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## **Effects of Mind Mapping, Cooperative Learning, and Learning Motivation on Elementary Students' Explanatory Text Retelling Achievement**

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**ABSTRAK.** Rendahnya hasil belajar siswa sekolah dasar dalam materi menceritakan kembali teks eksplanasi masih menjadi permasalahan penting dalam pembelajaran Bahasa Indonesia, terutama pada kemampuan memahami isi teks, mengorganisasi informasi, dan menyampaikan gagasan secara runtut. Penelitian ini bertujuan menganalisis pengaruh metode Mind Mapping dan Cooperative Learning serta motivasi belajar terhadap hasil belajar siswa kelas V. Penelitian menggunakan pendekatan kuantitatif eksperimen dengan desain Non-equivalent Control Group Design dan model faktorial  $2 \times 2$ . Sampel terdiri atas 52 siswa yang dibagi ke dalam kelompok Mind Mapping dan kelompok Cooperative Learning. Data dikumpulkan melalui tes hasil belajar dan angket motivasi belajar, kemudian dianalisis menggunakan Two-Way ANOVA. Hasil penelitian menunjukkan bahwa Mind Mapping memberikan pengaruh yang lebih signifikan dibandingkan Cooperative Learning. Motivasi belajar juga berpengaruh signifikan terhadap hasil belajar, serta terdapat interaksi signifikan antara metode pembelajaran dan motivasi belajar. Temuan ini menegaskan pentingnya strategi pembelajaran berbasis visual dan penguatan motivasi dalam meningkatkan kualitas pembelajaran Bahasa Indonesia di sekolah dasar.

**Kata Kunci :** *Mind Mapping; Cooperative Learning; Motivasi Belajar; Hasil Belajar; Teks Eksplanasi*

**ABSTRACT.** Low learning outcomes in retelling explanatory texts remain a major challenge in Indonesian language learning among elementary school students, particularly in comprehending text content, organizing information, and presenting ideas coherently. This study examined the effects of Mind Mapping and Cooperative Learning methods, as well as learning motivation, on the learning outcomes of fifth-grade students. A quantitative experimental approach was employed using a Non-equivalent Control Group Design with a  $2 \times 2$  factorial model. The sample consisted of 52 students divided into an experimental group taught through Mind Mapping and a comparison group taught through Cooperative Learning. Data were collected through learning outcome tests and learning motivation questionnaires and analyzed using Two-Way ANOVA. The findings revealed that Mind Mapping produced significantly better learning outcomes than Cooperative Learning. Learning motivation also significantly influenced learning outcomes, and a significant interaction was found between learning methods and motivation. These results highlight the importance of visual-based instructional strategies and motivational support in improving elementary Indonesian language learning.

**Keyword :** *Mind Mapping; Cooperative Learning; Learning Motivation; Learning Outcomes; Explanatory Text*

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## INTRODUCTION

The ability to comprehend and retell explanatory texts is one of the essential literacy competencies that elementary school students must master. This competency plays a crucial role in developing students' ability to understand information, think critically, and communicate ideas coherently. However, various international reports indicate that reading literacy remains a significant challenge in many countries, including Indonesia. The results of the Programme for International Student Assessment (PISA) show that Indonesian students' reading literacy performance remains below the average of OECD member countries, particularly in understanding, processing, and reconstructing information from texts. This condition highlights the need to improve the quality of literacy instruction through the implementation of more effective and student-centered learning strategies [1].

At the national level, literacy-related issues continue to be a major concern in elementary education. The results of the National Assessment indicate that many elementary school students still experience difficulties in comprehending reading materials and communicating information logically and systematically. Although various policies have been implemented through the Merdeka Curriculum and school literacy enhancement programs, classroom instruction is still predominantly teacher-centered. As a result, student engagement in the learning process remains relatively low, leading to less-than-optimal learning outcomes [2].

