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STUDENT ENGAGEMENT IN ISLAMIC RELIGIOUS EDUCATION: EXAMINING JIGSAW COOPERATIVE LEARNING IN INDONESIAN SECONDARY SCHOOLS

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Abstract

This study aimed to examine the relationship between the Jigsaw cooperative learning model and student engagement in Islamic Religious Education among seventh-grade students at an Indonesian junior high school. The study applied a quantitative correlational design involving 70 students selected through saturated sampling. Data were collected using Likert-scale questionnaires and analyzed using normality testing and simple linear regression with SPSS version 22. The findings showed that the implementation of the Jigsaw cooperative learning model was rated high (88.97%), while student engagement was rated very high (90.84%). Regression analysis demonstrated a significant positive relationship between the Jigsaw cooperative learning model and pupil engagement ($p < .05$). The coefficient of determination ($R^2 = .395$) indicated that the Jigsaw cooperative learning model accounted for 39.5% of the variance in student engagement. This evidence shows that collaborative learning activities were positively associated with student engagement in Islamic Religious Education.

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Introduction

Education fulfills a fundamental role in developing students' intellectual, social, emotional, and moral competencies. In the context of national education, learning is expected not only to improve academic achievement but also to encourage students' active involvement and interaction during the learning process. Student involvement is considered an important indicator of educational quality because actively engaged students tend to demonstrate higher academic performance, stronger motivation, and higher levels of classroom participation (Fredricks et al., 2004; Wong & Liem, 2022; Xu et al., 2023).

In classroom learning, teachers play a central role in creating instructional environments that stimulate students' active involvement. The effectiveness of learning activities is strongly influenced by the choice of appropriate instructional strategies and learning models (Han, 2021; Hooda, 2022; Siregar, 2024). Learning models that emphasize interaction, collaboration, and student participation are increasingly needed to support student-centered learning approaches in current education. One cooperative learning approach widely recognized for promoting student engagement is the Jigsaw cooperative learning model (Silva, Farias & Mesquita, 2021; Jeppu, Kumar & Sethi, 2023; Kebede et al., 2025).

The Jigsaw cooperative learning model is grounded in cooperative learning theory, which emphasizes positive interdependence, peer interaction, and students' collaborative responsibility (Slavin, 2015).

In the Jigsaw model, students are divided into heterogeneous groups and assigned responsibility for mastering and teaching designated content to their peers. This process encourages communication, discussion, teamwork, and active knowledge distribution among students. According to the social constructivist theory proposed by Lev Vygotsky, knowledge is constructed through social interaction and coordinated learning experiences. Therefore, cooperative learning environments such as Jigsaw can facilitate students' cognitive and social development simultaneously.

From a theoretical perspective, the Jigsaw cooperative learning model may strengthen student involvement by requiring active participation, peer communication, collaborative responsibility, and mutual dependence during learning activities. Students are not merely passive recipients of information; they are actively involved in explaining concepts, discussing ideas, and participating in group learning. These collaborative processes may increase students' behavioral, emotional, and analytical engagement during classroom instruction.

Student engagement has become an important issue in educational research because many students still demonstrate unengaged learning behaviors during classroom activities. Low student involvement is commonly reflected in limited classroom participation, lack of concentration, low motivation, reluctance to ask questions, and minimal involvement in group discussions (Bond et al., 2020; Metzger & Langley, 2020; Severe et al., 2024).

These conditions negatively affect students' academic achievement, communication skills, and teamwork-oriented abilities. In broader educational contexts, passive learning environments remain a major challenge, particularly in

subjects that require active discussion and interaction, such as Islamic Religious Education.

Several previous studies have reported that pupil engagement remains relatively low in many learning environments. Research conducted by Wulandari et al. (2021) found that students frequently demonstrated passive classroom behavior and limited participation during learning activities. Similarly, Fredricks et al. (2004) and Bond et al. (2020) reported that many students lacked confidence in expressing opinions and were reluctant to participate, yet were actively engaged in discussions. Previous international research has also demonstrated that cooperative learning strategies substantially enhance student involvement and engagement. For example, Çimer (2011) found that cooperative learning approaches increased students' classroom interaction and participation rates in comparison with conventional instructional methods.

