Journal of English Educational Study (JEES)
Volume 8 Issue 2 November 2025 Page 234-243
E-ISSN:2655-0776

EXPLORING PEER COOPERATIVE LEARNING THROUGH INDEX CARD MATCH IN ENGLISH LANGUAGE CLASSROOM: A CASE STUDY AT AN ELEMENTARY SCHOOL IN BANDUNG

Jihan Choirunnisa, Rojab Siti Rodliyah
Universitas Pendidikan Indonesia
jihan.choirunnisa.ag@upi.edu, rojab.siti@gmail.com

Submitted: 2025-07-04
Accepted: 2025-07-17

Abstract: Addressing the need for interactive and socially mediated language strategies in Indonesian classrooms, this qualitative case study explores how do students' social development processes, within the context of peer cooperative learning, unfold during the implementation of Index Card Match (ICM) in a sixth-grade English as a Foreign Language (EFL) classroom in Bandung. Rooted in Vygotsky's sociocultural theory, the study specifically focuses on fostering students' social development through social mediation and cooperative behaviors within small-group interaction, a key goal of the Emancipated Curriculum. Twenty-five students participated in six ICM sessions, working in five small groups. Data were collected through classroom observations, field notes, and semi-structured interviews, analyzed thematically using Saldaña's coding framework. Findings reveal six interconnected themes that characterize the cooperative process: (1) peer mediation and verbal scaffolding, (2) collaborative role negotiation, (3) self and peer regulation in task engagement, (4) clarification and meaning-making, (5) positive emotional climate and motivation, and (6) challenges and resolution in cooperative learning. While this study does not quantitatively assess learning outcomes, the insights highlight how ICM supports the creation of an interactive, supportive, and student-driven learning environment. These findings suggest that ICM is a practical and culturally responsive strategy for promoting social growth in young EFL learners.

Keywords**:** Cooperative Learning; Peer Interaction; Index Card Match; EFL; Elementary Education

INTRODUCTION

Cooperative learning has become an influential pedagogical approach in contemporary education, especially in student-centered language classrooms. It organizes students into small groups that work interdependently toward shared academic goals, fostering both cognitive and social development. Core elements which consist of positive interdependence, individual accountability, promotive interaction, social skills, and group processing are widely acknowledged as essential to effective collaboration (Gillies, 2016; Karmina et al., 2021). Grounded in Vygotsky's (1987) sociocultural theory, cooperative learning views peer interaction as a mechanism for scaffolding language acquisition and cognitive growth with teachers acting as facilitators who guide learners in co-constructing meaning through dialogue (Karmina et al., 2021; Gillies, 2016; Chairinkam & Yawiloeng, 2021).

In EFL contexts, cooperative learning has been shown to reduce affective barriers and foster authentic communicative opportunities. This aligns strongly with the current Indonesian

education reform, the Emancipated Curriculum, which emphasizes interactional learning and the development of collaborative social skills as core student competencies. Compared to traditional teacher-centered instruction, cooperative environments offer safer, low-anxiety spaces that encourage language production and peer support (Krashen, 1985; Bećirović et al., 2022). These advantages are particularly salient where communal values such as *gotong royong* (mutual assistance) align well with the collaborative ethos of cooperative learning (Kusnandar & Rachmawati, 2024; Demitra & Sarjoko, 2018)

Among various cooperative strategies, Index Card Match (ICM) stands out for combining movement, interaction, and conceptual reinforcement. Students are given cards with questions or answers and must interact to find matching pairs, stimulating active participation, negotiation, and peer scaffolding (Silberman, 1996). Empirical studies consistently report that ICM improves quantitative outcomes such as vocabulary mastery, enhances motivation and engagement, and promotes memory retention and group collaboration (Kusnandar & Rachmawati, 2024; Trinova et al., 2023; Zhang, 2024; Schoor et al., 2015; Ibrahim et al., 2023)

However, despite these reported quantitative benefits, a significant gap exists in understanding the micro-level processes of ICM. Research has primarily focused on test scores and motivational surveys, largely overlooking how cooperative learning unfolds at the level of peer discourse, social negotiation, and group dynamics (Fitriyah & Fauzi, 2020; Astuti & Barratt, 2021; Dani et al., 2018; Norito et al., 2019). This qualitative gap is particularly critical in Indonesian primary EFL settings, where teachers need detailed evidence on how best to facilitate social growth alongside language learning. In the sixth-grade research site, the English teacher reported low student participation and learning outcomes during individual tasks, underscoring the need for effective cooperative strategies like ICM.