Similar problems were identified at SDN Japanan 2 Kemlagi, Mojokerto Regency. Preliminary observations and interviews with fifth-grade teachers revealed that most students experienced difficulties in understanding explanatory texts, identifying key information, and reconstructing the content of texts coherently, both orally and in writing. Learning outcome data indicated that many students had not yet achieved the minimum mastery criteria. Teachers also reported that students tended to be passive during lessons because instructional practices were still dominated by lectures and individual assignments. Interviews with students revealed that they preferred learning activities involving visual representations and group discussions. These findings suggest that low achievement in retelling explanatory texts is influenced not only by students' academic abilities but also by instructional methods and learning motivation.

Previous studies have demonstrated that innovative instructional approaches can improve students' literacy achievement, particularly in reading comprehension and information reconstruction. Wilson [3] found that concept mapping enhances reading comprehension by helping students organize and integrate textual information, while Azizah [4] reported that mind mapping improved reading comprehension among elementary students through more systematic information processing. Likewise, cooperative learning has been shown to promote active participation, communication skills, and collaborative knowledge construction, which contribute positively to students' comprehension and expression of textual information. Furthermore, learning motivation plays a crucial role in literacy achievement, as students with higher motivation tend to show greater engagement and better academic performance (van der Sande [5]. Research has also established that retelling ability is a valid indicator of

reading comprehension because it reflects students' capacity to understand, organize, and reconstruct information from texts [6].

Nevertheless, several limitations remain in the existing literature. Most previous studies have examined mind mapping, cooperative learning, and learning motivation separately, providing limited evidence regarding their combined effects on literacy outcomes. In addition, research has primarily focused on general reading comprehension rather than students' achievement in retelling explanatory texts. Empirical studies investigating the comparative effects of mind mapping and cooperative learning while considering learning motivation among elementary school students are still scarce. Therefore, further research is needed to examine the effects of mind mapping, cooperative learning, and learning motivation on elementary students' explanatory text retelling achievement [7].

The novelty of this study lies in the integration of mind mapping and cooperative learning within a comparative research framework while incorporating learning motivation as a moderating variable. Unlike previous studies that have tended to examine these variables independently, this study analyzes the effects of each instructional method as well as their interaction with learning motivation on students' achievement in retelling explanatory texts. Furthermore, this study employs a two-way ANOVA analysis to provide a more comprehensive understanding of the relationships among the variables under investigation [8], [9].

Based on the identified problems and research gaps, this study aims to: (1) analyze the effects of mind mapping and cooperative learning methods on students' achievement in retelling explanatory texts; (2) analyze the effect of learning motivation on students' achievement in retelling explanatory texts; and (3) analyze the interaction between instructional methods and learning motivation on students' achievement in retelling explanatory texts among fifth-grade elementary school students [10].

The hypotheses proposed in this study are as follows: H1: There is a significant difference in explanatory text retelling achievement between students who learn through the mind mapping method and those who learn through the cooperative learning method. H2: There is a significant difference in explanatory text retelling achievement between students with high learning motivation and those with low learning motivation. H3: There is a significant interaction between instructional methods and learning motivation on students' achievement in retelling explanatory texts.

## **METHOD**

This study employs a quantitative approach using a quasi-experimental method with a Non-equivalent Control Group Design. This design was chosen because the research subjects were already placed in naturally formed classes, making individual randomization impossible. The study aims to analyze the effect of Mind Mapping and Cooperative Learning instructional methods on students' learning outcomes in retelling explanatory texts, with learning motivation as a moderating variable. The analysis uses a

2 × 2 factorial design, which allows testing the effects of instructional methods, learning motivation, and the interaction between both variables on students' learning outcomes [11], [12].

