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THE IMPACT OF GROUP -TO-GROUP EXCHANGE (GGE) METHOD IN GRAMMAR LEARNING

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ABSTRACT

This study rigorously examines the pedagogical efficacy of the Group-to-Group Exchange (GGE) method in enhancing grammar acquisition among a cohort of twenty-eightth-grade students at a junior high school in Banyuwangi, Indonesia. Employing a concurrent mixed-methods design, quantitative data were gathered via standardized classroom observations—measuring Johnson and Johnson's five cooperative-learning elements—and pre- and post-test grammar assessments developed from the official school syllabus and cross-checked against CEFR rubrics by subject teachers. Qualitative insights were derived from semi-structured interviews with both students and their instructors. Over an eight-week intervention, observation scores averaged 4.20 on a 5-point Likert scale (promotive interaction M = 4.50; social skills M = 4.25), indicating high levels of collaborative engagement. Paired-sample t-tests revealed a statistically significant improvement in grammar proficiency (pre-test M = 50.50 vs. post-test M = 69.25; Δ = +18.75, SD = 7.76, $t(19) = -10.81$, $p < .001$), with a large effect size (Cohen's $d \approx 2.41$). Interview themes highlighted increased motivation, peer-supported scaffolding, and positive shifts in classroom dynamics, alongside challenges such as passive participation and vocabulary constraints. Triangulation of these data sources confirms that GGE not only promotes syntactic mastery but also cultivates metacognitive awareness and learner autonomy. The findings advocate for the strategic integration of GGE within EFL curricula, recommending structured cross-group rotations, facilitator training, and targeted vocabulary supports to optimize cooperative grammar instruction in contexts similar to Indonesian secondary schools.

Keywords: Group-to-Group Exchange; Cooperative Learning; Grammar Proficiency; EFL; Active Learning

ABSTRAK

Penelitian ini menyajikan analisis mendalam tentang efektivitas metode Group-to-Group Exchange (GGE) dalam meningkatkan pembelajaran tata bahasa pada 20 siswa kelas VIII di sebuah SMP di Banyuwangi, Indonesia. Desain penelitian menggunakan pendekatan mixed-methods konkuren, di mana data kuantitatif dikumpulkan melalui observasi kelas terstandar—mengukur lima elemen pembelajaran kooperatif menurut Johnson & Johnson—serta pre-test dan post-test tata bahasa yang dikembangkan dari silabus sekolah dan dicocokkan dengan rubrik CEFR oleh para guru mata pelajaran. Data kualitatif diperoleh melalui wawancara semi-terstruktur dengan siswa dan guru. Selama delapan minggu intervensi, skor observasi rata-rata mencapai 4,20 pada skala Likert 1–5 (promotive interaction M = 4,50; social skills M = 4,25), mengindikasikan keterlibatan kolaboratif yang tinggi. Analisis uji t berpasangan menunjukkan peningkatan signifikan pada skor tata bahasa (pre-test M = 50,50 vs. post-test M = 69,25; Δ = +18,75, SD = 7,76, $t(19) = -10,81$, $p < .001$) dengan ukuran efek besar (Cohen's $d \approx 2,41$). Tema wawancara mengungkap peningkatan motivasi, dukungan scaffolding antar teman, dan dinamika

kelas yang lebih positif, meski terdapat tantangan seperti partisipasi pasif dan keterbatasan kosakata. Triangulasi ketiga sumber data ini membuktikan bahwa GGE tidak hanya memperkuat penguasaan tata bahasa, tetapi juga mengembangkan kesadaran metakognitif dan otonomi belajar siswa. Hasil penelitian merekomendasikan implementasi model GGE secara lebih luas dalam kurikulum EFL, dengan penekanan pada rotasi lintas-kelompok yang terstruktur, pelatihan fasilitator, dan pendukung kosakata untuk mengoptimalkan pembelajaran tata bahasa kooperatif di sekolah menengah Indonesia.

Kata-Kata Kunci: Group-to-Group Exchange; Pembelajaran Kooperatif; Kemampuan Tata Bahasa; EFL; Pembelajaran Aktif

INTRODUCTION

Learning English grammar in Indonesia presents multifaceted challenges, primarily due to entrenched pedagogical traditions and systemic constraints. Despite national curricula mandating student-centred methodologies, many EFL classrooms—especially those in rural and semi-urban contexts—continue to rely heavily on teacher-centred instruction, where the teacher dominates discourse and students occupy passive roles. This didactic approach limits learners' active engagement with grammatical structures, constraining opportunities for meaningful language use and peer interaction. Such educational practices have tangible repercussions at the macro level: in the Education First English Proficiency Index (EF EPI) 2024, Indonesia languished in the lower quartile, ranking 80th out of 113 nations. Low proficiency not only reflects individual learners' struggles with syntax acquisition but also underscores systemic issues—insufficient teacher training in interactive methods, large class sizes, and resource limitations—that perpetuate traditional modes of instruction. Consequently, while the official policy promotes constructivist and communicative frameworks, practice remains misaligned, perpetuating a cycle in which students seldom exercise critical thinking or collaborative problem-solving when constructing grammatically correct sentences. In this light, the persistent teacher-centred orientation functions as both a symptom and a catalyst of underperformance, necessitating innovative pedagogical interventions that can more effectively scaffold students' syntactic development through active, participatory, and socially mediated experiences.