This study aims to investigate the nature of social development and cooperative behavior during Index Card Match sessions. Specifically, this study seeks to answer the following research question: How do students' social development processes, within the context of peer cooperative learning, unfold during the implementation of Index Card Match (ICM) in a sixth-grade English as a Foreign Language (EFL) classroom in Bandung.

METHOD

This study employed a qualitative case study (Stake, 1995; Yin, 2018) to explore how do students' social development processes, within the context of peer cooperative learning, unfold during the implementation of Index Card Match (ICM) in a sixth-grade English as a Foreign Language (EFL) classroom in Bandung. The research site was an elementary school operating under the Emancipated Curriculum, focusing on one intact class of 25 students (aged 10–12; 12 females and 13 males). These students come from varied linguistic backgrounds, with Indonesian

as their first language and Sundanese as their second. The scope of inquiry centered on the implementation of a structured ICM intervention and its influence on students' cooperative learning dynamics. The classroom served as both the unit and site of analysis, in which the six-session intervention unfolded in real instructional time.

Data were comprehensively gathered by the lead researcher using three complementary instruments. First, the Cooperative Learning Observation Sheet, adapted from Johnson and Johnson (2008) and Prieto-Saborit et al. (2022), was used by the lead researcher to record structured behavioral indicators, enhanced with Vygotskian indicators of peer scaffolding and Zone of Proximal Development (Vygotsky, 1978). Second, rich field notes were recorded by three observers (the lead researcher, the classroom teacher, and a researcher's assistant) during and immediately after each ICM session. The lead researcher primarily focused on peer discourse, while the classroom teacher provided contextual validation, and the assistant managed behavioral log notes. Third, semi-structured interviews were conducted by the lead researcher with rotating groups of five students (ensuring all students were interviewed by the final session), guided by protocols from Johnson and Johnson (2008), Topping et al. (2017), and Prieto-Saborit et al. (2022). These tools captured behavioral, contextual, and reflective data on cooperative interactions and EFL learning. Six sessions were conducted in accordance with the regular syllabus, with students engaging in the required peer matching activities within small groups.

Thematic analysis was conducted using Saldaña (2021) coding framework, involving first-cycle (descriptive, *in vivo*, and process codes) and second-cycle coding (pattern codes) to construct the six themes. Credibility was established through triangulation across these complementary sources (Miles et al., 2014). Finally, the study was prepared through ethical clearance from the school's review board, alongside a review of the primary instruments by the homeroom teacher to ensure contextual relevance.

FINDING AND DISCUSSION

The thematic analysis resulted in six major themes, reflecting students' cooperative behavior and social mediation during ICM sessions. Table 1 summarizes these themes, accompanied by illustrative excerpts from observation sheet, field notes, and interviews.

Table 1.

Example of Observed Cooperative Learning Behaviors and Social Mediation

Theme	Observation Sheet	Field Notes	Interview
Peer Mediation and Verbal Scaffolding	P1-G6, P2-G1, P2-G2	Students spontaneously corrected pronunciation and modeled phrases slowly for their peers. S2 (G2) helped his peer pronounce "thank you very much" by repeating it slowly: "Try slowly… thank you… very much." The peer nodded and repeated	S2-G2: "When my friend didn't know, I helped him to say the word. I say slowly."