The study was conducted at SDN Japanan 2 Kemlagi, Mojokerto Regency, East Java, Indonesia, during the odd semester of the 2025/2026 academic year from August to October 2025. The instructional treatment was carried out over eight meetings, each lasting 2 × 35 minutes. The population consisted of all fifth-grade students at SDN Japanan 2 Kemlagi, totaling 56 students across two parallel classes. Saturated sampling was employed, in which all members of the population were initially included in the study. However, after data screening, only 52 students met the requirements for analysis because several students did not complete all stages of the study or had incomplete data. Consequently, 25 students were included in the Mind Mapping group and 27 students in the Cooperative Learning group. Based on the learning motivation questionnaire, 21 students were categorized as having high learning motivation and 31 students as having low learning motivation. Participants were aged between 10 and 11 years. Of the 52 participants, 28 (53.8%) were male and 24 (46.2%) were female. Inclusion criteria included active fifth-grade students who participated in all research activities and obtained parental or guardian consent. Exclusion criteria included students who did not complete the pre-test or post-test and those with incomplete research data.

**Table 1. Distribution of Participants**

Between-Subjects Factors			
		Value Label	N
Instructional Method	1	Mind Mapping	25
	2	Cooperative Learning	27
Learning Motivation	1	High	21
	2	Low	31

The independent variable in this study is the instructional method, consisting of Mind Mapping and Cooperative Learning. The dependent variable is students' learning outcomes in retelling explanatory texts. The moderating variable is students' learning motivation, categorized into high and low motivation groups based on questionnaire scores. Learning outcomes were measured through students' ability to understand the content of explanatory texts, identify text structure, determine main ideas, and retell the text coherently using appropriate language.

The learning motivation questionnaire was developed based on the ARCS motivational model, consisting of the indicators of attention, relevance, confidence, and satisfaction. Initially, the questionnaire contained 25 statements measured using a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). Following item validity testing using the Pearson Product-Moment Correlation, five items (Items 4, 6, 14, 16, and 24) were found to be invalid and removed. Consequently, 20 valid items were retained for the final data collection and analysis. Sample questionnaire statements included: "I am interested in learning Indonesian," "I try to understand the text even when it is difficult," and "I am confident that I can retell explanatory texts well." [13].

**Table 2. Blueprint of the Learning Achievement Test**

Variable	Indicator	Indicator Description	Cognitive Level	Item Format	Item Numbers	Total Items
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<b>Learning Achievement in Retelling Explanatory Texts</b>	Identifying text content	Identifying important information presented in the explanatory text	C2 (Understanding)	Multiple Choice	1, 2, 3	3
	Identifying text structure	Identifying the general statement, sequence of explanations, and interpretation sections	C2 (Understanding)	Multiple Choice	4, 5, 6	3
	Determining main ideas	Determining the main idea of each paragraph or section of the text	C2 (Understanding)	Multiple Choice	7, 8, 9	3
	Reconstructing text content	Arranging information based on the logical sequence of the explanatory text	C3 (Applying)	Multiple Choice	10, 11, 12	3
	Language accuracy	Identifying appropriate vocabulary and sentence structures in retelling activities	C3 (Applying)	Multiple Choice	13, 14, 15	3
	Content coherence	Identifying logical relationships among ideas and information within the text	C3 (Applying)	Multiple Choice	16, 17, 18	3
	Fluency in retelling	Identifying the appropriate sequence and flow of information in a retelling task	C3 (Applying)	Multiple Choice	19, 20	2
<b>Total</b>						<b>20</b>

The learning achievement test consisted of 20 multiple-choice items representing seven indicators of explanatory text retelling skills, namely identifying text content, identifying text structure, determining main ideas, reconstructing text content, language accuracy, content coherence, and retelling fluency. Sample test items included: "Which sequence correctly describes the process of rainfall?" and "Which sentence most accurately retells the process of rainfall based on the explanatory text?" These sample items illustrate the alignment between the test items and the assessment indicators presented in Table 2.

Content validity of the instruments was assessed by experts consisting of Indonesian language education lecturers and experienced elementary school teachers. Suggestions and feedback from the validators were used as the basis for revising the

instruments before pilot testing. Item validity was analyzed using the Pearson Product-Moment Correlation test, with items considered valid when the calculated r-value exceeded the r-table value (0.273) at a significance level of 0.05. Reliability was examined using Cronbach's Alpha coefficient [13].

