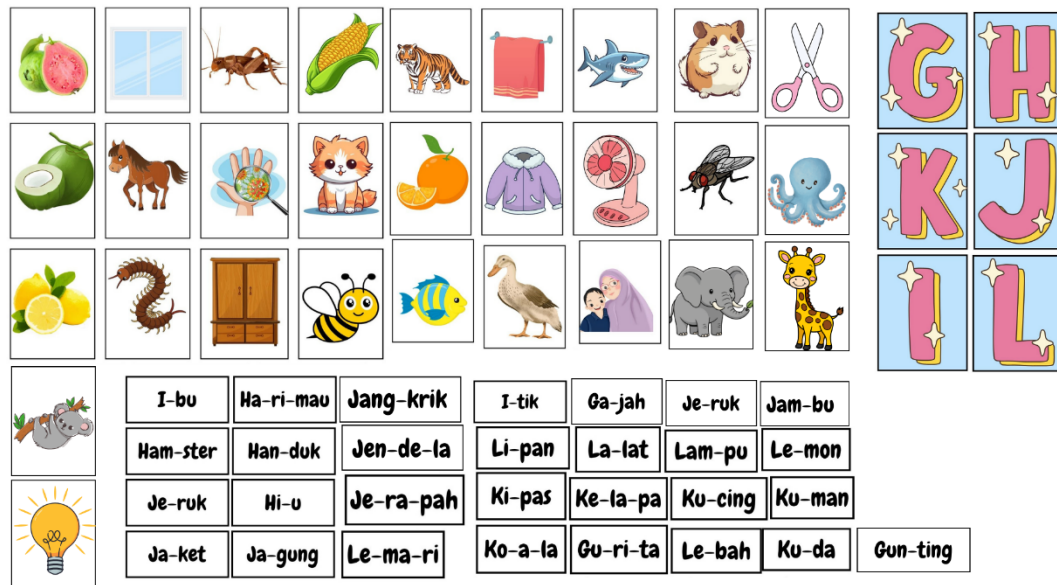


Figure 1. Printable Word Card Design

Implementation of ICM Media to Improve Indonesian Vocabulary Learning

During the implementation of ICM media, teachers use it as part of the Team Games Tournament learning method. The use of ICM is carried out through several actions in the learning process. First, introducing the alphabet using the phonics method. Before the game begins, teachers introduce the alphabet to students through the phonics method. Teachers teach the sounds of each letter and guide students in correct pronunciation. For example, “A” for “Apel,” “A” “A” “A,” “B” for “Baju” (clothes), “Beh,” “Beh,” “Beh,” and so on. This activity serves to ensure that students understand and know the shapes and sounds of the alphabet as a basis for developing vocabulary reading skills. Second, applying media to learning. At this stage, the teacher organizes the students into two groups: Group A consists of 12 students and Group B consists of 11 students. Group A focuses on the letters “J” and “L”. Meanwhile, Group B focuses on the letters “K” and “H.” Each student in a group receives a picture card. The teacher explains that the picture cards depict objects or items related to specific vocabulary.

After introducing the alphabet using the phonics method and applying learning media, the implementation stage continues to the third step, which is instructions and game rules. The teacher gave clear instructions and set the rules of the game: a) When it was their turn, each student had to find the word card that matched the picture on their picture card. b) After finding the right word card, the students stuck the picture and word cards on the corresponding letters on the foam board. c) The game lasted for 10 minutes, and each student had to follow the rules, remain orderly, and wait for their turn.

Fourth, implementation of ICM media through games. At this stage, students from each group take turns looking for matching picture cards and word cards. They then stick them on the alphabet letters provided by the teacher on the styrofoam board and return to their group. The game continues until the time is

up. While the game is in progress, the teacher supervises the process to ensure that students follow the rules and remain engaged. See Figure 2.



Figure 2. Implementation of ICM Media through Gaming

Fifth, ending the game. At this final stage, when the game time is up, the teacher counts the number of matching card pairs from each group. The group with the most card pairs receives a reward (such as a prize or verbal praise). The group with fewer pairs receives a minor punishment (for example, identifying vocabulary related to a specific letter chosen by the teacher). Thus, the implementation stage is complete. The five stages identified emerge as a combination of the use of ICM as a medium and TGT as a learning method.