Previous scholarship has extensively documented the efficacy of cooperative learning paradigms—such as Student Teams Achievement Divisions (STAD), Jigsaw, and Think-Pair-Share—in bolstering grammatical competence and communicative fluency. Meta-analyses and controlled trials across diverse cultural contexts consistently reveal that structured peer interaction, mutual accountability, and positive interdependence yield significant gains in test scores and learner motivation (Khan & Akhtar, 2017; Zarifi & Taghavi, 2016; Odehova et al., 2022). These models share core features: heterogeneous grouping, task interdependence, and teacher facilitation that orients students toward shared goals. Yet, the preponderance of research has gravitated toward these widely recognized frameworks, leaving lesser-known strategies underexplored. Notably, the Group-to-Group Exchange (GGE) method—characterized by initial intra-group learning followed by inter-group dissemination and synthesis—has been examined primarily in non-linguistic domains such as biology and social studies. While these studies attest to GGE's capacity to enhance conceptual understanding, its specific application to EFL grammar instruction remains empirically uncharted. The scarcity

of research on GGE in language pedagogy signals both an academic lacuna and a practical opportunity: by investigating this collaborative format within the grammar classroom, educators may uncover novel pathways to amplify student engagement, scaffold linguistic input, and promote deeper internalization of syntactic rules.

Grounded in Vygotsky's sociocultural theory, the current inquiry posits that learning emerges through socially mediated processes, wherein interaction with more capable peers or interlocutors within one's Zone of Proximal Development (ZPD) facilitates the internalization of complex skills. The GGE model operationalizes these theoretical constructs by orchestrating cycles of peer tutoring, reciprocal teaching, and collaborative reflection. According to Gillies (2016), cooperative learning not only fosters academic achievement but also cultivates metacognitive competencies, as learners articulate their reasoning, confront alternative perspectives, and assume collective responsibility for group outcomes. In GGE, initial group deliberations enable members to consolidate individual comprehension; subsequent exchanges across groups demand that each learner re-express and recontextualize grammatical concepts for unfamiliar peers, thereby reinforcing cognitive schemas through teaching. This cyclical architecture of scaffolded exploration, peer explanation, and critical feedback aligns with sociocultural tenets and extends beyond rote drills, offering a dynamic, dialogically rich environment in which grammar is negotiated, contested, and co-constructed. Such reflective practices not only bolster syntactic accuracy but also heighten learners' awareness of language structures, promoting adaptive transfer to spontaneous communication tasks.

Despite the theoretical allure of GGE, its empirical validation within Indonesian EFL settings is conspicuously absent. Prior investigations of cooperative frameworks in language education have rarely considered the nuanced affordances of GGE, focusing instead on more prevalent models whose procedural parameters differ markedly from the exchange-based pedagogy of GGE. Moreover, the socio-educational ecology of Indonesia—marked by heterogeneous classrooms, varied teacher competencies, and resource disparities—presents unique challenges and opportunities for collaborative methods. By targeting eighth-grade students in Banyuwangi, this study engages with a critical demographic poised at the intersection of curricular reform and educational equity. The research addresses key questions: Can GGE improve the passive learning culture endemic to many Indonesian schools? To what extent does iterative group exchange enhance both grammatical proficiency and learner agency? And which contextual factors mediate the success of GGE implementation? In so doing, the investigation seeks to bridge the gap between pedagogical theory and classroom praxis, offering data-driven insights that inform localized adaptations of cooperative learning in grammar instruction.

LITERATURE REVIEW

Teaching Models – Teacher-Centered vs Student-Centered

1. Definition

A teaching model serves as a strategic blueprint for the systematic delivery of instructional content, shaping not only the sequence of topics but also the roles of instructors and learners within the educational ecosystem. Within the domain of language acquisition, the selection of a pedagogical framework exerts a profound

influence on learners' cognitive processing, affective engagement, and long-term retention of grammatical structures. Two paradigmatic approaches prevail:

a) Teacher-Centred: In this arrangement, the teacher is the most important person in the classroom and the main source of knowledge. Lessons are usually characterised by lectures, didactic presentations of rules and examples, and a one-way flow of information. The teacher sets the agenda, establishing objectives, pacing the delivery of material and orchestrating class discourse. Drawing on behaviourist and information-processing theories, this model prioritises clarity of presentation and uniformity of learning experiences (Brown, 2001). It is effective in contexts that require the large-scale dissemination of foundational content, ensuring that all students receive the same input. However, the centralisation of authority can inadvertently cultivate learner passivity, diminish opportunities for hands-on experimentation and reduce intrinsic motivation to engage with the language beyond memorising surface-level rules.
b) Student-Centred: Grounded in constructivist principles as outlined by Piaget (1952) and sociocultural theorists like Vygotsky (1978), the student-centered approach reimagines learners as active creators of knowledge. In this approach, educators serve as facilitators, designing collaborative activities such as problem-solving workshops, peer instruction cycles, and project-based initiatives. These activities encourage students to negotiate meaning, articulate hypotheses, and apply grammatical concepts in authentic communication contexts. Key mechanisms include the Zone of Proximal Development (ZPD), where learners engage with tasks slightly beyond their independent capabilities with guided support. Scaffolding strategies gradually transfer cognitive responsibility from teacher to student (Ellis, 2006; Gillies, 2016). By situating grammar within interactive, learner-driven activities, this model aims to enhance metacognitive awareness, boost self-efficacy, and reduce affective barriers such as language anxiety.

2. Advantages and Disadvantages

A comparative analysis, based on Markina and Molla's (2022) findings, highlights the trade-offs associated with each approach.

Teacher-Centred:

a) Teacher-centered education offers several advantages, such as an organized educational pathway with clearly defined lesson plans and sequenced content, which reduces cognitive load by providing predictable frameworks. This approach also enhances operational efficiency through direct instruction, streamlining the introduction of new grammatical forms and enabling the rapid achievement of curriculum objectives. Additionally, centralized control in the classroom fosters consistent behavior expectations, minimizing off-task behaviors.
b) However, teacher-centered education also has its disadvantages. One challenge is learner passivity, which can be suppressed by predominant lecturing and limit students' own questions and exploratory discourse. Another disadvantage is engagement deficits, which can arise from reduced peer collaboration and undermine social interactivity, which is crucial for naturalistic language practice. Lastly,

overreliance on rote learning and repetitive drills can lead to motivational erosion, reducing student enthusiasm and hindering long-term retention.

Student-Centred:

a) Collaborative tasks and peer teaching, through active participation, foster a shared responsibility and continuous feedback environment, encouraging students to actively engage in the learning process. Inquiry-based activities help learners analyze, synthesize, and evaluate grammatical rules within a specific context, promoting critical thinking skills. Taking ownership of the learning process leads to intrinsic motivation, resulting in deeper retention of language structures.
b) Designing authentic, scaffolded activities requires a substantial initial investment in materials, rubrics, and differentiation strategies, making it a time-consuming process. Additionally, without careful facilitation, discussions may stray from the intended grammar objectives, potentially diluting the instructional focus and leading to curriculum drift. Furthermore, managing small-group interactions demands strong leadership skills to ensure equitable participation and effectively resolve conflicts, which can be complex and challenging.

The Context of EFL in Grammar Learning

In the realm of English as a Foreign Language (EFL) education, mastering grammar goes beyond mere rote memorization of syntactic rules and paradigms. It serves as the foundation for facilitating authentic communication, as emphasized by the Common European Framework of Reference for Languages (CEFR), which prioritizes functional competence and real-world language use over abstract rule recall (Council of Europe, 2001). Within this framework, grammar functions not as an end in itself but as an instrumental tool that propels learners toward both fluency—the ability to use language spontaneously and coherently—and accuracy—the precise application of forms in context. The dual emphasis on meaning and form prompts contemporary curricula to advocate for a synthesis of deductive and inductive methodologies, integrated into student-centered instructional designs to cultivate metalinguistic awareness. These designs encourage learners to alternate between rule-driven analysis and discovery-based exploration, engaging multiple cognitive pathways. In deductive sequences, the teacher explains grammatical concepts, such as tense formation or clause structure, providing learners with a clear conceptual scaffold. Conversely, inductive segments immerse students in authentic texts, dialogues, or multimodal inputs, prompting them to infer patterns, test hypotheses, and negotiate meaning collaboratively. This integrative approach aligns with cognitive-interactionist theories, which suggest that explicitly presented rules and stimulated input contribute to the internalization of complex language structures. Moreover, this hybridized pedagogy resonates with Vygotskian notions of scaffolding and zone of proximal development (ZPD), where socially mediated guidance gradually transfers cognitive responsibility to learners. Ultimately, by situating grammar instruction within a communicative, contextually rich environment, EFL programs can effectively bridge the gap between mechanical rule application and the dynamic demands of real-life English usage.

1. Practical Implementation of Deductive and Inductive Approaches

Translating this theoretical framework into classroom practice involves deliberately designing teaching sequences that alternate between explicit rule presentation and exploratory pattern discovery. In a typical lesson, instructors might begin with a concise deductive

exposition, for example, framing the morphological markers of the past perfect tense, accompanied by illustrative sentences and visual timelines. This initial phase, often supported by clear charts and metalinguistic commentary, equips learners with an analytical lens to scrutinize subsequent examples. Subsequently, the teacher transitions to inductive tasks, presenting learners with authentic materials, such as excerpts from blogs, news articles, or recorded conversations, in which past perfect constructions naturally occur. Students work in small groups to identify recurring forms, formulate provisional rules, and compare their hypotheses with the deductive schema previously introduced. These collaborative ventures are further enriched by guided reflection, where learners articulate their reasoning, confront anomalies, and receive corrective feedback. Donato and Brooks (2015) emphasize that this cyclical movement between "teach" and "discover" phases fosters deeper cognitive engagement as learners are compelled to reconcile theory with authentic usage. Crucially, scaffolding must be calibrated to learners' proficiency levels. Novices may require more structured prompts and sentence-level probes, while advanced students can tackle discourse-level analyses and text reconstruction tasks. By embedding grammar within purposeful communicative activities, such as role-plays and problem-solving discussions, educators not only reinforce structural comprehension but also cultivate learners' ability to transfer grammatical competence to diverse contexts, from peer presentations to academic essay writing.