Data collection was conducted through several stages, including initial observation, pre-test administration, treatment implementation, post-test administration, and measurement of learning motivation. Initial observations were conducted to identify problems in teaching explanatory texts and students' learning conditions. Subsequently, all students were given a pre-test to determine their initial abilities. Treatment was delivered over eight meetings using Mind Mapping for the experimental group and Cooperative Learning for the comparison group. After the treatment, students were given a post-test to measure learning outcomes. At the final stage, students completed a motivation questionnaire used to classify them into high and low motivation categories [14]

Data were analyzed using IBM SPSS Statistics version 27. Prior to hypothesis testing, data were tested for normality using the Kolmogorov-Smirnov test and for homogeneity of variance using Levene's test. Data were considered normally distributed if the significance value was greater than 0.05 and considered homogeneous if the Levene test significance value was greater than 0.05. After all assumptions were met, hypothesis testing was conducted using Two-Way ANOVA at a 5% significance level to determine the effects of instructional methods, learning motivation, and their interaction on students' learning outcomes in retelling explanatory texts. Effect size was analyzed using Partial Eta Squared ( $\eta^2$ ), where 0.01–0.05 indicates a small effect, 0.06–0.13 a medium effect, and  $\geq 0.14$  a large effect. Interpretation of ANOVA results was based on the significance values of each source of variation to determine each variable's contribution to students' learning outcomes [15].

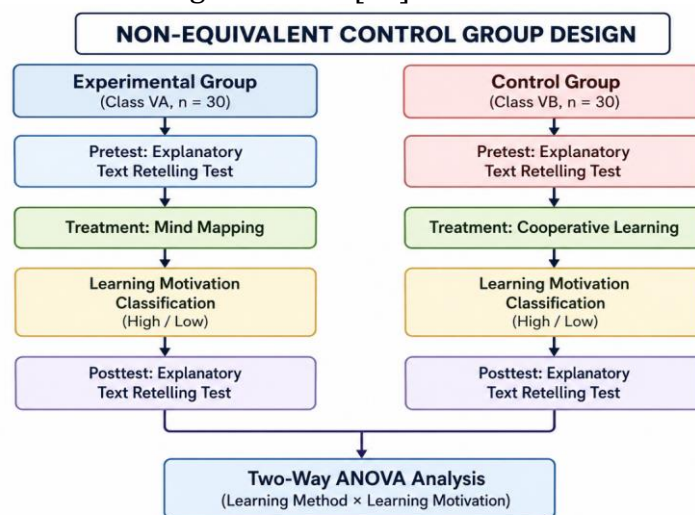
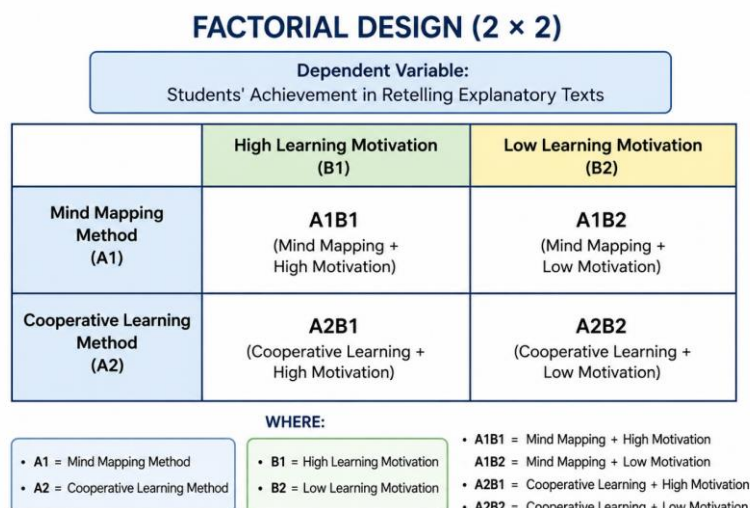


Figure 1. Non-equivalent Control Group Desig



**Figure 2. Factorial 2 × 2 Design Matrix**

This study employed a quasi-experimental method using a non-equivalent control group design with a 2 × 2 factorial arrangement. Two intact fifth-grade classes were selected as research groups. The experimental group was taught using the Mind Mapping method, while the control group used the Cooperative Learning method. Each group was further categorized based on students' learning motivation, namely high and low motivation. The combination of instructional methods and learning motivation formed four experimental conditions: Mind Mapping–High Motivation (A1B1), Mind Mapping–Low Motivation (A1B2), Cooperative Learning–High Motivation (A2B1), and Cooperative Learning–Low Motivation (A2B2). Students' achievement in retelling explanatory texts was measured through pretest and posttest assessments. Data were analyzed using two-way ANOVA to examine the main effects and interaction effects among variables.