		after him. S9 (G4) whispered a phrase to a classmate who hesitated to read, tapping the table for rhythm: "You can say it like this." Both students continued reading the cards together.	S9-G4: "Sometimes I forget the words, but my friend say it again and I follow."
Collaborative Role Negotiation	P2-G2, P3-G3, P4-G4	Students took turns reading, flipping, and matching cards without teacher instruction. S3 (G3) began by reading a card aloud: "I'll read first, okay?" After several turns, S14 said, "Now let me, so we take turns." S4 (G4) said, "I'm always the one reading," and another responded, "Okay, now it's my turn." They rotated roles after every few turns without being prompted by the teacher.	S2-G2: "I picked the card, and my friend read it. We took turns too." S3-G4 (Field notes paraphrased): "You choose now, I already did it twice."
Self and Peer Regulation	P1-G6, P2-G1	Students reminded each other to stay focused and continue with the task. S17 (G2) noticed a teammate daydreaming and slid a card forward, saying, "Try this one first." The teammate nodded and re-engaged. S21 (G5) was momentarily distracted, and a peer said, "Come on, hurry!" S21 laughed briefly and then returned to the activity and began reading the card.	S17-G2: "I saw my friend just sitting there, so I gave them a card and said, 'Try this one first.'" S21-G5: "I kind of spaced out, but my friend said, 'Come on, hurry!' so I jumped in…"
Clarification and Meaning-Making	P2-G2, P3-G3	Students discussed unfamiliar phrases and clarified meaning through peer interaction. S13 (G3) read aloud, "See you later? *Lihat kamu nanti?*" S14 replied, "No, *sampai jumpa nanti*.". They then resumed reading the cards together.	S13-G3: "I asked my friend, "Nice to meet you means *bagus ketemu kamu*, right?" S14- G3: "No, it means *senang bertemu denganmu.*" S13-G3: "My group say to me the right sentence. I repeat after them."
Positive Emotional Climate	P5-G5, P1-G1	Students expressed enjoyment and encouraged each other. S20 (G5) shouted, "We won!" after completing their card matching. Teammates gave high-fives and laughed together. S1 (G1) offered a suggestion for arranging the cards. After it worked, a peer said, "That was a good idea!" S1 smiled proudly.	S1-G1: "It felt nice when my friend liked my idea." S20-G5: "We laugh together when we win the match."
Challenges and Resolution	P4-G4, P3-G3	Students encountered confusion with cards and asked for help from other groups. S8 (G4) was confused by having two cards that said "Nice to meet you." He asked, "Why are both the same?" The group was unsure, so they approached G3. S7 (G3) said, "One of them should be 'Nice to meet you too'." After hearing that, S8 and his group returned and fixed the card pair.	S7-G3: "Who put that?" S7-G3: "Let's check again slowly, don't blame each other." S8-G4: "We ask Group 3. They say, 'One is meet you, one is meet you too.'"

Peer Mediation and Verbal Scaffolding

One of the most prominent themes was the frequent display of peer mediation through spontaneous verbal scaffolding during the ICM activities. Students consistently demonstrated

peer assistance in the form of modeling, repeating, paraphrasing, or spelling out words to address confusion or hesitation. Such peer-teaching behavior powerfully reflects Vygotsky's Sociocultural Theory, providing concrete evidence that the Zone of Proximal Development (ZPD) is active within the peer group, where students alternate roles as the More Knowledgeable Other (MKO) (Vygotsky, 1978).

Many students actively sought help from peers to understand vocabulary or grammar points and, conversely, readily took on the role of "peer tutors" to explain concepts. For instance, a student recounted how they clarified a pronunciation issue for a classmate:

"My friend misread 'washed', and I helped him spell it" (Session 1, S25).

Another student described asking a peer about a word meaning and receiving an explanation with visual cues and verbal scaffolding:

"I asked my friend what 'cycling' means, and he explained while pointing at the picture and said sepedahan" (Session 4, S13).

These excerpts illustrate how students naturally turned to each other as resources, allowing less proficient students to progress with support.

Notably, this process offered a dual benefit. The less proficient students were scaffolded into performing tasks above their individual capability, while the "tutors" benefitted from cognitive elaboration. By having to articulate rules (e.g., explaining past tense "needs -ed") or spell out words, the student-tutors reinforced their own knowledge, aligning with Slavin's developmental and cognitive perspectives on cooperative learning (Slavin, 2014). This dynamic not only facilitated immediate understanding but also fostered an interactive atmosphere, demonstrating a peer-driven learning environment consistent with Vygotskyan theory. Evidently, peer scaffolding within ICM can redistribute cognitive authority from teachers to students, supporting the shift toward learner autonomy and dialogic learning.