2. Cognitive and Affective Outcomes of Hybrid Grammar Instruction

Empirical research supports the effectiveness of blended deductive-inductive models in encouraging long-term grammar acquisition and the development of higher-order thinking skills. Gass and Selinker (2017) demonstrate that learners who alternate between studying explicit rules and recognising inductive patterns achieve superior long-term retention compared to those who follow monolithic instructional sequences. This is attributed to dual encoding of information: first, through declarative memory pathways activated by rule explanation; then, via procedural consolidation during contextualised practice. Furthermore, Nation and Newton (2018) reveal that such integrative pedagogy enhances metacognitive monitoring, enabling learners to self-assess their grammatical hypotheses, detect errors, and adjust strategies with minimal teacher intervention. Beyond cognitive gains, there are also improvements in the affective domain: students report increased motivation and reduced anxiety when grammar tasks are embedded within meaningful communicative scenarios rather than isolated drills. This positive emotional climate fosters learner autonomy, as students feel empowered to experiment with language forms and take intellectual risks. Furthermore, strategically alternating deductive and inductive phases cultivates critical thinking as learners evaluate the applicability of general rules to specific contexts and negotiate divergent interpretations within peer groups. Overall, these cognitive and emotional benefits come together to produce more resilient communicative competence, equipping EFL learners to not only comprehend and apply grammatical structures, but also adapt them creatively in new discourse situations. Consequently, the hybrid model emerges as a compelling paradigm for grammar instruction — one that reconciles the precision of rule-based learning with the dynamism of experiential discovery.

Cooperative Learning & Group-to-Group Exchange (GGE)

1. Conceptual Framework

Cooperative learning, as described by Johnson and Johnson (1998), is an instructional paradigm where learners collaborate to achieve shared academic goals. This model is based on five interconnected elements. First, positive interdependence ensures that each student's success depends on the group's collective success. Individual contributions are integrated into a shared product or outcome. Second, individual accountability requires learners to demonstrate mastery of assigned content, preventing them from relying solely on more capable peers. Third, face-to-face promotive interaction involves students engaging directly through questioning, explaining, and feedback to enhance understanding. Fourth, interpersonal and social skills development emphasizes communication strategies, conflict resolution, and leadership, which are crucial for effective collaboration. Finally, group processing and evaluation encourages learners to reflect on their interactions, assess the effectiveness of their strategies, and plan improvements for future tasks. Gillies (2016) emphasizes that true cooperative dynamics arise when group members actively analyze, debate, and refine their ideas, rather than simply distributing tasks. The Group-to-Group Exchange (GGE) method further enhances these cooperative principles by facilitating structured interchange of group-generated knowledge. Each group not only constructs its own understanding but also serves as both a teacher and a learner when sharing insights with peer groups. Through these reciprocal exchanges, GGE operationalizes the Johnsons' framework, transforming static small-group work into a dynamic network of knowledge construction and peer scaffolding.

2. The GGE Method Mechanism

The Group-to-Group Exchange (GGE) method is a sophisticated cooperative learning approach that divides instructional content into distinct segments and distributes them to multiple small groups. During the initial phase, each group thoroughly examines its assigned topic, employing techniques such as concept mapping, role-playing, and problem-solving discussions to internalize grammatical structures and content-specific principles. This intra-group phase promotes cognitive elaboration as learners articulate, inquire, and reconcile divergent understandings under the guidance of peer facilitators.

In the interchange phase, groups reorganize into cross-group pairings or clusters, where they engage in reciprocal teaching and instruction on their respective topics. This reciprocal pedagogy compels every student to assume the dual role of instructor—articulating and contextualizing content—and learner—asking clarifying questions and evaluating peer explanations. This oscillation between teaching and learning positions cultivates metacognitive monitoring as students become acutely aware of their knowledge gaps and strategies for remediation.

Drawing on Vygotsky's (1978) sociocultural theory, the GGE mechanism embodies the principles of scaffolding within the Zone of Proximal Development. Peer "more knowledgeable others" guide learners toward tasks they could not yet accomplish independently, gradually withdrawing support as competence increases. The iterative cycles of explanation, questioning, and feedback embedded in GGE thus generate a robust scaffold for cognitive development, simultaneously reinforcing grammatical accuracy and communicative proficiency.