## RESULT AND DISCUSSION

This study aimed to analyze the effects of the Mind Mapping and Cooperative Learning instructional methods, learning motivation, and their interaction on students' achievement in retelling explanatory texts among fifth-grade students at SDN Japanan 2 Kemlagi, Mojokerto Regency. The analysis was conducted using a Two-Way Analysis of Variance (ANOVA) at a significance level of 5% [16].

Prior to hypothesis testing, a normality test was conducted to determine whether the residual data were normally distributed. The Kolmogorov–Smirnov test was employed because the sample size exceeded 50 participants. The results are presented in Table 5.

**Table 5. Normality Test Results of Residual Data Using the Kolmogorov–Smirnov Test**

<b>One-Sample Kolmogorov-Smirnov Test</b>		Unstandardized Residual
N		52
Normal Parameters <sup>a,b</sup>	Mean	.000000
	Std. Deviation	6.09190982
Most Extreme Differences	Absolute	.114
	Positive	.101

	Negative		-0.114
Test Statistic			.114
Asymp. Sig. (2-tailed) <sup>c</sup>			.087
Monte Carlo Sig. (2-tailed) <sup>d</sup>	Sig.		.085
	99% Confidence Interval	Lower Bound	.078
		Upper Bound	.092

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Based on Table 5, the Kolmogorov–Smirnov test produced an Asymp. Sig. (2-tailed) value of 0.087, which is greater than the significance level of 0.05. The Monte Carlo significance value also yielded a result of 0.085, exceeding the 0.05 threshold. These findings indicate that the residual data were normally distributed. Therefore, the assumption of normality required for conducting the Two-Way ANOVA was satisfied, and the data were considered appropriate for further parametric statistical analysis.

Following the normality test, a homogeneity test was conducted using Levene's Test to examine whether the variances of learning outcomes were equal across groups. The results are presented in Table 6.

**Table 6. Homogeneity Test Results Using Levene's Test**

Tests of Homogeneity of Variances		Levene Statistic	df1	df2	Sig.
Hasil Belajar Siswa	Based on Mean	2.804	1	50	.100
	Based on Median	2.838	1	50	.098
	Based on Median and with adjusted df	2.838	1	48.610	.098
	Based on trimmed mean	2.820	1	50	.099

Based on Table 6, the Levene's Test yielded a significance value of 0.100, which is greater than the significance level of 0.05. This result indicates that the variances of students' learning outcomes across groups were homogeneous. Therefore, the assumption of homogeneity of variance required for conducting the Two-Way ANOVA was satisfied, and the data were considered appropriate for further inferential analysis.

Prior to hypothesis testing, descriptive statistics were employed to provide an initial overview of students' learning outcomes based on instructional methods and levels of learning motivation. A total of 52 students participated in the study, consisting of 25 students in the Mind Mapping group and 27 students in the Cooperative Learning group. Based on the learning motivation classification, 21 students were categorized as having high learning motivation, while 31 students were categorized as having low learning motivation.

Descriptive statistics of students' learning outcomes based on the combination of instructional methods and learning motivation are presented in Table 7.