Collaborative Role Negotiation

Collaborative role negotiation emerged as a critical feature that ensured individual accountability and equitable participation across all sessions. Unlike classrooms where group work often results in dominance by a few, the ICM structure encouraged students to take initiative in deciding who would read, write, organize, or speak. These decisions, often non-verbal or negotiated through subtle pauses, reflected a maturing awareness of social cues and turn-taking norms.

The process of shared responsibility was highlighted by a student: *"I picked the card, and my friend read it. We took turns too"* (Interview, S2–G2). In another group, a student proactively shaped the workflow: *"I will be the one to stick it on the paper, you guys help find it!"* (Field Notes, S15–G5).

This behavior signified a growing internalization of fairness and an emerging sensitivity to equitable participation within their groups. From a language learning lens, this flexible role-

shifting prevented dominance by high-proficiency learners and increased the frequency of oral production among all students. From a social standpoint, this dynamic allowed learners to build crucial negotiation skills and respect group consensus, thus strengthening the group's capacity for collective action. Collectively, such collaborative exchanges reflect early socialization into democratic classroom culture, illustrating how cooperative learning can nurture agency and shared responsibility.

Self and Peer Regulation in Task Engagement

A marked developmental shift occurred where students moved from relying on teacher reminders to self-initiating and maintaining focus, demonstrating strong task ownership. Instances where students spontaneously nudged disengaged peers, re-established group attention, or distributed turns reflect the process of co-regulation, the shared executive function of maintaining task focus (Hadwin, et al., 2011).

> One student described the prompt received: *"I kind of spaced out, but my friend said, 'Come on, hurry!' so I jumped in…" (Interview, S21, G5).* Another instance showed peer intervention: *"I saw my friend just sitting there, so I gave them a card and said, 'Try this one first'" (Interview, S17, G2).*

This shift from external reliance to internal, peer-driven prompts is a critical step toward Vygotskyan self-regulation. When students manage their own and each other's attention, they ensure that communicative practice remains uninterrupted and signal trust among peers, as correction is received as support. While role negotiation reflects students' growing awareness of fairness and turn-taking, self and peer regulation highlight their shared accountability in maintaining focus and sustaining group productivity. Together, these behaviors signify students' emerging sense of autonomy and collective responsibility within a democratic classroom culture.

Clarification and Meaning-Making

Beyond initial scaffolding, deeper linguistic work was captured in episodes of clarification and negotiation of meaning. These episodes occurred when students encountered unfamiliar vocabulary or grammatical complexities. Instead of halting the task to rely on the teacher, students collaboratively resolved confusion through restatement, synonyms, body language, or strategic use of the L1. Such moments signal learners' intellectual investment in the task and their willingness to engage in exploratory talk.

The use of L1 was a strategic resource. The phenomenon of utilizing multiple languages to make sense of content is known as translanguaging (Cenoz & Gorter, 2017). This translanguaging served a critical purpose in the ICM sessions. Critically, this strategy acted as a cognitive mediation tool, allowing students to stabilize the English concept in their primary linguistic schema before re-encoding the meaning back into English, thereby preserving the task flow and honoring their linguistic repertoires.

The process of translating was observed when a student asked, *"Nice to meet you means bagus ketemu kamu, right?" and another quickly responded, "No, it means senang bertemu denganmu" (Interview, S13–S14).* Another student described asking a peer about a word meaning and receiving an explanation with visual cues: *"I asked my friend what 'cycling' means, and he explained while pointing at the picture and said sepedahan" (Interview, S13).*

Such collaborative meaning-making processes are essential for effective language acquisition, as students are not merely memorizing but actively negotiating meaning, which leads to deeper cognitive processing and longer retention. This mechanism confirms that peer interaction is an instrumental resource in the collaborative construction of knowledge. These patterns underscore the pedagogical importance of legitimizing translanguaging as a resource rather than a hindrance, especially in multilingual EFL contexts like Indonesia, where students' first languages can scaffold deeper conceptual understanding.

Positive Emotional Climate and Motivation

The interactive and cooperative nature of the ICM sessions successfully created a positive emotional climate that directly boosted students' confidence and motivation. This climate, characterized by peer encouragement, laughter, shared excitement, and collective celebration, effectively lowered the affective filter (Krashen, 1985). This is vital in EFL settings, as the safe peer environment mitigates the fear of embarrassment or failure, unlocking learners' willingness to engage in language risk-taking.

