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The Effectiveness of Index Card Match Method to Increase Motivation and Learning Outcomes in English Lessons Among Fifth-Grade Students at MI Al-Hidayah Karangtanjung

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Abstract

This study examined the implementation of the Index Card Match (ICM) method in English learning to improve fifth-grade students' learning motivation and learning outcomes at MI Al-Hidayah Karangtanjung. The study used a quantitative pretest–posttest approach supported by classroom observation, teacher interview, and self-reflection. The participants were 19 fifth-grade students in the 2025/2026 academic year. The instructional topic was "Adjectives of Taste." Students completed a pretest before the ICM activity and a posttest afterward. Classroom observations were used to describe students' attention, participation, enthusiasm, collaboration, and task responsibility. The descriptive results showed that the mean pretest score was 6.53 (69.41 on a 100-point scale), whereas the mean posttest score was 9.37 (93.68 on a 100-point scale). The mean raw-score progress was 2.05 points. Observation and reflection data also indicated greater student engagement during the card-matching activity: students participated actively, discussed with peers, remained focused, and presented their results. The findings suggest that ICM is a promising active-learning strategy for elementary English instruction, particularly for vocabulary and concept-recall activities. However, because the study involved one class without a control group and the motivation measure was observational rather than a validated pre–post motivation scale, the findings should be interpreted as descriptive evidence of improvement rather than definitive causal proof.

Keywords: *Index Card Match, learning motivation, active learning, elementary education.*

Introduction

Language is central to human interaction because it enables people to communicate ideas, emotions, facts, and directions. English has an important international role in business, technology, tourism, and global communication. For elementary learners, early exposure to English can provide opportunities to develop vocabulary and communicative competence. However, English learning at the elementary level can be challenging because students encounter unfamiliar vocabulary, linguistic structures, and pronunciation (Ajiza & Rahman, 2023; Susanthi, 2020).

The thesis underlying this article identifies a classroom problem at MI Al-Hidayah Karangtanjung: English learning was frequently dominated by lectures, question-and-answer sessions, and written exercises, while student participation was limited and often concentrated among a few learners. The classroom teacher also reported that English was challenging for students because it was not their native language. These conditions created a need for an instructional strategy that could make learning more interactive and accessible.

One strategy considered suitable for this context is Index Card Match (ICM). ICM is an active-learning technique in which students receive cards containing questions, statements, pictures, or answers and then search for the card that forms a correct pair. The activity requires students to move, communicate, compare information, and work with peers. Previous studies cited in the thesis reported positive results from ICM in vocabulary, mathematics, social studies, science, and other learning contexts (Amir et al., 2021; Annisa & Marlina, 2019; Ariani & Setianingsih, 2018; Nazariah, 2020; Prabowo et al., 2020).

Learning motivation is also important because students who are motivated tend to devote attention and effort toward learning goals. Motivation can be influenced by internal factors and by external conditions such as rewards, a pleasant learning atmosphere, and engaging activities (Fernando et al., 2024). In cooperative learning, interaction with peers can support participation and create opportunities for learners to construct understanding through shared activity (Slavin, 2005, 2006).

Based on this rationale, the present article reports the study of ICM implementation in fifth-grade English learning on the topic "Adjectives of Taste." The study focuses on two outcomes: students' learning engagement/motivation as reflected in classroom observation and reflection, and students' learning outcomes as reflected in pretest and posttest performance.

Literature Review

English Language Learning and Learning Outcomes

English learning involves the development of vocabulary, grammar, pronunciation, and the four language skills: listening, speaking, reading, and writing. Brown (2007) emphasizes that language learning involves regular practice so that learners can use language effectively. Oxford (1990) further highlights the importance of learning strategies that help learners understand, retain, and apply language knowledge. In this study, ICM functions as an instructional strategy that gives students repeated opportunities to recognize and apply vocabulary related to tastes.

Learning outcomes refer to changes or competencies acquired through learning experiences and may involve cognitive, affective, and psychomotor dimensions. In the present study, the cognitive dimension is represented by students' performance on the vocabulary test, while the affective/behavioral dimension is described through classroom engagement and motivation indicators.