3. The Merits of the GGE Method in Light of Empirical Evidence

Putri (2023) found that after eight weeks of implementing the Grammar Grouping Exercise (GGE), an average grammar accuracy increase of 15% was achieved. This demonstrates the effectiveness of peer teaching in clarifying grammar concepts before students apply them independently.

Sarwono (2018) also reported a 20% reduction in error rates on written assignments. This suggests that cross-group feedback helps students identify and correct their mistakes.

Integration of GGE in Grammar Teaching

Before we look at specific points, it is important to understand that the GGE method focuses on collaboration between different groups as the most important part of grammar learning. Through cross-group exchange and feedback mechanisms, language rules are not only learnt by students, but their application in various contexts is also internalised by them as follows:

a) Scaffolding and the Zone of Proximal Development (ZPD): Intergroup interaction places students within their peers' ZPD, enabling them to build grammar knowledge together through peer support (Vygotsky, 1978).
b) Metalinguistic awareness: When students present the results of their discussions, they are forced to explicitly formulate grammar rules, which increases their awareness of the way they think about language (Ellis, 2006).
c) Peer feedback: Receiving feedback from various groups enables students to self-correct and reflect on their mistakes, in line with the principles of peer evaluation (Gillies, 2016).
d) Transfer Learning: Talking about and using grammar in different situations helps people to be more flexible in how they use language structures, which supports transfer learning (Larsen-Freeman, 2011).

Hypothesis

The research hypothesis: the showing of significant improvement by students who participate in GGE compared to before the GGE method was implemented. Strengthening of the validity of the findings was also enabled by triangulation analysis.

METHOD

This pedagogical research analysis adopts a pragmatic paradigm (Johnson et al., 2007), consisting of a mixed-methods approach validated by concurrent triangulation (Creswell & Plano Clark, 2018), to gain an in-depth understanding of the impact of implementing the Group-to-Group Exchange (GGE) method on grammar learning. A quantitative approach was applied so that the intensity of cooperative learning element implementation could be measured through observation and improvements in students' grammar skills could be assessed using pre-tests and post-tests. Meanwhile, a qualitative approach was employed to explore teachers' and students' perceptions via semi-structured interviews.

The research was conducted at a junior high school in Banyuwangi Regency, East Java. The sample consisted of 20 eighth-grade students, selected using homogeneous sample to

ensure uniformity in learning backgrounds and English proficiency levels. This school was chosen because it still uses traditional teaching methods and teachers reported that the grammar proficiency of eighth-grade students was relatively low.

The data collection techniques used in this study included the following: (1) direct observation of student group activities (based on the rubric of Johnson & Johnson, 1998); (2) semi-structured interviews with teachers and three student representatives per group, exploring their experiences and perceptions of applying the GGE method; (3) grammar assessments in the form of pre- and post-tests, based on the syllabus and cross-checked against CEFR rubrics by subject teacher.

The data analysis procedures were executed concurrently and supplemented each other: (1) Data acquired from observations were analysed descriptively and quantitatively to gauge the intensity of the implementation of cooperative learning elements; (2) Interview data were analysed using thematic analysis techniques based on the Braun & Clarke (2006) framework, which includes the processes of coding, identifying themes, and drawing conclusions from patterns of findings; (3) Grammar test data were analysed using a paired sample t-test to determine the significance of differences in learning outcomes before and after the application of the GGE method. The findings of the three techniques are then validated through methodological triangulation, yielding meaningful and actionable conclusions.

RESULT

The results of this study are based on its main focus: examining the impact of the Group-to-Group Exchange (GGE) method on students' grammar learning. Data were collected using three methods: observation, assessment (pre- and post-tests) and interviews. The results are presented according to the method used: quantitative for observation and assessment, and qualitative for interviews.

Tabel 1. Observation Gain Score per Aspect

Aspects.	Mean	Interpretation
Promotive Interaction	4.50	Very High
Social Skills	4.25	Very High
Group Processing	4.25	Very High
Positive Interdependance	4.00	High
Individual Accountability	4.00	High
Overall Mean	4.20	High

The observation data from the table above shows that all the indicators (aspects) of cooperative learning, such as promotive interaction, social skills, group processing, positive interdependance, and individual accountability, were implemented effectively during the GGE learning process. The average scores for the five main indicators were in the 4.0–4.5 range on the 1–5 Likert scale, falling into the high-to-very-high category. This suggests that students were actively engaged in group activities, engaging in discussions about grammar and collaborating to complete tasks. Additionally, promotive interaction scored the highest and directly aligns with Vygotsky's principle of socially mediated learning.

Tabel 2. Observation Gain Score per Group

Group	Kriteria	Prosentase
A	4.40	Very High
B	4.20	High
C	4.20	HIgh
D	4.00	High

Referring to the above table, the pack was led by Group A (4.40, Very High), with strong peer coaching and reflection being demonstrated. Groups B and C (4.20, High) displayed a solid yet slightly less intense interaction. Group D (4.00, High) achieved collaborative goals but didn't reach the "Very High zone worth investigating in qualitative follow-ups. The consistently 'high' to 'very high' scores confirm that the GGE setup created the cooperative conditions that Johnson & Johnson (1998) deem vital for deep learning. This climate likely supports the grammar-proficiency gains that will be discussed.

