

## AN ANALYSIS OF THE INTENSITY OF REMEDIAL ACTIVITIES AND SELF-EFFICACY ON STUDENT LEARNING OUTCOMES: A MIXED-METHODS STUDY

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### ABSTRACT

This study aims to examine the contribution of remedial activities and self-efficacy to student learning outcomes. The study employs a mixed-methods approach, combining quantitative analysis to test relationships between variables with qualitative data collected through interviews and observations to strengthen the findings in the field. The results of the regression analysis indicate that remedial activities ( $\beta = 0.166$ ;  $p = 0.000$ ) and self-efficacy ( $\beta = 0.198$ ;  $p = 0.000$ ) both have a positive and significant effect on learning outcomes, with self-efficacy exerting a greater influence. The coefficient of determination ( $R^2 = 0.573$ ) also indicates that these two variables account for 57.3% of the variation in student learning outcomes. Qualitative findings support these results, indicating that remedial activities help students better understand the material while boosting their self-confidence, whereas self-efficacy plays a role in fostering motivation, perseverance, and students' readiness to face learning challenges. Thus, remedial activities should not only focus on improving grades but also be directed toward strengthening students' understanding and self-confidence to optimize learning outcomes.

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### INTRODUCTION

Education is one of the main pillars of quality human resource development. Education is key to creating an intelligent and competitive generation. Efforts in Indonesia will continue to be made to improve the quality of education (Muiz et al., 2024). However, there are still some students who struggle to understand the subject matter, and if this is allowed to continue, it will negatively impact student learning outcomes (Sellyani, 2023). This phenomenon is evident in schools, where there are still some students who have not been able to meet the Minimum Competency Criteria (KKM) set by the school (Wulandari, 2022). This phenomenon reflects the diversity of students'

academic abilities. Some students have successfully met competency standards, while others require follow-up in the form of supplementary learning programs (Diani et al., 2022). This situation indicates that students' achievement of the MPC is not determined solely by the learning process. It is also influenced by several factors, both internal and external (Ilham et al., 2024). External factors include the school environment, such as inadequate school facilities, the curriculum, and learning media in the school. Meanwhile, internal factors stem from within the student, such as motivation and interest in learning. In addition to these two factors, teacher support is also a key factor in improving student learning outcomes. Positive interactions between teachers and students can foster a greater enthusiasm for learning (Jainiyah et al., 2023). Therefore, efforts to improve the achievement of the minimum competency standard (KKM) must be comprehensive, taking both of these aspects into account.

Considering these two factors, schools need to implement strategic measures to help students achieve the established KKM standards. One approach involves conducting remedial activities or supplementary learning sessions for students who have not yet met the proficiency standards (Imran et al., 2023). This program not only serves to improve students' grades but also functions as a means to understand students' learning difficulties by providing targeted guidance (Fatmawati et al., 2024). Therefore, remedial activities are an important component in the learning process and in improving the quality of student learning outcomes. While previous studies have extensively discussed remedial activities in schools, most have focused on their effectiveness. There has been

little discussion regarding how frequently these remedial activities are held. Yet the intensity of such activities including their frequency, duration, and student engagement can be critical factors in determining the success of the learning process. If remedial activities are conducted regularly and students are actively engaged in them, it is expected that learning outcomes will improve (Owa et al., 2024). A study on the intensity of these remedial activities is important to provide a comprehensive overview of how remedial instruction is implemented in schools. Through this research, schools can assess whether the remedial activities currently being conducted are effective or need improvement in terms of implementation and student engagement. Additionally, it is hoped that this study can serve as valuable input for teachers in designing more targeted remedial programs that genuinely contribute to improving student learning outcomes (Purnomo et al., 2024).

This practice generally occurs because teachers strive to maintain consistency between the taught material and assessment instruments, while also considering efficiency in the test-item development process. If remedial activities are designed and implemented appropriately, they can help students master the material while boosting their self-efficacy. Both of these aspects remedial activities and self-efficacy play equally important roles in determining student learning outcomes. This indicates that improvements in learning outcomes. Based on the above description, this study focuses on analyzing the relationship between the intensity of remedial activities and self-efficacy on student learning outcomes. This study employs a mixed-methods approach to examine the quantitative relationship between the two variables while also understanding the factors influencing the success of remedial activities from a qualitative perspective. The research was conducted at Ponggok State Junior High School 1, with eighth-grade students in the 2025/2026 academic year as the research subjects. The location was selected based on the results of preliminary observations indicating that there were still differences in students' learning success rates.

## METHOD

This study employed a mixed-methods approach with an explanatory sequential design, in which quantitative analysis was conducted first, followed by a qualitative approach to further explore the findings (Mulyadi, 2023). This approach was chosen to obtain a more comprehensive understanding of the relationship between the intensity of remedial activities, self-efficacy, and student learning outcomes. The integration of the two datasets was conducted during the interpretation phase to yield a more complete understanding and support data triangulation. The study was conducted at Ponggok State Junior High School 1 during the 2025/2026 academic year. Instrument pilot testing was conducted on 30 seventh-grade students who were not included in the main research sample. Meanwhile, the main research sample consisted of 176 eighth-grade students. Data collection was conducted via a questionnaire to measure the intensity of remedial activities and self-efficacy, as well as through documentation of students' learning outcomes.