**Table 7. Descriptive Statistics of Learning Outcomes by Instructional Method and Learning Motivation**

Descriptive Statistics				
Dependent Variable: Hasil Belajar Siswa				
Metode Pembelajaran	Motivasi Belajar	Mean	Std. Deviation	N
Mind Mapping	Tinggi	66.42	4.325	19
	Rendah	76.33	6.831	6
	Total	68.80	6.513	25

Cooperative Learning	Tinggi	63.00	2.828	2
	Rendah	62.20	1.780	25
	Total	62.26	1.810	27
Total	Tinggi	66.10	4.277	21
	Rendah	64.94	6.521	31
	Total	65.40	5.703	52

Table 7 shows differences in students' learning outcomes based on instructional methods and learning motivation levels. The Mind Mapping group obtained a higher overall mean score ( $M = 68.80$ ,  $SD = 6.513$ ) compared to the Cooperative Learning group ( $M = 62.26$ ,  $SD = 1.810$ ). Based on learning motivation categories, students with high motivation achieved a mean score of 66.10 ( $SD = 4.277$ ), while students with low motivation achieved a mean score of 64.94 ( $SD = 6.521$ ).

The highest mean score was obtained by students in the Mind Mapping group with low learning motivation ( $M = 76.33$ ,  $SD = 6.831$ ), while the lowest mean score was found in the Cooperative Learning group with low learning motivation ( $M = 62.20$ ,  $SD = 1.780$ ). These findings indicate that differences in instructional methods and learning motivation levels may influence students' achievement in retelling explanatory texts. Further analysis was conducted using Two-Way ANOVA. The results of hypothesis testing using Two-Way ANOVA are presented in Table 8.

**Table 8. Two-Way ANOVA Results for Explanatory Text Retelling Achievement**

Tests of Between-Subjects Effects						
Dependent Variable: Hasil Belajar Siswa						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1004.554 <sup>a</sup>	3	334.851	24.578	<.001	.606
Intercept	94560.409	1	94560.409	6940.586	<.001	.993
Metode_Pembelajaran	405.844	1	405.844	29.788	<.001	.383
Motivasi_Belajar	109.356	1	109.356	8.027	.007	.143
Metode_Pembelajaran * Motivasi_Belajar	151.130	1	151.130	11.093	.002	.188
Error	653.965	48	13.624			
Total	224097.000	52				
Corrected Total	1658.519	51				

a. R Squared = .606 (Adjusted R Squared = .581)

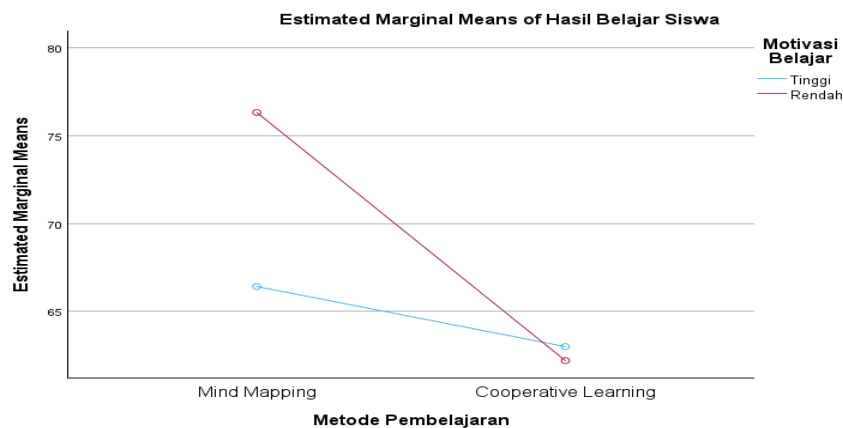
Based on Table 8, the Two-Way ANOVA results indicate that the instructional method significantly affected students' learning outcomes. The effect of the instructional method was statistically significant,  $F(1,48) = 29.788$ ,  $p < 0.001$ , with a Partial Eta Squared value of 0.383. This finding indicates that the type of instructional method contributed significantly to differences in students' achievement. The higher mean score obtained by the Mind Mapping group suggests that this method was more effective in supporting students' understanding and ability to retell explanatory texts compared to Cooperative Learning.

Learning motivation also had a significant effect on students' learning outcomes,  $F(1,48) = 8.027$ ,  $p = 0.007$ , with a Partial Eta Squared value of 0.143. This finding demonstrates that students' motivation levels played an important role in determining their learning achievement. Students with higher learning motivation tended to show better performance in understanding and expressing information from explanatory texts.