Tabel 3. Thematic Analysis of Interview

Theme	Subthemes / Key Concepts	Representative Quotes	Participants (n)
T1 Enjoyment & Engagement	Positive emotions, comfort, excitement	"It was very exciting"	10/12 Students
T2 Peer-Supported Grammar Learning	Understanding grammar through peer support	"Group members were all supporting me to understand"	9/12 Students
T3 Collaborative Practices	Discussion, work-sharing, peer feedback	"We do discussion and peer-to-peer feedback"	12/12 Students
T4 Motivation & Confidence Boost	Increased motivation, confidence gains	"I'm feeling more confident"	8/12 Students
T5 Barriers to Full Participation	Passive members, low vocabulary, miscommunication	"Some did not participate" / "Low vocab makes me hard to speak English"	7/12 Students
T6 Desired Adjustments & Support	Preference for self-selected members; smaller groups; teacher facilitation	"Wanna choose our own members" / "Teacher could facilitate more"	9/12 Students
T7 Teacher Perspective	Active learning, partial passiveness; classroom management benefits; resource limitations	"They were more active, but sometimes partially passive"	1 Teacher

The above table showcases the themes generated and the responses recorded from the students which match into the themes. From this, we are able to identify the meaningful insights from participant responses. The breakdown of the results from the table are defined are discussed as below:

1. T1: Enjoyment & Engagement
   83% of students reported positive emotions—"very exciting", "enjoyable", "comfortable" indicating that GGE created an engaging classroom climate. This aligns with the social interdependence theory of Johnson & Johnson (1998).
2. T2: Peer-Supported Grammar Learning
   75% of students reported quoted as "helped me understand better" and "peer-to-peer feedback" show grammar understanding improved via peer scaffolding (Vygotsky, 1978).
3. T3: Collaborative Practices
   100% of students mentioned that it was a group effort that required collaboration to derive the answer or discussion among peers to further understand the questions. Discussion and task-sharing confirm positive interdependence.
4. T4: Motivation & Confidence Boost
   66% of students referenced that this form of learning increased motivation and confidence, supporting Gillies (2016) findings that cooperative learning enhances language self-efficacy.

5. T5: Barriers to Full Participation
   58% of students implied that there were some challenges they faced, namely - passive members, limited vocabulary, and miscommunication. This was further support by the observation from the Teacher interview who observed partial passiveness in some students.
6. T6: Desired Adjustments & Support
   75% of students provided similar feedback that they favoured autonomy in member selection and smaller groups for deeper interaction. They also commented on the need for enhanced teacher facilitation to reduce confusion of instructions and provide clarity.
7. T7: Teacher Perspective
   The teacher viewed GGE as useful for class management but noted some students remained passive. Future strategies include addressing resource limitations and motivating the less cooperative students.

It can be concluded that GGE generally enhances student engagement, grammar understanding, and motivation while highlighting challenges related to participation and group structure. These insights support the hypothesis that GGE positively impacts grammar learning and provide practical guidance for refining cooperative learning models in EFL classrooms.

Tabel 4. Result of Pre- and Post-Test

	Student	Pre-test Score	Post-test Score	Difference
Group A	Student A1	45	80	35
	Student A2	50	75	25
	Student A3	50	65	15
	Student A4	50	60	10
	Student A5	45	60	15
	Average Score A:	48	68	20
Group B	Student B1	50	65	15
	Student B2	50	60	10
	Student B3	55	70	15
	Student B4	55	70	15
	Student B5	50	75	25
	Average Score B:	52	68	16
Group C	Student C1	55	75	20
	Student C2	50	80	30
	Student C3	50	70	20
	Student C4	55	70	15
	Student C5	45	75	30
	Average Score C:	51	74	23
Group D	Student D1	55	70	15
	Student D2	50	60	10
	Student D3	45	75	30
	Student D4	55	65	10
	Student D5	50	65	15
	Average Score D:	51	67	16

The table above shows the baseline and outcome measures for the four groups that took part in the Group-to-Group Exchange (GGE) intervention for learning grammar. All groups showed positive gains: Group A improved from a mean pre-test score of 48 to a post-test score of 68 ($\Delta = 20$); Group B improved from a mean pre-test score of 52 to a post-test score of 68 ($\Delta = 16$); Group C improved from a mean pre-test score of 51 to a post-test score of 74 ($\Delta = 23$); and Group D improved from a mean pre-test score of 51 to a post-test score of 67 ($\Delta = 16$).

Notably, Group C achieved the largest mean gain, suggesting that specific peer-exchange configurations or facilitation methods may have optimised its learning environment. In contrast, groups B and D exhibited identical improvements despite their differing starting points. This suggests that learner characteristics (e.g. prior proficiency and motivation) likely moderated their responsiveness. These results support the overall efficacy of the GGE intervention, while highlighting the need to determine which exchange dynamics drive maximal grammar acquisition.