Similar problems were identified in Islamic Religious Education classes at a public junior high school in Siak Hulu, Indonesia. Preliminary observations and interviews with teachers revealed that several students demonstrated low learning engagement during classroom activities. Students often lacked concentration, talked with peers during instruction, hesitated to express opinions, and showed limited participation in discussions. In addition, some students experienced difficulties understanding learning materials collaboratively and solving problems during group activities. These findings indicate the need for instructional strategies that promote more active and interactive learning environments.

The Jigsaw cooperative learning model is a relevant pedagogical approach for addressing these issues because it motivates students to take an active role in learning and in sharing knowledge within groups. Previous studies have demonstrated that Jigsaw learning positively affects student participation, communication skills, collaborative learning, and academic achievement (Santoso & Soeryanto, 2021; Anggraini & Simanjuntak, 2023). Furthermore, Abdul Wahab, Suhartini, and Buhaerah (2022) reported that students taught through the Jigsaw model demonstrated higher classroom participation, greater confidence, and stronger involvement in discussions compared with those taught using standard methods.

Although numerous studies have examined the effectiveness of the Jigsaw cooperative learning model, several important gaps remain in the literature. First, most previous studies have focused primarily on academic achievement and cognitive learning outcomes, while paying relatively limited attention to learner involvement as a multidimensional educational construct. Second, empirical evidence regarding the relationship between Jigsaw cooperative learning and student involvement within Islamic Religious Education contexts remains limited, particularly at the junior high school level in Indonesia. Third, previous studies have generally emphasized participation outcomes without sufficiently examining how collaborative interaction and peer responsibility may contribute to students' behavioral, emotional, and cognitive involvement during classroom learning activities.

Therefore, this study strives to examine the relationship between the Jigsaw cooperative learning model on student commitment in Islamic Religious Education among seventh-grade students at an Indonesian junior high school. The findings are

expected to contribute to the development of cooperative learning practices and to yield empirical evidence on the effectiveness of the Jigsaw model in advancing student engagement.

Research Method

This study used a quantitative correlational design to examine the relationship between the Jigsaw cooperative learning model and pupil engagement in Islamic Religious Education. Quantitative correlational research is commonly used to investigate relationships and predictive associations between variables through quantitative statistical analysis (Creswell & Creswell, 2018; Lim, 2025). The study was conducted at a public junior high school in Siak Hulu District, Riau Province, Indonesia, from January to April 2026.

The population consisted of 70 seventh-grade students, all selected as research participants through saturated sampling because the population was relatively small (Etikan & Bala, 2017). Data were collected using Likert-scale questionnaires and documentation techniques. The questionnaire instruments measured the implementation of the Jigsaw cooperative learning model and learner involvement using a five-point scale ranging from strongly disagree to strongly agree (Joshi et al., 2015; Kurniawan, Sukarni & Hoyi, 2021; Prieto Saborit et al., 2022).

Instrument validity was tested using Pearson product–moment correlation analysis, while reliability testing employed Cronbach's alpha coefficient through SPSS version 22. The results indicated that the instruments met the validity and reliability criteria, with Cronbach's alpha values of .985 for the Jigsaw cooperative learning model variable and .983 for the student engagement variable, indicating excellent reliability (Taber, 2018).

Data analysis included descriptive and inferential statistical techniques using SPSS version 22. Prior to hypothesis testing, data normality was examined using the One-Sample Kolmogorov–Smirnov test. Hypothesis testing was subsequently performed using simple linear regression analysis to determine the predictive relationship between the Jigsaw cooperative learning model and student involvement.

Results and Discussion

A. Descriptive Analysis

Descriptive statistical analysis was conducted to examine the implementation of the Jigsaw cooperative learning model and the level of pupil engagement in Islamic Religious Education learning. Descriptive analysis is important regarding educational research because it provides an overview of respondents' perceptions and the distribution of research variables before inferential statistical testing is conducted (Hair et al., 2019; Dani & Al Quraan, 2023).

The findings indicated that students demonstrated positive perceptions toward the implementation of the Jigsaw cooperative learning model. Most respondents selected the "agree" and "strongly agree" categories on questionnaire items related to

group discussion, collaborative learning, peer teaching, and active participation. The implementation score for the Jigsaw cooperative learning model reached 88.97%, showing a high level of implementation.