The interaction between instructional method and learning motivation was also statistically significant,  $F(1,48) = 11.093$ ,  $p = 0.002$ , with a Partial Eta Squared value of 0.188. This result indicates that the effectiveness of instructional methods depended on students' learning motivation levels. In other words, the influence of instructional methods on learning outcomes varied according to students' motivational conditions.

The overall model showed a significant contribution to explaining students' learning outcomes, with  $R^2 = 0.606$  and Adjusted  $R^2 = 0.581$ . This means that instructional methods, learning motivation, and their interaction explained 60.6% of the variance in students' learning outcomes, while the remaining 39.4% was influenced by other factors not examined in this study, such as students' prior knowledge, learning habits, environmental support, and other learning-related factors.

The interaction pattern between instructional methods and learning motivation is presented in Figure 3.



**Figure 3. Interaction Graph of Instructional Methods and Learning Motivation on Learning Outcomes.**

Overall, the findings demonstrate that the Mind Mapping method produced better learning outcomes than Cooperative Learning in improving students' ability to retell explanatory texts. The results also show that learning motivation influenced students' achievement and interacted with the instructional methods applied. Therefore, selecting instructional methods that consider students' motivational characteristics is important to create an effective and meaningful learning process.

This study demonstrates that the Mind Mapping method is more effective than Cooperative Learning in improving elementary school students' ability to retell explanatory texts. This finding suggests that successful learning of explanatory texts is determined not only by students' learning activities but also by how information is presented and organized during the instructional process. The characteristics of explanatory texts, which involve cause-and-effect relationships, sequential processes, and complex information structures, require strategies that assist students in organizing information systematically. In this context, Mind Mapping provides visual support that enables students to connect main ideas with supporting information, thereby making comprehension and retelling processes more structured [17].

These findings can be explained through the perspective of Constructivist Theory, which emphasizes that knowledge is actively constructed by learners through the

process of linking new information to their existing cognitive structures. The activity of creating mind maps encourages students to identify key concepts, establish relationships among ideas, and construct their own representations of knowledge. This process facilitates more meaningful learning compared to merely receiving information passively. The findings reinforce the argument that visual-based learning and active knowledge construction are particularly suitable for developing text-based literacy skills among elementary school students [18], [19].

The results are also consistent with several recent international studies. Research conducted by Gao et al. (2025) [20] revealed that visual mapping strategies improve students' information organization skills and memory retention in text-based learning. Similar findings were reported by Chiang et al. (2025) [21], who found that visual representations help students understand conceptual relationships more deeply than conventional instructional strategies. A systematic review conducted by E. Morsi and B. Sivakami (2026) [22] further demonstrated that visual mapping techniques positively affect reading, writing, and the comprehension of complex information in elementary education. The consistency of these findings strengthens the external validity of the present study and indicates that the effectiveness of Mind Mapping is not limited to the local context but is also evident across different educational systems [22].

The significant effect of learning motivation on learning outcomes indicates that psychological factors remain essential elements of academic success. This finding supports Self-Determination Theory, which explains that individuals with higher motivation tend to demonstrate greater learning engagement, stronger persistence, and better self-regulation abilities. Motivation functions as a psychological driving force that encourages students to understand learning materials, complete tasks, and maintain attention throughout the learning process. The results of this study reinforce previous international research showing that intrinsic motivation is positively associated with academic achievement, learning engagement, and higher-order thinking skills among elementary school students [23].

One of the most interesting findings of this study is that students with low motivation in the Mind Mapping group achieved higher average learning outcomes than highly motivated students within the same group. This finding suggests that the effectiveness of an instructional method does not always depend entirely on students' initial levels of motivation. In this context, Mind Mapping appears to function as a compensatory mechanism that helps overcome limitations in intrinsic motivation. The use of colors, images, symbols, and branching ideas creates a more engaging learning experience, thereby increasing the participation of students who were previously less motivated. In other words, an attractive instructional design can generate situational motivation that emerges during the learning process, even when students initially possess relatively low motivation [24].