Tabel 5. Paired Samples Statistics

Test	Mean	N	Std. Deviation	Std. Error Mean
Pre-test	50.50	20	3.50	0.78
Post-test	69.25	20	6.38	1.43

Descriptive statistics consolidate the intervention's aggregate impact across all 20 participants. The mean score on the pre-assessment was 50.50 (SD = 3.50, SE = 0.78), whereas the mean score on the post-assessment increased substantially to 69.25 (SD = 6.38, SE = 1.43). The unequal standard deviations imply greater variability in post-test performance, perhaps reflecting differential assimilation of grammar structures via GGE. Furthermore, the larger standard error in the post-assessment indicates that, although average gains were substantial, there was greater divergence in individual performance after the intervention. These descriptive findings lay the groundwork for inferential testing, confirming both a shift in central tendency and heterogeneity in outcomes following GGE implementation.

Tabel 6. Paired Samples Test

Pair	Mean Difference	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1. Pre- & Post-Test	-18.75	7.76	-10.81	19	< .001

Inferential analysis via a paired samples t-test confirms that the observed gains from the pre- to post-assessment are statistically significant, leading to the rejection of the null hypothesis (H_0) that the GGE method has no effect on students' grammar learning. The mean difference of –18.75 points (SD = 7.76) yielded a t-value of –10.81 with 19 degrees of freedom and a p-value of less than 0.001. This large effect size (Cohen's d ≈ −18.75/7.76 ≈ −2.41) indicates that the GGE intervention had a significant impact on grammar proficiency. The extremely low p-value rules out chance as an explanation and affirms that peer-mediated exchanges systematically enhanced learner performance.

DISCUSSION

Tabel 7. Triangulation Matrix

Construct / Theme	Observation (Likert 1–5)	Assessment (Pre–Post Gain)	Interview (Themes & Subthemes)	Triangulation Interpretation
1. Engagement & Promotive Interaction	Promotive Interaction: 4.50 (Very High)	Mean gain: +18.75 (SD 7.76), p < .001	"Enjoyment & Engagement" (83% found it "very exciting" and "comfortable")	**Convergence**: All sources confirm high engagement; GGE clearly boosts promotive interaction and enthusiasm.
2. Collaborative Practices & Social Skills	Social Skills: 4.25 (Very High); Group Processing: 4.25 (Very High)	Groups A–C gained 16–23 points	"Collaborative Practices" (100% reported active	**Convergence**: Peer collaboration and social skills

			discussion and peer feedback)	consistently support grammar gains.
3. Grammar Understanding	–	Pre-test: 50.50 → Post-test: 69.25 (Δ +18.75)	"Peer-Supported Grammar Learning" (75% said "it helped me understand better")	**Convergence**: Assessment and interviews both show GGE enhances understanding via peer scaffolding.
4. Motivation & Confidence	Individual Accountability: 4.00 (High)	Post-test variability: SD 6.38 (shows individual differences)	"Motivation & Confidence Boost" (66% felt more self-assured)	**Convergence & Complementarity**: Quantitative data show varied outcomes; qualitative data confirm overall confidence boost.
5. Participation & Barriers	Positive Interdependence: 4.00 (High)	Group D lowest gain: Δ +16	"Barriers to Full Participation" (58% noted passive members, vocab gaps, miscommunication)	**Convergence**: Lower interdependence groups faced participation barriers, reflected in both scores and student narratives.
6. Group Variability	Group A: 4.40 (Very High); B/C: 4.20 (High); D: 4.00 (High)	Highest gain: Group C (Δ +23); Lowest: Group D (Δ +16)	–	**Complementarity**: Between-group differences highlight areas to optimize exchange dynamics.
7. Desired Adjustments & Supports	–	–	"Preferences for self-selection," "More teacher facilitation," "Resource support needed"	**Complementarity**: Interview feedback pinpoints refinements to GGE not captured by quantitative data.

The triangulation of observational, assessment, and interview data reveals a robust pattern of convergence around student engagement, collaborative practices, and grammar comprehension under the Group-to-Group Exchange (GGE) model. The results of the observational scores indicate exceptionally high levels of promotive interaction (M = 4.50 on a 5-point Likert scale), social skills (M = 4.25), and group processing (M = 4.25). These levels correlate directly with significant gains in grammar proficiency (mean pre-to-post gain = +18.75, SD = 7.76, $p < .001$). Interviews also support these findings: An overwhelming majority of participants, 83 percent in fact, described the activities as "very exciting" and "comfortable," while a full 100 percent reported active peer discussion and feedback, and a significant 75 percent credited peer scaffolding with deepening their grammatical understanding. This alignment across three distinct data sources constitutes clear convergence (Denzin, 1978) and affirms that the GGE method fosters an interactive learning environment that translates directly into measurable improvements in student performance. This consistency confirms the study's internal validity and highlights the pedagogical effectiveness of structured cooperative learning formats in enhancing the affective and cognitive aspects of grammar acquisition. Furthermore, integrating quantitative measures with qualitative insights in accordance with Patton's (1999) framework for complementarity validates the strength of GGE's core mechanics — positive interdependence, individual accountability, and promotive interaction —lays the

groundwork for refining cooperative learning theory to account for process-level dynamics, such as scaffold diffusion, motivational momentum, and group variability.