Learning Motivation

Learning motivation is the set of internal and external forces that initiates, sustains, and directs learning activity toward particular goals. Sardiman (2011) places motivation in relation to students' enthusiasm and persistence in learning. The study therefore observed behaviors associated with motivation, including attention, questioning and answering, participation, enthusiasm, peer collaboration, and responsible completion of tasks.

Index Card Match

ICM is an active-learning strategy designed to make review and concept retrieval more engaging. The basic procedure involves preparing paired cards, distributing them among students, asking students to find their matching partners, and then having pairs explain or present their answers. The strategy can encourage active participation, cooperation, responsibility, and attention, although it also requires careful preparation,

clear instructions, time management, and classroom control (Silberman, 2009; Sularsih & Muammar, 2020).

The ICM procedure in the present lesson was adapted to the "Adjectives of Taste" topic. One set of cards contained food names or pictures and the other contained taste adjectives. Students searched for matching pairs and then stated their matches aloud, such as "Lemon is sour." This design connected vocabulary recognition with peer interaction and oral production.

Previous Studies

The thesis reviewed several studies related to ICM. Ariani and Setianingsih (2018) reported vocabulary improvement associated with ICM-based instruction. Nazariah (2020) found that ICM could increase motivation and learning outcomes in social studies. Amir et al. (2021) reported increased motivation and learning outcomes in integrated science. Prabowo et al. (2020) found that cooperative ICM improved learning outcomes among fifth-grade students. These studies provide a rationale for examining ICM in elementary English learning, while the present study focuses specifically on "Adjectives of Taste" and combines test results with classroom observation.

Method

Research Design and Participants

The study used a quantitative pretest–posttest design supported by descriptive classroom observations, teacher interview, and researcher self-reflection. The research was conducted at MI Al-Hidayah Karangtanjung, Alian District, Kebumen Regency, Central Java. The participants were 19 fifth-grade students in the 2025/2026 academic year. The research activities included an interview with the English teacher on July 16, 2025; classroom observation and pretest on July 23, 2025; implementation of ICM on July 30, 2025; and posttest administration after the intervention. The findings section of the thesis also identifies August 2, 2025 as the study date for the English lesson; this inconsistency is retained here as a source limitation rather than being silently corrected.

Instruments and Data Collection

Three main forms of evidence were used. First, a teacher interview explored existing teaching practices, student engagement, learning outcomes, and perceived classroom difficulties. Second, observation sheets assessed teacher implementation and student behavior. Student indicators included attention, asking or answering questions, participation, enthusiasm, collaboration, and responsible task completion. Third, a ten-item vocabulary test was administered before and after the ICM activity. Documentation and researcher self-reflection were used as supporting evidence.

Data Analysis

Pretest and posttest scores were summarized using the mean, median, standard deviation, and score progress. The source thesis also reports raw scores and scores converted to a 100-point scale. Because there was no comparison group and no inferential test is reported in the source, the article limits interpretation to descriptive change. Observation, interview, and reflection data were interpreted by identifying recurring patterns in attention, participation, collaboration, enthusiasm, and understanding.

Learning Procedure

The 60-minute lesson consisted of a 10-minute pre-activity, a 40-minute main activity, and a 10-minute post-activity. During the main activity, the teacher introduced taste vocabulary, distributed paired cards, instructed students to find their matching partners, and asked pairs to state their matches aloud. The lesson used vocabulary such as sweet, sour, salty, bitter, spicy, and savory, with examples including lemon, honey, chili, salty fish, dates, and bitter melon.

Results

Classroom Engagement and Motivation

Before the ICM intervention, the observation data showed limited engagement. Attention and task completion were observed at the "sometimes" level, while questioning/answering, participation, enthusiasm, and peer collaboration were generally recorded at the "rarely" level. The teacher interview similarly described a classroom in which participation was limited and often dominated by a small number of students.

During the ICM activity, the researcher's reflection reported that students actively matched cards, discussed answers with peers, remained focused, and participated enthusiastically. Students were able to follow the instructions, present group results, and respond to questions more confidently. These observations provide descriptive evidence of increased engagement during the intervention, although they do not constitute a standardized quantitative motivation gain score.

