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Original Article

The Relationship Between the Application of the Jigsaw-Type Cooperative Learning Method and Student Learning Activeness in Indonesian Language Learning for Fifth-Grade Elementary School Students in Pejagalan Sub-District, North Jakarta

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Abstract

Indonesian language learning at the elementary level requires active student engagement in listening, speaking, reading, and writing, yet many teachers still rely on conventional lecture-based methods that leave students passive. Preliminary interviews with fifth-grade teachers in Pejagalan Sub-District, North Jakarta, indicated low student activeness under conventional teaching, while cooperative learning was reported to encourage independence, motivation, and communication skills. This study examined the relationship between the application of the jigsaw-type cooperative learning method and student learning activeness in Indonesian language learning among fifth-grade students in Pejagalan Sub-District. A quantitative correlational approach was used. The population consisted of 300 fifth-grade students across two elementary schools; a total sampling (census) approach was attempted, but only 199 students (a response rate of 66.3 percent) ultimately participated as respondents, using validated Likert-scale questionnaires for the jigsaw-type cooperative learning method variable (X) and the student learning activeness variable (Y). Data were analyzed using Pearson Product Moment correlation with SPSS. Results showed a Pearson correlation coefficient of 0.747 with a significance value of 0.00 (< 0.05), indicating a positive and significant relationship in the strong category (0.600 to 0.799). The alternative hypothesis was accepted: the application of the jigsaw-type cooperative learning method is positively and strongly related to student learning activeness in Indonesian language learning among fifth-grade elementary students in Pejagalan Sub-District, North Jakarta.

Keywords: Active Learning, Cooperative Learning, Correlational Study, Elementary School Students, Jigsaw Method.

1. Introduction

As articulated in the Republic of Indonesia's Law Number 20 of 2003, education represents a planned state initiative for national enlightenment, with Article 1 Paragraph 1 describing it as intentional, structured activity to enable students' self-actualization. Article 37 Paragraph 1, consistent with BSKAP Decree Number 046 of 2025, requires Indonesian Language instruction at primary levels to foster verbal facility, reading proficiency, and mastery of linguistic conventions. Elementary School (SD), as the first level of formal education taken by children aged 7 to 12 years, has an important role in developing students' basic abilities through an active and conducive learning process (Susanto, 2013). Indonesian

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language learning requires active student engagement in listening, speaking, reading, and writing, because these four skills are interrelated and can only develop through active practice, not merely theory.

Although the jigsaw type cooperative learning method has proven to have great potential for student learning activeness, most previous studies focused on experimental or qualitative methods, and were conducted in the Civics and Physical Education, Sport, and Health subjects; no research has specifically examined the context of Pejagalan Sub-District, North Jakarta. This study therefore presents novelty in the form of a correlational approach to analyze the relationship between the jigsaw type cooperative learning method and student learning activeness, specifically focused on Indonesian language learning for fifth grade elementary school students in the urban area of Pejagalan Sub-District, North Jakarta, a context that has not been widely studied before.

Student learning activeness is influenced by internal factors, external factors, and learning approaches, including the appropriateness of the teaching method used by the teacher (Kosasih, 2017). However, the results of direct interviews with the homeroom teacher of grade V at SD Negeri Pejagalan 01 Pagi showed that the lecture method is still dominantly used, and this method is considered not to make students active because learning is teacher centered. The grade V teacher at SD Negeri Pejagalan 01 Pagi (Mrs. Marsih, S.Pd.), who often applies the cooperative method, stated that this method encourages independence, motivation, and the courage to ask and answer questions. A similar opinion was expressed by the grade V teacher at SD Negeri Pejagalan 05 Pagi (Mr. Andri Hermawan, S.Pd.), who mentioned that the cooperative method increases student activeness in group discussion and communication ability. This finding is reinforced by research results on grade V students at SD Negeri Gandasoli which showed that the cooperative learning method can increase student activeness (Wulandari & Anggis, 2022).