This explanation can also be understood through Self-Determination Theory. The theory posits that motivation is not fixed but can develop when the learning environment satisfies individuals' basic needs for competence, autonomy, and social relatedness. Mind mapping activities provide students with opportunities to determine

how information is organized, express creativity, and experience success directly. These conditions can enhance students' perceptions of competence, thereby fostering stronger motivation throughout the learning process. Therefore, the findings suggest that appropriately designed instructional methods can reduce the negative effects of low initial motivation [23].

The significant interaction between instructional methods and learning motivation indicates that the effectiveness of learning strategies is influenced by student characteristics. This finding suggests that no single instructional method is equally effective for all learners under all conditions. Learning success is the result of an interaction between pedagogical and psychological factors. This perspective reinforces the constructivist view that learning is an active process influenced by learners' experiences, readiness, and individual characteristics [25].

Although Cooperative Learning produced lower achievement than Mind Mapping in this study, this finding does not imply that the method is generally ineffective. The effectiveness of Cooperative Learning largely depends on the quality of group interactions, students' communication skills, and teachers' ability to manage collaborative activities. From the perspective of Social Learning Theory, learning occurs through observation, imitation, and social interaction. Among elementary school students, collaborative and discussion skills are still developing; therefore, the benefits of collaborative learning may not yet be fully optimized. This condition may explain why the advantages of Cooperative Learning reported in many previous studies did not emerge as prominently in the present study [26].

The findings of this study have several theoretical implications. First, they strengthen Constructivist Theory by demonstrating that learning environments that enable students to actively construct knowledge representations result in better learning outcomes. Second, the findings support Social Learning Theory by highlighting the importance of learning environments in shaping students' educational experiences. Third, the results provide empirical support for Self-Determination Theory by demonstrating that learning motivation and instructional design interact in influencing learning outcomes [26].

The practical implications of this study are significant for various educational stakeholders. For teachers, the findings indicate that Mind Mapping can serve as an effective instructional strategy for improving students' ability to comprehend and retell explanatory texts. For curriculum developers, the results highlight the importance of integrating concept visualization and graphical representation activities into elementary literacy instruction. For educational policymakers, the findings provide empirical evidence supporting the expansion of teacher professional development programs that emphasize active, visual, and student-centered learning approaches. Strengthening teachers' competencies in implementing innovative instructional strategies has the potential to improve the quality of literacy education on a broader scale [27].

Overall, this study demonstrates that improving students' ability to retell explanatory texts requires synergy between effective instructional methods and students' motivational conditions. The superiority of Mind Mapping highlights the

importance of visualization and information organization in literacy learning, while the significant interaction between instructional methods and learning motivation confirms that learning success is determined not only by the strategies employed by teachers but also by the extent to which those strategies accommodate learners' needs and characteristics [28].

## **CONCLUSION**

This study demonstrates that the Mind Mapping method is more effective than Cooperative Learning in improving elementary students' explanatory text retelling achievement. Learning motivation also significantly influences learning outcomes, and a significant interaction between instructional methods and learning motivation indicates that the effectiveness of instructional strategies depends on students' motivational levels. The findings further reveal that the instructional method had the largest effect on learning outcomes (Partial  $\eta^2 = 0.383$ ), followed by the interaction effect (Partial  $\eta^2 = 0.188$ ) and learning motivation (Partial  $\eta^2 = 0.143$ ). The novelty of this study lies in simultaneously comparing Mind Mapping and Cooperative Learning while examining learning motivation as a moderating variable in explaining elementary students' explanatory text retelling achievement. The findings are limited by the relatively small sample from a single elementary school, the inclusion of only two independent variables, and the short intervention period, which may limit the generalizability and long-term interpretation of the results. Mind Mapping can be adopted as an effective instructional strategy to improve explanatory text retelling skills, while teachers should consider students' learning motivation when planning instructional activities.

## **AWARD**

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