Table 1. Summary of observed engagement indicators

No	Indicator	Before ICM	During/after ICM
1	Attention during lesson	Sometimes	Yes/maintained during activity
2	Questions/answers	Rarely	Active participation reported
3	Participation	Rarely	Active in card-matching
4	Enthusiasm	Rarely	Enthusiastic
5	Peer collaboration	Rarely	Positive collaboration
6	Task completion	Sometimes	Students completed/presented tasks

Learning Outcomes

The pretest and posttest results show a clear descriptive increase. Among the 17 students with both pretest and posttest scores, the mean raw pretest score was 6.53 (69.41/100), while the mean raw posttest score was 9.37 (93.68/100). The reported mean progress was 2.05 raw-score points. Two students did not have pretest scores recorded and were therefore excluded from the pretest descriptive statistics.

Table 2. Descriptive statistics of test performance

Measure	Mean	Median	SD
Pretest raw score	6.53	6.00	2.79
Pretest grade	69.41	60.00	27.93
Posttest raw score	9.37	10.00	0.90
Posttest grade	93.68	100.00	8.99
Progress	2.05	2.00	2.43

The individual data show that most students improved after the intervention. Several students reached a posttest raw score of 10, while a small number showed no change or a decrease. The source data therefore support a general upward trend but also show individual variation.

Table 3. Individual pretest–posttest raw scores

Student	Pretest	Posttest	Progress
S1	5	10	5
S2	6	10	4
S3	10	10	0
S4	5	7	2
S5	1	7	6
S6	8	9	1
S7	10	10	0
S8	10	7	-3
S9	6	10	4
S10	10	9	-1
S11	8	10	2
S12	9	10	1
S13	1	9	8
S14	6	10	4
S15	5	10	5
S16	10	9	-1
S17	8	10	2
S18	—	10	—
S19	—	10	—

The descriptive findings indicate that ICM created a more active classroom environment than the baseline condition described in the study. The activity required students to search for matching information, interact with classmates, and explain the result. This is consistent with the cooperative-learning perspective that structured peer interaction can support participation and learning (Slavin, 2005, 2006). It is also consistent with the active-learning principle that students learn through doing, discussing, and processing information rather than only listening to teacher explanations (Silberman, 2009).

The increase in test performance is also consistent with previous ICM studies cited in the thesis. Ariani and Setianingsih (2018) reported benefits for vocabulary learning, while Amir et al. (2021) and Nazariah (2020) reported improvements in motivation and/or learning outcomes in other subject areas. The present study extends this line of work to fifth-grade English learning, particularly vocabulary describing taste.

A possible explanation is that ICM provides repeated retrieval and immediate peer discussion. Students do not merely see the word “sour” or “sweet”; they must connect the adjective to a food example and communicate the relationship. This contextual and social processing may help learners remember vocabulary. However, the present design cannot isolate the ICM effect from other factors such as teacher explanation, repeated exposure, or the pretest itself.

The motivation finding should be interpreted carefully. The study reports increased enthusiasm, attention, collaboration, and participation, but the motivation instrument was an observation sheet rather than a validated standardized scale administered before and after the intervention. Thus, the strongest conclusion supported by the data is that student engagement and observable motivational behaviors improved

during the ICM lesson, not that a statistically significant change in motivation was established.

The study also has methodological inconsistencies that should be acknowledged. The thesis alternately describes the research as quantitative and qualitative, while the data include numerical pretest–posttest scores and descriptive observations. In addition, the reported number of participants is 19, but only 17 have recorded pretest scores. Finally, the research date is reported differently in the method and results sections. These issues do not invalidate the descriptive pattern, but they limit the strength of causal claims and should be addressed in future research.

Discussion

The descriptive findings indicate that ICM created a more active classroom environment than the baseline condition described in the study. The activity required students to search for matching information, interact with classmates, and explain the result. This is consistent with the cooperative-learning perspective that structured peer interaction can support participation and learning (Slavin, 2005, 2006). It is also consistent with the active-learning principle that students learn through doing, discussing, and processing information rather than only listening to teacher explanations (Silberman, 2009).