A student noted a growth in confidence: *"I feel more confident speaking English because we often practice together." (Session 1, S21)*. The enjoyment was also evident: *"My friend and I made a story from the cards, and it was fun to read it."* (Session 5, S19).

From a Social-Emotional Learning (SEL) perspective, the joy of shared success functions as social reinforcement, collectively validating effort and sustaining motivation. This pattern aligns closely with Slavin's motivational theory, where the success of the group encourages individuals to try harder and support each other. As previously hesitant students began to volunteer answers, the class dynamic became markedly positive. Such evidence suggests that emotional safety functions as an intentional and beneficial outcome of well-structured cooperative learning. This highlights how affective engagement, often overlooked in EFL pedagogy, can serve as a foundation for sustainable communicative confidence in young learners.

Challenges and Collaborative Resolution

Challenges inevitably surfaced during the ICM sessions (e.g., role conflicts, misunderstandings), yet the students displayed significant social maturity by navigating these issues through patience, humor, and verbal negotiation. This ability to manage friction reflects a critical shift from dependence on teacher arbitration to peer-mediated problem solving.

In a situation of frustration, a classmate intervened with a supportive suggestion: *"I said to my friend when our answer is false: let's check again slowly, don't blame each other" (Interview, S7).*

Such episodes are significant because they simulate real-world collaboration, prompting spontaneous, functional speech acts like persuading, explaining, and compromising which are the communicative functions rarely practiced in rote exercises. Effective conflict management observed here illustrates students' developing social maturity and emotional regulation (Johnson & Johnson, 2008). The students learned that navigating conflict respectfully is part of learning together, fostering an autonomous and resilient learning community. Taken together, these peer-managed resolutions demonstrate that cooperative learning nurtures both linguistic competence and contributes to students' socio-emotional growth, reflecting the holistic aims of character education.

CONCLUSION

This study demonstrates that the Index Card Match (ICM) technique effectively fosters a supportive, interactive, and socially meaningful learning environment for sixth-grade EFL students. Through sustained peer mediation, role negotiation, and collaborative regulation, students engaged in authentic cooperative behaviors that advanced both linguistic and social development.

The findings reaffirm the theoretical relevance of Vygotsky's Sociocultural Theory by showing how peer interaction and translanguaging serve as key mediators of learning within the Zone of Proximal Development. Equally important, the cooperative structure nurtured students' emerging autonomy, self-regulation, and interpersonal sensitivity.

Pedagogically, this study highlights the value of incorporating structured cooperative strategies like ICM to cultivate learners' communicative confidence and social awareness. Teachers are encouraged to design peer-based activities that explicitly invite co-regulation and role negotiation, while recognizing students' multilingual repertoires as legitimate learning resources.

Despite its strengths, this short-term qualitative case study is limited in scope and generalizability. Future research could adopt mixed-method or longitudinal designs to explore the sustainability and transferability of these cooperative dynamics across broader EFL contexts.

Taken together, the study underscores that meaningful language learning emerges most powerfully when social collaboration, emotional safety, and cognitive engagement converge within a cooperative classroom culture.

REFERENCES

Astuti, P. & Barratt, L. (2021). "She taught me words": The availability of vocabulary help in EFL classrooms during cooperative learning's peer. *PASAA: Journal of Language Teaching and Learning in Thailand.* https://digital.car.chula.ac.th/pasaa

Bećirović, S., Dubravac, V., & Brdarević-Čeljo, A. (2022). Cooperative learning as a pathway to strengthening motivation and improving achievement in an EFL classroom. *SAGE Open*, *12*(1). https://doi.org/10.1177/21582440221078016

Cenoz, J., & Gorter, D. (2017). Translanguaging as a new theoretical perspective in education. *Applied Linguistics Review*.

Chairinkam, J., & Yawiloeng, R. (2021). Peer scaffolding behaviors in english as a foreign language writing classroom. *Asian Journal of Education and Training*, *7*(4), 226–234. https://doi.org/10.20448/journal.522.2021.74.226.234

Dani, G., Rahayu, S., & Nugraha, F. F. (2018). Effect of cooperative learning model type team game tournament (TGT) on cross-cultural skills in learning science social knowledge in primary school. *Journal of Elementary Education*, *2*(1).