Results of Using ICM Media to Improve Indonesian Vocabulary Learning

During the learning process, students worked in groups and were guided to arrange card pairs according to the letters of the alphabet displayed on the Styrofoam board. This learning approach using ICM showed significant results. A total of 17 out of 23 students successfully matched the cards correctly. Of those 17 students, 16 successfully matched the word cards according to the alphabet available on the Styrofoam board. Only one mismatch occurred in group B, where the card with the picture of “scissors” was matched with the word card ‘scissors’ but was incorrectly placed under the letter “K”. This mistake caused Group B to lose. However, in general, the students were able to match the vocabulary correctly. This indicates that ICM has significantly increased their Indonesian vocabulary. This far exceeds the previous vocabulary results, where students experienced stagnation in their Indonesian vocabulary. Look at Figure 3.



Figure 3. Student Group Work Results Using ICM

In terms of learning outcomes, Group A excelled in the number of correct card matches and speed of completing activities compared to Group B. However, both groups demonstrated a clear understanding of the game's objective, which was to expand their Indonesian vocabulary through interactive and enjoyable activities. This activity also highlighted the students' active participation, as they engaged in discussions and collaborated to complete tasks. This approach proved to be very effective for younger students, who benefited from visual and concrete methods when learning new vocabulary. The teacher told us: "With the team game tournament and Index Card Match (ICM) methods, students became much more participatory. It was very different from previous learning experiences. Now they are more active, and the students seem very enthusiastic. Some students even find it difficult to get their turn because other students are scrambling and really want to go first" (Interview P1, December 9, 2024).

Overall, the use of ICM media effectively supports students in improving their vocabulary mastery. Despite minor errors in the process, students successfully understand the learning objectives and participate actively in a fun and engaging way. This method also encouraged cognitive development, such as grouping based on alphabetical order, in addition to language learning. These findings indicate several areas for improvement, such as ensuring the accuracy of card pairs and providing clearer guidance to optimize the learning experience in future lessons.

On the other hand, another important and valuable aspect was the students' response to the use of ICM Media. At the beginning of the activity, students showed mixed reactions when ICM Media was introduced. Many students were unfamiliar with the term, prompting the teacher to provide detailed explanations of the game instructions. ICM Media was explained as a game in which picture cards are matched with word cards based on the alphabetical order provided. The teacher said to the students: "Today we will learn vocabulary using cards. Here, I have alphabet cards G-L, word cards, and picture cards. First, look at the pictures I have given you, then match them with the words I have provided. Then, stick them on the alphabet on the Styrofoam board. Make sure you stick the word cards according to the initial letters of the words you find, sticking them horizontally with the alphabet cards on the Styrofoam board." (P1 in Observation, December 7, 2024).

This explanation successfully sparked the students' curiosity and enthusiasm, as they appeared excited and eager to begin the activity. This finding was supported by the coherent statements of three students. "At first I was confused about what the cards were for. But after the teacher explained and I tried it, I started to like it" (Interview P3, December 7, 2024). Another student said, "Earlier, I went up and stuck (the word and picture cards) three times" (Interview P19, December 11, 2024). Their high enthusiasm even caused the students to jostle each other, as stated by one student: "I had trouble getting a turn because my friends kept cutting in line. So, I was late in sticking the cards on the Styrofoam" (Interview P14, December 7, 2024).

The above findings show that the learning stages described by the teacher were not immediately understood by the students. This is inseparable from the varying initial abilities of the students before the learning activity was carried out. However, when the practical stages began, the students' reactions became much more varied. Some students seemed to easily follow the directions, presumably because they were already able to understand each instruction. Meanwhile, some other students appeared confused at the beginning of the practice.

The observation results showed that when the game started, the classroom atmosphere became very dynamic. The excitement caused some students to break the queue or push their classmates because they were impatient to wait for their turn. "Ma'am, I haven't stuck it on yet, only my friend has" (P18 in observation, December 7, 2024).