Similarly, the descriptive analysis showed that student engagement in Islamic Religious Education was categorized as very high, with a percentage score of 90.84%. The results suggest that students actively participated in classroom discussions, paid close attention during learning activities, expressed their opinions confidently, and demonstrated strong involvement in collaborative learning. Table 1 presents the descriptive statistics of the research variables.

Table 1. Descriptive statistics of research variables

Variable	Percentage (%)	Category
Jigsaw Cooperative Learning Model	88.97	High
Student Engagement	90.84	Very High

The high implementation level of the Jigsaw cooperative learning model indicates that cooperative learning activities were effectively carried out during Islamic Religious Education instruction. Students were actively involved in expert-group discussions, shared learning responsibilities, and exchanged information with peers. According to cooperative learning theory, collaborative instructional strategies encourage positive interdependence, communication, and active participation among students (Slavin, 2015). Cooperative learning environments also support student-centered learning by promoting interaction and mutual responsibility during classroom activities.

The findings further demonstrate that pupil engagement increased positively through the implementation of the Jigsaw learning model. Student involvement refers to students' behavioral, emotional, and cognitive involvement in learning activities (Fredricks et al., 2004). High commitment levels in this study were reflected in students' enthusiasm, participation, concentration, and joint interaction during classroom learning. These results indicate that the Jigsaw model created a more involved and participatory learning environment in Islamic Religious Education classes.

The present findings are consistent with previous studies reporting that cooperative learning approaches improve learner involvement and classroom participation. Anggraini and Simanjuntak (2023) found that implementing the Jigsaw model significantly increased students' active participation in elementary school learning activities. Similarly, Abdul Wahab et al. (2022) reported that Jigsaw cooperative learning improved students' engagement and participation in discussions during mathematics instruction. Compared with previous findings, the current study reported higher descriptive percentages for both Jigsaw implementation (88.97%) and learner involvement (90.84%), suggesting that cooperative learning strategies may prove especially effective in Islamic Religious Education contexts that emphasize interaction, collaboration, and discussion-based learning.

These findings uphold Lev Vygotsky's theoretical perspective, which holds that knowledge is constructed through social interaction and joint learning. Through

Jigsaw learning activities, students not only receive information from teachers but also deliberately construct understanding through peer interaction, communication, and cooperative problem-solving processes.

B. Inferential Statistical Analysis

Inferential statistical analysis was conducted to examine the effect of the Jigsaw cooperative learning model on student participation in Islamic Religious Education. Inferential statistical analysis is important in quantitative educational research because it enables researchers to determine the statistical relationship between independent and dependent variables (Hair et al., 2019).

The regression analysis results presented a significant association between the Jigsaw cooperative learning model and pupil engagement. The ANOVA test yielded a significance value of less than .05, indicating that the Jigsaw learning model was significantly associated with students' engagement during the learning process. This evidence suggests that cooperative learning activities emphasizing peer interaction, discussion, and joint responsibility may support students' active participation in Islamic Religious Education classes. Table 2 presents the results of the inferential statistical analysis.

Table 2. Results of simple linear regression analysis

Variable	R	R^2	Adjusted R^2	Regression Coefficient (β)	Sig.
Jigsaw Cooperative Learning Model → Student Engagement	0.628	0.395	0.386	0.592	< .05

Note: N=70, p < .05.

The coefficient of explained variance analysis produced an R^2 of .395, indicating that the Jigsaw cooperative learning model explained 39.5% of the variance regarding student engagement, with the remaining 60.5% attributable to other variables not examined in this study. The correlation coefficient (R = .628) indicated a moderately strong positive relationship between implementing the Jigsaw cooperative learning model and student engagement. In addition, the regression coefficient (β = .592) suggests that higher levels of Jigsaw cooperative learning implementation were associated with greater pupil engagement during classroom learning activities.

The findings of this study are consistent with previous research demonstrating that Jigsaw cooperative learning positively affects student involvement and engagement. Abdillah et al. (2024) reported that implementing the Jigsaw cooperative learning strategy substantially increased students' engagement, collaboration, and participation in Islamic Cultural History learning. Similarly, Huda and Rochmania (2025) found that the Jigsaw model increased pupil engagement in mathematics learning from 65% in the initial stage to 85% after implementation. Furthermore, recent systematic reviews have demonstrated that the Jigsaw method positively affects students' motivation, social interaction, and educational outcomes across various instructional environments.