Several previous studies have examined related topics. Hadiah (2024) studied the effect of the jigsaw method on increasing the activeness of grade V students in the Civics subject at MI ATTAQWA 27 Bekasi using a quasi-experimental method, with results showing average activeness increased from 72.55 (pretest, experimental group) to 77.60 (posttest). Faza (2024) studied the relationship between the STAD type cooperative learning model and learning motivation in Physical Education, Sport, and Health learning for grade IV in Sleman Regency using a quantitative questionnaire approach, with a coefficient of determination (R Square) of 0.723. Kinesti and Fatatussa'diyah (2023) studied the application of the jigsaw type cooperative method in increasing the learning activeness of grade V students in Indonesian language learning at SD Negeri 03 Sidigede, Jepara, using a descriptive qualitative method with triangulation of sources, techniques, and time.

The present investigation seeks to determine whether a relationship obtains between the employment of the Jigsaw cooperative learning model and learner participation in Indonesian language classes at the fifth-grade level in elementary schools situated in Pejagalan Sub-District, North Jakarta. Theoretically, this study is expected to become a source of knowledge and new insight in designing Indonesian language learning that is enjoyable and meaningful. Practically, the results of this study are expected to be beneficial for students in knowing the extent of learning activeness that has been applied, for teachers in designing Indonesian language learning in accordance with the Merdeka Curriculum that encourages student activeness, and for future researchers as a reference to further examine the topic of student learning activeness with other methods or variables.

2. Literature Review

2.1. Student Learning Activeness

Student learning activeness is a condition of student involvement physically, mentally, emotionally, and cognitively at every stage of the learning process. Sardirman (in Wibowo, 2016) states that activeness is an activity that is both physical and mental, namely doing and thinking as an inseparable series. John Dewey (in Wibowo, 2016) affirms that learning is related to something done and the active mission of students. Nana Sudjana (in Wibowo, 2016) details that student activeness is observable through task participation, engagement in problem-solving activities, questioning peers or instructors, information-seeking for solution development, group discussion involvement, self-assessment of abilities and outcomes, practice with analogous problems, and application of acquired knowledge to task completion.

Student learning activeness is influenced by three factors: internal factors (physiological and psychological aspects such as intelligence, attitude, aptitude, interest, and motivation), external factors (social and non-social environment), and learning approach factors including the appropriateness of the teaching method (Kosasih, 2017). Based on the indicators proposed by Dimyati and Mudjiono (2010), the indicators of student learning activeness used in this study include attention, asking questions, answering questions, discussion, doing tasks, learning skills, learning involvement, interest and motivation, self-confidence, learning consistency, learning initiative, and active attitude.

2.2. Jigsaw Type Cooperative Learning Method

According to Uno (2023), a teaching method is a way used by teachers to carry out their function as a tool to achieve learning objectives. Isjoni (2013) defines cooperative learning as an activity carried out together with mutual assistance within a group, with the aim of improving students' academic performance, building acceptance of differences among peers, and developing social skills. According to Roger and David Johnson, cooperative learning is built on five elements: positive interdependence, face to face interaction, individual accountability, social skills, and group process evaluation.

Jigsaw is a type of cooperative learning method that emphasizes cooperation among students in small groups to achieve a common goal (Triani, 2016). The steps in its application include grouping students into teams of 4 to 5 members, dividing different material to each member, holding expert group meetings to discuss the same sub topic, returning members to their original groups to teach the material to one another, presenting the results of the expert group discussion, evaluation in the form of a quiz, giving group rewards, and closing. According to Slavin, the main activities of jigsaw include reading, expert group discussion, team report, test, and team recognition. Based on this review, the indicators of the application of the jigsaw method in this study include group formation, material division, expert groups, individual responsibility, group cooperation, interaction and discussion, the teacher's role, the impact of jigsaw learning, attitude and skill values, and student involvement.