This prompted the teacher to temporarily stop the game to restore order. After the students calmed down and the atmosphere became conducive again, the activity resumed and continued until the allotted time ended. "When I finally understood the game, suddenly the time was up. So I didn't get to stick (the media card) on the Styrofoam board" (Interview with P21, December 7, 2024). This statement implies that P21 was slow to understand the game procedure but was enthusiastic. He wanted to stick the card but ran out of cards.

The results of the interviews and observations, which show an increase in student engagement, enthusiasm, and excitement, further strengthen the evidence that ICM media is effective. Not only in improving learning outcomes, but also in attracting students to be more focused and involved in the process of learning Indonesian vocabulary in lower elementary education.

Discussions

The findings section has stated that the overall use of ICM is carried out in three stages. First, the planning stage, which includes: a) Selecting teaching materials that are appropriate for students' needs, b) Limiting the focus to the alphabet, c) Selecting contextual vocabulary, d) Designing media that is appropriate for students' initial abilities, e) The visual and aesthetic aspects of the media, f) The technical readiness of the media. Second, the implementation stage, which consists of: a) introduction to basic literacy concepts, b) organization of the classroom and media, c) rules and mechanisms of the game, d) implementation of media through games, e) evaluation and conclusion of the game. Third, the results of using ICM media in vocabulary learning. In it, new achievements emerged: a) Improved student vocabulary comprehension, b) Identification of conceptual errors and follow-up plans, c) Comparison of group performance, d) Student cognitive development, e) Meaningful and enjoyable learning, f) Initial unfamiliarity with the media, g) Emergence of curiosity and enthusiasm, h) Active and collaborative classroom dynamics, i) The role of teachers in classroom control. These results far exceed the objective conditions of Indonesian vocabulary learning identified in the pre-research period. This proves that the use of ICM is effective in Indonesian vocabulary learning.

Furthermore, for methodological transparency, the researcher grouped these new achievements into indicators of effectiveness. Please see Figure 4.



Figure 4. Mind Map the effectiveness of ICM

In Figure 4, new and valuable aspects obtained from the three stages of learning have been grouped according to effectiveness indicators (Cameron, 2015; Lanuza-Quimson & Vadil, 2024). The findings of this study indicate that the use of Index Card Match (ICM) media in Indonesian vocabulary learning in lower grades not only works as a simple game technique, but also forms a complete gradual learning ecology: highly focused planning, interactive implementation, and meaningful evaluation. At each stage, ICM proved capable of shifting learning from a dry, one-way transmission pattern to a constructive, collaborative, and emotionally positive learning experience for students who are just beginning to learn to read and speak.

At the planning stage, the teachers in this study did not simply “prepare the media,” but designed a literacy scaffolding system that was sensitive to the

developmental needs of lower grade students. The selectivity of teaching materials, the limitation of the focus to the alphabet, and the selection of contextual vocabulary demonstrate a didactic awareness that early childhood requires a measured and gradual cognitive load, not just vocabulary memorization exercises. The design of ICM media, which takes into account students' initial abilities, visual-aesthetic aspects, and technical readiness, makes the cards not just a game tool, but a multimodal medium that integrates text, images, and kinaesthetic experiences simultaneously.

At the implementation stage, the research findings show that ICM changed the classroom dynamics from a passive situation, which previously characterized pre-research vocabulary learning, to a space for interaction where basic literacy concepts, media organization, and game rules were internalized through experience. The process of introducing concepts, explaining game mechanics, managing groups, and implementing cards in matching activities progressively trains students to associate letters, sounds, and meanings in situations that demand attention, speed, and cooperation. The evaluation and conclusion of the game did not stop at giving scores, but served as a moment of joint reflection on the successes and mistakes that occurred during play, so that conceptual errors became material for follow-up, not just "low scores."

The learning outcome evaluation stage provided the richest findings. Nine new dimensions of achievement emerged: increased vocabulary comprehension, ability to identify conceptual errors, comparison of performance between groups, strengthening of cognitive development, and the emergence of meaningful and enjoyable learning, as stated by P19, who said, "the learning method was fun." The learning process shows that teachers managed the students' initial unfamiliarity with the media, increasing their curiosity and enthusiasm. Statement P3 "...after the teacher explained and I tried it, I started to like it" reinforces this enthusiasm. At the same time, the learning outcomes also recorded active and collaborative classroom dynamics, as well as the increasingly strategic role of teachers as classroom controllers and facilitators. These dimensions show that the effect of ICM in low-income classrooms is not only cognitive (increased vocabulary), but also affective, social, and regulatory (self-regulation and classroom management).