Compared with previous studies, the present research demonstrated a relatively strong explanatory contribution (R^2 = .395) within the context of Islamic Religious Education. This finding indicates that cooperative learning approaches emphasizing peer teaching, collaborative discussion, and mutual accountability are effective in motivating students' behavioral and affective engagement during learning activities. The findings suggest that collaborative instructional environments enhance students' sense of responsibility for learning and their social participation during classroom activities. Within the Jigsaw learning process, each student is responsible not only for their own understanding but also for assisting with the group's learning outcomes. This instructional structure may encourage students to participate more actively because their involvement directly influences the success of collaborative group activities. Consequently, cooperative learning environments may strengthen both individual accountability and collective engagement simultaneously. From a theoretical perspective, the findings uphold social constructivist and cooperative learning perspectives by demonstrating that structured peer interaction, along with collaborative responsibility, is strongly associated with learner involvement during classroom learning activities. The study also suggests that engagement development in Islamic Religious Education may benefit from instructional environments that emphasize communication, participation, and mutual learning. The findings also support Robert E. Slavin's cooperative learning theory, which emphasizes that structured collaborative interaction promotes both academic and social development among students.

In addition, the results reinforce Lev Vygotsky's social constructivist perspective, which holds that knowledge develops through social interaction and joint experiences. Through the Jigsaw learning process, students actively constructed understanding by discussing materials, sharing information, and teaching peers within cooperative groups. Therefore, the Jigsaw cooperative learning model can act as an effective instructional strategy for improving pupil engagement in Islamic Religious Education learning environments.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, the study involved a relatively small sample drawn from a single junior high school, which may limit the generalizability of the results to wider educational contexts. Second, the study used a correlational research design; therefore, causal conclusions regarding the relationship between the Jigsaw cooperative learning model and learner involvement cannot be fully established. Third, the data were collected using self-report questionnaires, which may be influenced by students' subjective perceptions and social desirability bias. Future studies should involve larger, more diverse samples, employ experimental or mixed-methods approaches, and examine additional variables related to learner involvement and collaborative learning.

Conclusion

The findings of this study demonstrated that the implementation of the Jigsaw cooperative learning model and pupil engagement in Islamic Religious Education were both categorized as high. Students actively participated in joint discussions, peer interaction, and joint learning activities during classroom instruction. The inferential statistical analysis additionally showed a significant association between the Jigsaw cooperative learning model and pupil engagement, indicating that joint instructional activities emphasizing peer communication, discussion, and mutual responsibility were associated with higher levels of student engagement and classroom involvement.

The inferential statistical analysis additionally revealed that the Jigsaw cooperative learning model had a significant association on pupil engagement in Islamic Religious Education. The coefficient of explanation indicated that the Jigsaw model accounted for 39.5% of the variance in student involvement, denoting a moderately strong relationship between the variables. These outcomes confirm that the Jigsaw cooperative learning model can function as an effective instructional strategy for improving students' behavioral, emotional, and thinking engagement during the learning process. Therefore, integrating cooperative learning approaches is recommended to support more interactive, student-centered, and meaningful learning experiences in Islamic Religious Education classrooms.

Recommendations

Based on this study's findings, teachers are recommended to implement the Jigsaw cooperative learning model more consistently in Islamic Religious Education classes to increase pupil engagement and participation during the learning process. The Jigsaw model creates a more interactive, student-centered learning environment through encouraging discussion, peer teaching, collaboration, and mutual responsibility among students. Schools are also expected to support the implementation of cooperative learning strategies through teacher training programs, instructional supervision, and the provision of learning resources that enable active and joint classroom activities.

For future researchers, it is recommended to expand the scope of research by involving larger samples, different educational levels, and broader research settings to improve the generalizability of findings. Future studies may also investigate additional variables related to pupil engagement, such as learning motivation, academic achievement, communication skills, and digital learning environments. In addition, the use of experimental or mixed-method research designs is recommended to obtain more comprehensive evidence regarding the effectiveness of the Jigsaw cooperative learning model in Islamic Religious Education and other teaching contexts.

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