2.3. Indonesian Language Learning

Indonesian Language is a compulsory subject at the elementary and secondary education levels in accordance with Law of the Republic of Indonesia No. 20 of 2003 Article 37 Paragraph 1. The objectives of this subject according to Decree of the Head of BSKAP Number 046 of 2025 include the development of effective and polite communication ability, appreciation of Indonesian as the official language of the state, multimodal language ability, literacy ability, self confidence in expression, understanding of grammatical and cultural rules, and concern for contributing as a citizen. Language skills (listening, speaking, reading,

writing) are closely interrelated and only develop through active student involvement, so that learning activeness becomes key to mastering language skills, especially in learning with the cooperative method.

2.4. Conceptual Framework

Meaningful Indonesian language learning requires two-way communication between teacher and students as well as active student involvement in discussion and social interaction. The jigsaw type cooperative learning method attracts student attention and participation through group work, so that each student has the opportunity to be directly involved, cooperate, and dare to ask questions or give opinions. Clear division of tasks, positive interaction among group members, and shared responsibility are thought to make students more active in learning, so that the better the application of the jigsaw method, the higher the student learning activeness.

2.5. Research Hypothesis

The research hypothesis derived from this framework proposes that the application of the Jigsaw cooperative learning method correlates positively with learner engagement in Indonesian language classes at the fifth-grade level in elementary schools within Pejagalan Sub-District, North Jakarta.

3. Methods

This investigation adopts a quantitative design with correlational procedures, the objective being to determine whether a relationship exists between two variables without exerting experimental control over either (Sugiyono, 2018; Suharsimi, 2012). The independent variable is the application of the jigsaw type cooperative learning method (X), and the dependent variable is student learning activeness (Y). The study was conducted at elementary schools in Pejagalan Sub-District, North Jakarta, in the even semester of the 2025/2026 academic year during April to May 2026.

The target population of this study is fifth grade elementary school students in Pejagalan Sub-District, North Jakarta. Although four elementary schools are located in this sub-district (SDN Pejagalan 01, 03, 05, and 09), the study focused on two schools, SDN Pejagalan 01 and SDN Pejagalan 05, based on considerations of time, effort, and cost, the similarity of school characteristics, and access and research permission. Within these two schools, the total sampling (census) technique was applied, so all 199 students from a combined population of 300 students were included in the study without a further selective sampling step that could introduce additional bias.

The target population of this study is fifth grade elementary school students in Pejagalan Sub-District, North Jakarta. Based on data from the North Jakarta Administrative City Education Office and Government, there are four elementary schools in this area (SDN Pejagalan 01, 03, 05, and 09), but the researcher selected two schools (SDN Pejagalan 01 and SDN Pejagalan 05) considering limitations of time, effort, and cost, similarity of school characteristics, and access and research permission, with a total population of 300 students. A total sampling (census) approach was attempted across this population; however, only 199 of the 300 students (a response rate of 66.3 percent) completed and returned valid questionnaires. Because a portion of the population did not participate, the resulting 199 respondents constitute a non-random subset of the population rather than a full census, and the sampling technique used is more accurately described as total sampling with non-response, rather than a completed census.

Primary data were collected through a Likert scale questionnaire with a score range of 1 to 4 (4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree), prepared based on the indicators of each variable. The instrument for the application of the jigsaw type cooperative method (X) refers to ten indicators: group formation, material division, expert groups, individual responsibility, group cooperation, interaction and discussion, the teacher's role, the impact of jigsaw learning, attitude and skill values, and student involvement. The instrument for student learning activeness (Y) refers to twelve indicators: attention, asking questions, answering questions, discussion, doing tasks, learning skills, learning involvement, interest and motivation, self-confidence, learning consistency, learning initiative, and active attitude.

Instrument validation was carried out through content validity (expert judgment by the supervising lecturer and the grade V Indonesian language teacher) and empirical validity (trial on 30 students outside the sample, analyzed using Pearson Product Moment correlation; items with r calculated greater than r table at a significance level of 5% were declared valid). Reliability was tested using the Cronbach's Alpha coefficient, with the instrument declared reliable if $\alpha \geq 0.70$ (Riduwan, 2018). The results of reliability test results are presented in table 1 below.