Several recent studies on cooperative and peer-mediated learning in EFL contexts are found to be in resonance with our findings. For instance, Odehova et al. (2022) discovered that structured triadic peer feedback sessions significantly enhanced metalinguistic awareness and facilitated more effective error correction compared to dyadic exchanges. This finding underscores the value of diverse peer roles. Zarifi and Taghavi (2016) reported that cooperative learning interventions characterized by positive interdependence and mutual goal setting yielded substantial improvements in grammar accuracy among Iranian EFL learners. The effect sizes ranged from 0.28 to 0.42. Similarly, Khan and Akhtar (2017) demonstrated that peer interaction tasks enhanced both students' linguistic performance and their self-efficacy and willingness to communicate. In contrast to some studies that noted uneven affective gains, our data revealed a consistent confidence boost (66% of participants). This suggests that the rotational, multi-group design of GGE amplifies cognitive and motivational outcomes. Collectively, these studies corroborate the premise that carefully structured peer exchanges, particularly those involving multiple heterogeneous groups, can lead to substantial improvements in language competence and learner motivation.

Our results theoretically extend Vygotsky's (1978) social constructivism by operationalizing the Zone of Proximal Development through sequential peer scaffolding. They precisely align with Johnson and Johnson's (1998) five essential elements of cooperative learning: positive interdependence, individual accountability, promotive interaction, social skills, and group processing. By embedding these elements within a multi-group rotation format, GGE catalyzes iterative scaffold diffusion. Each group's insights feed into the next, intensifying both knowledge construction and learner engagement. Unlike single-group or dyadic models, this cross-group cycle creates a dynamic learning ecology where cognitive co-construction and affective support circulate continuously. This refinement suggests that the temporal sequencing and diversity of group exchanges are as critical as the structural design itself. It lays the groundwork for a "Multi-Group Scaffolding Cycle" that elaborates and enriches Johnson and Johnson's foundational framework.

Based on these insights, we propose the 'Multi-Group Scaffolding Cycle' as a theoretical refinement. This cycle involves structured rotations among diverse groups, generating cascading scaffolds where each exchange builds on prior insights and maintains learner momentum. This cyclical diffusion mechanism extends Johnson and Johnson's five elements by incorporating temporal and cross-group dimensions. It emphasizes that the sequence and diversity of exchanges are equally important as their structural design. In practice, this implies that EFL curricula should incorporate scheduled rotations and support protocols, such as peer moderation training and targeted vocabulary modules, to enhance both collaborative quality and grammatical progress. These design principles can inform teacher training and curriculum development, ensuring that GGE implementations are theoretically sound and contextually adaptable.

However, this study has its limitations. Purposive sampling in interviews (with 12 out of 20 participants) and single-observer coding may introduce selectivity and observer bias. Additionally, the eight-week observation period may not capture the long-term retention of grammatical knowledge. Some students were unavailable for interviews due to scheduling constraints, and the observing teacher may not have recorded every nuance of every interaction required for a comprehensive trait analysis. Future research should therefore

expand cohort sizes across multiple schools, incorporate multiple observers to strengthen reliability, and extend the intervention period to evaluate sustained learning outcomes. Furthermore, manipulating exchange parameters and facilitation intensity experimentally will be essential to validate and refine the Multi-Group Scaffolding Cycle, advancing both theoretical understanding and pedagogical practice.

CONCLUSION

The findings of this study demonstrate that implementing the Group-to-Group Exchange (GGE) method in an Indonesian junior high school setting yields substantive gains in both learner engagement and grammatical competence. Quantitative analyses revealed a marked increase in cooperative-learning behaviors—promotive interaction, social skills, and group processing—with observation scores averaging above 4.2 on a 5-point scale, while paired-sample t-tests confirmed a statistically significant improvement in grammar proficiency ($\Delta = +18.75$ points, $p < .001$) accompanied by a large effect size. Qualitative insights corroborated these outcomes, highlighting elevated student motivation, dynamic peer scaffolding, and a more interactive classroom climate, even as challenges such as occasional passive participation and limited vocabulary emerged. By triangulating observational, assessment, and interview data, this research affirms that GGE not only fosters syntactic mastery but also cultivates metacognitive awareness and learner autonomy—outcomes that are essential for sustainable language development in EFL contexts. Practically, these results underscore the value of structured cross-group rotations, targeted facilitator training, and explicit vocabulary support to maximize the pedagogical benefits of GGE. Future investigations should examine long-term retention of grammatical skills and explore adaptability across diverse educational environments. Overall, this study offers compelling evidence that cooperative learning frameworks like GGE can be strategically integrated into secondary-level grammar instruction to produce measurable, transformative effects on student performance and engagement.

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