Theoretical Implication

Theoretically, this study expands the understanding of ICM effectiveness beyond the "before-after" model that focuses on test scores, as seen predominantly in quantitative studies that examine the effect of ICM on learning outcomes in various subjects. Oktaviani et al. (2024) and Devi et al. (2022) for example, show that ICM significantly improves academic achievement in Pancasila Education and science knowledge competencies through differences in average scores and statistical tests. This study adds a new layer: the effectiveness of ICM is proven through a more holistic configuration of indicators. These include the quality of planning, the interaction process, and the breadth of post-learning achievements, which are highly relevant to early literacy studies.

The findings on the integration of media design (visual, aesthetic, technical readiness) with the structure of card games also resonate with the literature on card and smart card media development, which emphasizes the importance of attractive, thematic, and easy-to-operate designs for elementary school students (Audia et al., 2021). However, this research positions card media not only as a learning technology product but as part of a “language learning ecosystem” that is deliberately mapped to letters, contextual vocabulary, and classroom interaction experiences. This is in line with the direction of ICM development, which has begun to integrate digital technology (augmented reality and “Match Up”) to enrich the learning experience without losing the essence of the matching game (Hidayat et al., 2020; Oktaviani et al., 2024).

Another theoretical significance is the strengthening of the argument that active learning based on card games can be an effective medium for developing meaningful early literacy, not just technical spelling skills. Dimensions such as the emergence of curiosity, enthusiasm, and collaborative dynamics reinforce the findings of Yulia et al. (2025), that ICM combined with QR Code cards gradually increases learning motivation and the quality of student interactions in IPAS learning. Thus, this study contributes to the theoretical corpus that views ICM as a learning model capable of simultaneously integrating the cognitive, affective, and social domains.

Practical Implication for Teacher and School

In practical terms, the findings of this study provide highly operational guidance for lower grade teachers who have had difficulty developing vocabulary learning that is both interesting and structured. The detailed planning steps, from letter and vocabulary selection to visual design and technical readiness, can be directly adopted as a template for card-based learning in early grades. Teachers no longer position games as interludes, but as the core of learning activities that are consciously directed to form connections between text, sound, meaning, and social interaction.

At the implementation level, procedures that emphasize classroom organization, explanation of rules, and facilitation of student interaction enable teachers to move from the role of “main explainer” to “stage director” who manages the flow of the game, the rhythm of the class, and the emotional atmosphere. This is in line with the experience of Husain & Abidin (2023), which shows that the application of ICM in the Fiqh learning through the stages of planning, implementation, evaluation - can transform a previously passive classroom into an environment where almost all students meet the indicators of learning activity.

At the evaluation stage, the practice of comparing performance between groups, identifying conceptual errors, and designing follow-up actions provides a concrete example of how ICM can serve as the basis for authentic assessment in language learning. This approach is richer than evaluations that focus solely on posttest scores, as is dominant in ICM studies in science and Pancasila (Devi et al., 2022; Oktaviani et al., 2024). For schools and curriculum designers, these findings

indicate that ICM can be positioned as one component of an early literacy strategy compatible with the demands of the Merdeka Curriculum to deliver active, collaborative, and contextual learning.

Comparison With Previous Relevant Studies

When compared to seven other studies, the results of this study show several points of similarity and superiority. In terms of consistency of results, this study is in line with the quantitative findings of Oktaviani et al. (2024) and Devi et al. (2022), which both show that ICM has a significant impact on improving learning outcomes in Pancasila and Science Education. Both emphasize that the card-matching game structure is able to activate students and deepen their understanding of concepts; this study confirms this pattern in the context of language literacy in lower grades with indicators of increased vocabulary comprehension and cognitive development.

Second, there is alignment with Arminiati et al. (2024), who combined ICM with Think Pair Share to improve early mathematics skills and cooperation in early childhood, as well as with Efendi (2022) and Yulia et al. (2025), who combined ICM with QR Codes to increase motivation to learn IPAS. Similar to these two studies, this research confirms that the strength of ICM lies in its ability to build healthy social interaction and collaboration; the active and collaborative classroom dynamics that emerged in the findings of this study are a concrete form of ICM's ability to encourage cooperation and communication among students.