Table 1. Reliability Test Results

Variable	N of Item	Cronbach's Alpha	Reference Value	Conclusion
Application of the Jigsaw Type Cooperative Learning Method (X)	30	0.875	0.70	Reliable
Student Learning Activeness (Y)	30	0.912	0.70	Reliable

Source: Processed data (2026)

Both variables obtained a Cronbach's Alpha greater than 0.70, so the reliability assumption for both instruments was met. The validation test results produced a final instrument of 21 valid statement items for variable X and 25 valid statement items for variable Y, as presented in Table 2 and Table 3.

Table 2. Final Grid of the Instrument for the Application of the Jigsaw Type Cooperative Learning Method in Indonesian Language Learning

No.	Indicator	Item Number	Total
1.	Group formation	1	1
2.	Material division	2	1
3.	Expert groups	3, 4	2
4.	Individual responsibility	5, 6, 7, 8	4
5.	Group cooperation	9, 10, 11	3
6.	Interaction and discussion	12, 13	2
7.	Teacher's role	14, 15, 16	3
8.	Impact of jigsaw learning	17, 18, 19	3
9.	Attitude and skill values	20	1
10.	Student involvement	21	1
Total			21

Source: Processed data (2026)

Table 3. Final Grid of the Student Learning Activeness Instrument

No.	Indicator	Item Number	Total
1.	Attention	1, 2, 3	3
2.	Asking questions	4, 5	2
3.	Answering questions	7	1
4.	Discussion	8, 9	2
5.	Doing tasks	11, 12, 13	3
6.	Learning skills	14, 15	2
7.	Learning involvement	16, 17, 18	3
8.	Interest and motivation	20, 21, 22	3
9.	Self-confidence	23	1
10.	Learning consistency	25, 26	2
11.	Learning initiative	28	1
12.	Active attitude	29, 30	2
Total			25

Source: Processed data (2026)

Because both variables are interval-level, the data analysis employed the Pearson Product Moment correlation. Prior to testing the hypothesis, normality was evaluated using the Kolmogorov-Smirnov test, and linearity was assessed via ANOVA with reference to the deviation-from-linearity significance value. The resulting r coefficient was compared to the critical r at $\alpha = 0.05$; significance is established when the calculated value surpasses the table value. The magnitude of the relationship was interpreted according to the benchmarks in Table 4.

Table 4. Guideline for Interpreting Correlation Values

Value Range of r	Relationship Interpretation
0.000 – 0.199	Very low
0.200 – 0.399	Low
0.400 – 0.599	Moderate
0.600 – 0.799	Strong
0.800 – 1.000	Very strong

Source: Riduwan (2018)

The statistical hypotheses are specified as H0: $\rho = 0$, indicating no positive association between the Jigsaw cooperative learning method and student activeness, against Ha: $\rho \neq 0$, denoting a positive relationship between these variables, where ρ represents the correlation coefficient for variables X and Y.

4. Results and Discussion

4.1. Research Results

4.1.1. Data Description

The study was conducted on 199 grade V elementary school student respondents in Pejagalan Sub-District, North Jakarta, representing 66.3 percent of the 300-student population across the two selected schools following the total sampling (census) approach described in the Methods section. Data on student learning activeness (25 valid items) produced the following descriptive statistics.

Table 5. Descriptive Data of Student Learning Activeness

Descriptive Statistic	Value
Mean	80.11
Standard Deviation	8.393
Variance	70.4424
Minimum	60
Maximum	100

Source: Processed data (2026)

Based on this data, the range (R) was determined to be 40, the number of classes (K) was 8.582, and the class length (I) was 4.658, with the following frequency distribution.