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Conclusion

The study indicates that the Index Card Match method was associated with increased classroom engagement and improved English learning outcomes among fifth-grade students at MI Al-Hidayah Karangtanjung. Students became more active in

matching cards, collaborating, presenting answers, and responding to questions. The mean raw test score increased from 6.53 before the intervention to 9.37 after the intervention, while the mean converted score increased from 69.41 to 93.68.

ICM can therefore be considered a promising active-learning strategy for elementary English lessons, especially vocabulary topics that can be represented through paired concepts, pictures, or examples. Nevertheless, the evidence should be interpreted as descriptive because the study used one class, had no control group, and did not employ a validated quantitative pre–post motivation scale. Future studies should use larger samples, a comparison group, validated motivation instruments, and inferential statistical tests to provide stronger evidence of effectiveness.

Implications

For teachers, ICM can be used as a variation from lecture-dominated instruction, particularly when teaching vocabulary and review material. Clear demonstrations, carefully prepared cards, classroom rules, and time management are important because the activity can initially create confusion or noise. For schools, professional development in active and cooperative learning can support teachers in implementing such methods effectively. For researchers, future work should examine ICM using stronger experimental or quasi-experimental designs and investigate retention, speaking performance, communication, and collaboration.

References

Ajiza, M., & Rahman, A. (2023). Strategi pembelajaran Bahasa Inggris pada siswa sekolah dasar. *Jurnal Komunitas: Jurnal Pengabdian kepada Masyarakat*, 5(2), 215–220.

Amir, A., Azmin, N., Rubianti, I., & Olahairullah. (2021). Meningkatkan motivasi dan hasil belajar siswa melalui model pembelajaran Index Card Match pada pelajaran IPA terpadu. *Jurnal PIPA: Pendidikan Ilmu Pengetahuan Alam,* 2(1), 1–6. https://jurnal.habi.ac.id/index.php/JP-IPA

Annisa, F., & Marlina, M. (2019). Penerapan model pembelajaran kooperatif tipe Index Card Match terhadap aktivitas dan hasil belajar matematika peserta didik. *Jurnal Basicedu,* 3(4), 1047–1054. https://doi.org/10.31004/basicedu.v3i4.209

Ariani, S., & Setianingsih, T. (2018). The effectiveness of using Index Card Match in teaching vocabulary. *Jo-ELT (Journal of English Language Teaching),* 5(2), 107. https://doi.org/10.33394/jo-elt.v5i2.2309

Brown, H. D. (2007). *Principles of language learning and teaching* (5th ed.). Pearson Longman.

Fernando, Y., Andriani, P., & Syam, H. (2024). Pentingnya motivasi belajar dalam meningkatkan hasil belajar siswa. *ALFIHRIS: Jurnal Inspirasi Pendidikan,* 2(3), 61–68. https://doi.org/10.59246/alfihris.v2i3.843

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know.* Heinle & Heinle Publishers.

Prabowo, W. R., Purnomo, D., & Mushafanah, Q. (2020). Metode kooperatif tipe Index Card Match meningkatkan hasil belajar siswa kelas V pada tema Peristiwa dalam Kehidupan. *Jurnal Mimbar Ilmu*, 25(3), 380–390.

Sardiman, A. M. (2011). *Interaksi dan motivasi belajar mengajar. Rajawali* Pers.

Silberman, M. (2009). Active learning: 101 strategies to teach any subject. Allyn & Bacon.

Slavin, R. E. (2005). Cooperative learning: Theory, research, and practice (2nd ed.). Allyn & Bacon.

Slavin, R. E. (2006). Educational psychology: Theory and practice. Pearson Education.

Sularsih, E. Y., & Muammar. (2020). Penerapan strategi Index Card Match pada pembelajaran tema "Menuju Masyarakat Sejahtera" kelas VI di MI Muhammadiyah Losari. *Al-Miskawaih,* 1(2), 132–154. https://journal.stitpemalang.ac.id/index.php/al-miskawaih/article/view/340

Susanthi, I. G. A. A. D. (2020). Kendala dalam belajar Bahasa Inggris dan cara mengatasinya. *Linguistic Community Services Journal*, 1(2), 64–70. https://doi.org/10.55637/licosjournal.1.2.2658.64-70