Third, this study is in line with Hidayat et al. (2020) and Audia et al. (2021), who developed digital card and smart card media using the ADDIE model to make science learning more interesting and visual. Both emphasize the validity of the media and its suitability for use in the classroom based on expert assessment, while this study adds a contextual layer: how well-designed card media, inserted into a systematic learning planning and implementation flow, can produce rich literacy outcomes in lower grades.

Fourth, in terms of the meaningfulness of the learning experience, the findings on enjoyable learning, the emergence of enthusiasm, and increased student activity resonate strongly with the results of Yulia et al. (2025) and Husain & Abidin (2023), which document increased motivation, engagement, and learning activity after the implementation of ICM in different settings. This shows that even though the contexts and subjects are different (Fiqh, IPAS, Pancasila, Science, Mathematics, and Language Literacy), the pattern of ICM's impact on the affective and participatory dimensions of learning is relatively consistent.

The Novelty of Research

Compared to seven other studies that tended to focus on one main aspect, such as improving cognitive learning outcomes (Devi et al., 2022; Oktaviani et al., 2024), the development of specific competencies and cooperation (Arminiati et al., 2024), learning motivation (Yulia et al., 2025), media validity (Audia et al., 2021; Hidayat et al., 2020), or student activity in Fiqh (Husain & Abidin, 2023). This study has the advantage of a broad scope of effectiveness constructs. The indicators

produced not only show that ICM is “influential” or “feasible,” but also map in detail how planning, implementation, and evaluation are intertwined to produce vocabulary, cognitive, social, emotional, and managerial development in the classroom.

Furthermore, the focus on Indonesian vocabulary learning in lower grades, with particular attention to letter selection, contextual vocabulary, and students' initial experiences with media, has positioned this study as an important contribution to a relatively unexplored area in ICM literature, which has mostly focused on upper elementary school students, junior high school students, and non-language subjects (Audia et al., 2021; Devi et al., 2022; Oktaviani et al., 2024). Thus, this study not only confirms the effectiveness of ICM but also articulates how the model can be sensitively adapted to the context of early literacy in lower elementary education, while offering a practical framework for teachers and schools seeking to develop more humanistic, active, and enjoyable vocabulary learning.

CONCLUSION

When teachers encountered difficulties in expanding the Indonesian vocabulary of lower elementary school students, an initiative to use Index Card Match (ICM) media as an innovative approach emerged. This innovative practice was observed by this study using a qualitative approach with an exploratory case study method. Upon in-depth investigation, we observed that ICM Media had been used in three complete stages of learning. After evaluation, we found new aspects that were obtained: a) Increased student vocabulary comprehension; b) Identification of conceptual errors and follow-up plans; c) Comparison of group performance; d) Student cognitive development; e) Meaningful and enjoyable learning; f) Initial unfamiliarity with the media; g) The emergence of curiosity and enthusiasm; h) Active and collaborative classroom dynamics; i) The role of teachers in classroom control. This presents strong evidence that ICM media is effective in improving Indonesian vocabulary mastery. At the same time, it is effective in triggering enthusiasm, focus, and student engagement in learning.

The results of this study present a more comprehensive theoretical contribution compared to previous research findings. Instead of only presenting numerical measurements of certain partial stages of learning, the results of this study holistically encrypt all stages of ICM utilization. Practically, the results of this study provide operational guidelines for lower grade teachers who have had difficulty developing vocabulary learning, so that learning becomes more interesting but still structured. Detailed planning steps, from the selection of letters and vocabulary to visual design and technical readiness, can be directly adopted as a template for card-based learning designs in early grades. This allows the results of this study to be adapted into learning activities that aim to improve vocabulary in various contexts of basic education institutions around the world. Finally, further research using a quasi-experimental approach to test the results of this study is recommended.

Limitations

The case study that found evidence of this success was obtained in a very specific context, namely the acquisition of Indonesian vocabulary by lower grade elementary school students. As a result, the use of ICM in the context of students at different levels is believed to require certain developments or adjustments.

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