Table 6. Frequency Distribution of Student Learning Activeness

No.	Class Interval	Absolute Frequency	Relative Frequency (%)
1.	60–64	7	3.5
2.	65–69	15	7.5
3.	70–74	29	14.6
4.	75–79	43	21.6
5.	80–84	44	22.1
6.	85–89	33	16.6
7.	90–94	21	10.6
8.	95–100	7	3.5
Total		199	100

Source: Processed data (2026)

Based on the frequency distribution table above, it can be seen that the number of students who obtained scores between 60 and 64 was 7 students, between 65 and 69 was 15 students, between 70 and 74 was 29 students, between 75 and 79 was 43 students, between 80 and 84 was 44 students, between 85 and 89 was 33 students, between 90 and 94 was 21 students, between 95 and 100 was 7 students. Most students obtained scores in the range of 80 to 84 with a total of 44 students, while the fewest students obtained scores in the range between 60 and 64 and between 95 and 100 with a total of 7 students each.

Table 7. Descriptive Data of the Application of the Jigsaw Type Cooperative Learning Method

Descriptive Statistic	Value
Mean	67.70
Standard Deviation	6.658
Variance	44.3289
Minimum	50
Maximum	84

Source: Processed data (2026)

The range (R) was 34, the number of classes (K) was 8.58, and the class length (I) was 3.95, with the following frequency distribution.

Table 8. Frequency Distribution of the Application of the Jigsaw Type Cooperative Learning Method

No.	Class Interval	Absolute Frequency	Relative Frequency (%)
1.	50–53	5	2.5
2.	54–57	6	3.0
3.	58–61	30	15.1

No.	Class Interval	Absolute Frequency	Relative Frequency (%)
4.	62–65	29	14.6
5.	66–69	49	24.6
6.	70–73	38	19.1
7.	74–77	28	14.1
8.	78–81	13	6.5
9.	82–84	1	0.5
Total		199	100

Source: Processed data (2026)

Based on the frequency distribution table 8 above, it can be seen that the number of students who obtained scores between 50 and 53 was 5 students, between 54 and 57 was 6 students, between 58 and 61 was 30 students, between 62 and 65 was 29 students, between 66 and 69 was 49 students, between 70 and 73 was 38 students, between 74 and 77 was 28 students, between 78 and 81 was 13 students, between 82 and 84 was 1 student. Most students obtained scores in the range of 66 to 69 with a total of 49 students, while the fewest students obtained scores in the range between 82 and 84 with a total of 1 student.

4.1.2. Testing of Analysis Requirements

Normality was assessed using the Kolmogorov-Smirnov test at a significance threshold of $\alpha = 0.05$ with a sample size of 199, and the data were considered normal when the p-value exceeded 0.05.

Table 9. Kolmogorov-Smirnov Normality Test Results

Variable	α	Asymp. Sig. (2-tailed)	Conclusion
Application of the Jigsaw Type Cooperative Learning Method (X)	> 0.05	0.061	Normally distributed
Student Learning Activeness (Y)	> 0.05	0.200	Normally distributed

Source: Processed data (2026)

The linearity test was carried out using the ANOVA table in SPSS, with the criteria that a significance value of deviation from linearity less than 0.05 means not linear, and greater than 0.05 means linear.

Table 10. Linearity Test Results

Variable	α	Sig. Deviation from Linearity	Conclusion
Application of the Jigsaw Type Cooperative Learning Method (X) with Student Learning Activeness (Y)	> 0.05	0.169	Linear

Source: Processed data (2026)

The linearity assumption is satisfied, as the deviation from linearity statistic of 0.169 surpasses the 0.05 significance criterion, indicating a linear association between the two variables.

4.1.3. Hypothesis Testing

After the data was declared normally distributed and linear, hypothesis testing was carried out using Pearson Product Moment correlation.