Demitra, & Sarjoko. (2018). Effects of handep cooperative learning based on indigenous knowledge on mathematical problem solving skill. *International Journal of Instruction*, *11*(2), 103–114. https://doi.org/10.12973/iji.2018.1128a

Fitriyah, T., & Fauzi, Moh. F. (2020). Improving quality of arabic translation course through jigsaw cooperative learning. *Izdihar : Journal of Arabic Language Teaching, Linguistics, and Literature*, *3*(1), 17–30. https://doi.org/10.22219/jiz.v3i1.11033

Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education* (Vol. 41, Issue 3, pp. 39–54). Social Science Press. https://doi.org/10.14221/ajte.2016v41n3.3

Hadwin, A. F., Järvelä, S., & Miller, M. (2011). Self-regulated learning and co-regulated learning in technology-enhanced learning environments. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance*. Routledge.

Ibrahim, K., Cuba Carbajal, N., Zuta, M. E. C., & Bayat, S. (2023). Collaborative learning, scaffolding-based instruction, and self-assessment: impacts on intermediate EFL learners' reading comprehension, motivation, and anxiety. *Language Testing in Asia*, *13*(1). https://doi.org/10.1186/s40468-023-00229-1

Johnson, D. W., & Johnson, R. T. (2008). *Social interdependence theory and cooperative learning: the teacher's role. in the teacher's role in implementing cooperative learning in the classroom* (pp. 9–37). Springer US. https://doi.org/10.1007/978-0-387-70892-8_1

Karmina, S., Dyson, B., Watson, P. W. S. J., & Philpot, R. (2021). Teacher implementation of cooperative learning in indonesia: A multiple case study. *Education Sciences*, *11*(5). https://doi.org/10.3390/educsci11050218

Krashen, S. D. (1985). *Principles and practice in second language acquisition*. Pergamon Press Inc.

Kusnandar, A., & Rachmawati, A. W. (2024). Improving students' vocabulary mastery by using index card match. *Elang: An English Language Education Journal.*

Miles, M., Huberman, A., & Saldaña, J. (2014). *Qualitative data analysis* (3rd ed.). SAGE Publications.

Norito, T., Dlis, F., Hanif, A., & Muhammad, I. (2019). Implementing cooperative learning in physical education and sport to improve children fundamental movement skill. *Journal of Education*, *9*(7), 2391–8306. https://doi.org/10.5281/zenodo.3346970

Prieto-Saborit, J. A., Méndez-Alonso, D., Ordóñez-Fernández, F., & Bahamonde, J. R. (2022). Validation of a cooperative learning measurement questionnaire from a teaching perspective. *Psicothema*, *34*(1), 160–167. https://doi.org/10.7334/psicothema2021.126

Saldaña, J. (2021). *The coding manual for qualitative researchers* (4th ed.). SAGE Publications. www.sagepublications.com

Schoor, C., Narciss, S., & Körndle, H. (2015). Regulation during cooperative and collaborative learning: A theory-based review of terms and concepts. *Educational Psychologist*, *50*(2), 97–119. https://doi.org/10.1080/00461520.2015.1038540

Silberman, M. (1996). *Active learning: 101 strategies to teach any subject*. Allyn and Bacon.

Slavin, R. E. (2014). Cooperative learning and academic achievement. *Anales de Psicología*, *30*(3), 785-791.

Trinova, Z., Nasution, I., Masyhudi, F., & Belia Sameto, M. (2023). Implementation of the index card match method in islamic learning. *Nida Al-Qur'an: Jurnal Pengkajian Islam Advancing Educational Practices.* https://ejournal.staipiq.ac.id/index.php/jpi

Vygotsky, L. (1987). *The development of higher psychological processes*. Harvard University Press.

Zhang, T. (2024). Effects of self-regulation strategies on EFL learners' language learning motivation, willingness to communication, self-efficacy, and creativity. *BMC Psychology*, *12*(1). https://doi.org/10.1186/s40359-024-01567-2