Table 11. Pearson Product Moment Correlation Test Results

Variable	α	Pearson Correlation	Sig. (2-tailed)
Application of the Jigsaw Type Cooperative Learning Method (X) with Student Learning Activeness (Y)	> 0.05	0.747	0.00

Source: Processed data (2026)

With a significance value of 0.00 ($p < 0.05$), the analysis reveals a correlation between the Jigsaw cooperative learning approach and student activeness. The positive Pearson Correlation of 0.747 signifies that greater fidelity in Jigsaw implementation is associated with elevated learning activeness among fifth graders in Indonesian language classes at Pejagalan Sub-District elementary schools, while weaker implementation corresponds to lower activeness. This coefficient, falling within the 0.600–0.799 band as per Table 4, indicates a strong relationship. The results thus support Ha and reject H0, confirming the hypothesis that a robust positive correlation obtains between the Jigsaw method and student learning activeness.

4.2. Discussion

The results of the Pearson Product Moment correlation test obtained a correlation value of 0.747 which is positive, indicating a one directional relationship between the application of the jigsaw type cooperative learning method (X) and student learning activeness (Y): a change in one variable will be followed by a change in the other variable regularly in the same direction. This relationship falls within the strong category because it lies within the r value range of 0.600 to 0.799. Thus, the alternative hypothesis (Ha) stating that there is a positive relationship between the jigsaw type cooperative learning method and student learning activeness in Indonesian language learning in fifth grade elementary schools in Pejagalan Sub-District, North Jakarta is accepted, and the null hypothesis (H0) is rejected.

The results of this study are in line with the theory that one of the factors influencing student learning activeness is the learning approach factor, including the use of teaching methods (Kosasih, 2017). The use of an appropriate teaching method affects students' tendency to participate actively in the learning process, thereby influencing optimal learning activeness. The application of the jigsaw type cooperative learning method places students at the center of learning through discussion in the original group and the expert group, thereby encouraging active participation, responsibility, communication, and cooperation among students in the learning process. This finding reinforces theories proving that the application of the jigsaw type cooperative learning method is related to student learning activeness.

This pattern is consistent with findings from other cooperative learning models applied at the elementary level. Fatimah et al. (2025) found that a cooperative Talking Stick model, applied through classroom action research, raised both teaching quality and student engagement across successive cycles, alongside a marked rise in the proportion of fourth-grade students meeting the mathematics passing standard. Similarly, Madjid and Bahiroh (2022), examining cooperative learning strategies for second language communication skills using a quasi-experimental design, found that cooperative approaches produced significantly better communication outcomes than more individualistic, passive conventional methods,

and highlighted the role of student-to-student interaction as a key factor behind that improvement. Taken together with the present findings, this suggests that structured student interaction is a common mechanism behind the positive outcomes reported across different cooperative learning models and subject areas, though each study's design differs and causal claims should be limited to what each design supports.

This study has several limitations. First, the correlational design only shows the existence of a relationship between variables, not a cause-and-effect relationship. Second, the study was only conducted on fifth grade elementary school students in Pejagalan Sub-District, North Jakarta, so the results cannot necessarily be generalized to other education levels or regions with different characteristics. Third, data collection used a questionnaire so respondents' answers depended on the honesty, understanding, and perception of each student. Fourth, the study only examined one independent variable, while student learning activeness can be influenced by other factors that were not examined. Fifth, the study was conducted within a certain time period so the results obtained describe the condition of the respondents at the time the study was conducted.

5. Conclusion

Three key findings emerge from this study regarding Jigsaw-type cooperative learning and learner activeness in Indonesian language classes at the fifth-grade level in Pejagalan Sub-District, North Jakarta. The first establishes a robust positive relationship between the variables, supporting the alternative hypothesis over the null; the correlational and cross-sectional nature of the research, nevertheless, precludes causal interpretation. Second, this association is consistent with the jigsaw structure of original groups and expert groups, in which each student holds responsibility for understanding the material and conveying it back to group members, a structural feature linked to greater involvement in asking questions, discussing, expressing opinions, and cooperating. Third, teachers and schools may consider applying and supporting the jigsaw method more optimally, adjusted to student characteristics and classroom conditions, while future researchers are advised to use wider samples, other education levels or subjects, additional variables, and designs better suited to clarifying the direction and strength of this relationship.

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