Qualitative data were obtained through interviews with subject teachers and observations of the implementation of remedial activities in the classroom. Quantitative data were analyzed using multiple linear regression to determine the relationship between the intensity of remedial activities and self-efficacy on students' learning outcomes. Furthermore, qualitative data were analyzed descriptively through the stages of data reduction, data presentation, and drawing conclusions. (Inayah et al., 2025). The results of both analyses were then integrated to strengthen and explain the research findings. A summary of the data and their analysis is presented in the following table,

**Table 1. Data Collection and Analysis**

Data Type	Data Collection	Data Analysis Techniques	Analysis Stage
Quantitative	Survey Distribution	Multiple Regression- SPSS	<ul style="list-style-type: none"> <li>- Validity and Reliability Tests</li> <li>- Tests of Classical Assumptions: Normality, Multicollinearity, Heteroscedasticity.</li> <li>- t-Test, F-Test, and Coefficient of Determination (R-Square)</li> </ul>
Qualitative	Interviews	Descriptive	<ul style="list-style-type: none"> <li>- Source Triangulation</li> </ul>

*Source: Data compiled by the researcher (2026)*

## RESULT AND DISCUSSION

### RESULT

In this study, the researcher collected data from 176 respondents who were seventh-grade students at the school. Quantitative data were obtained through questionnaires completed by the respondents. Based on the questionnaire, the following data were obtained,

**Table 2. Respondent Characteristics**

Gender	Number	Percentage
Male	95	54%
Female	81	46%

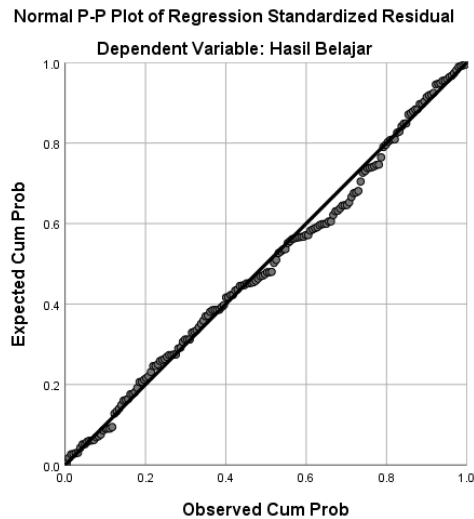
*Source: Data compiled by the researcher (2026)*

Based on the respondent characteristic data that has been obtained, the next step is to conduct an instrument validation test before using it in the main data collection. Validity testing was performed using Pearson's Product-Moment correlation on 30 pilot test respondents from seventh-grade students. The results showed that all statement items had a Sig. (2-tailed) value  $< 0.05$  and a correlation coefficient above the critical value of 0.361. Thus, all items were deemed valid and suitable for use in the study. After the instrument was deemed valid, a reliability test was conducted using Cronbach's Alpha via SPSS. The Remedial Activities variable obtained an Alpha value of 0.799, while Self-Efficacy obtained a value of 0.852. Both values fall within the reliable category; thus, the instrument is considered to have good consistency and can be used accurately to measure the research variables.

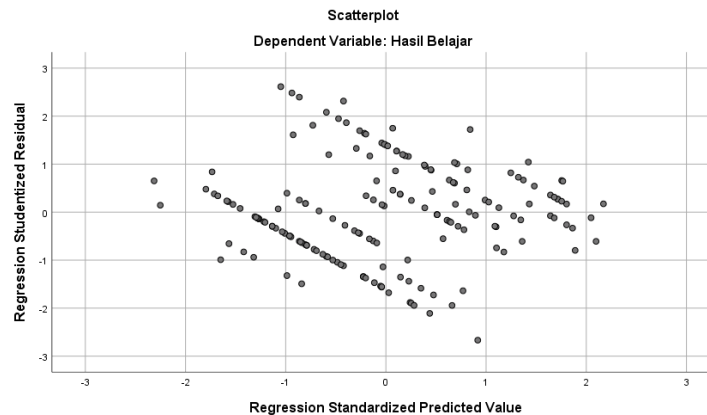
After the instrument validation process was completed, the next step was to test the prerequisites for analysis as a basis for model validity. The normality test was conducted using the One-Sample Kolmogorov-Smirnov Test, which yielded an Asymp. Sig. (2-tailed) value of 0.200, higher than the significance threshold of 0.05. This value indicates that the residual data follow a normal distribution and can therefore be used in regression analysis without violating any assumptions. Next, a multicollinearity test was performed by examining the Tolerance and Variance Inflation Factor (VIF) values. The results show that the variables Remedial Activities (X1) and Self-Efficacy (X2) have Tolerance values of 0.705 and VIF values of 1.418, meaning Tolerance  $> 0.10$  and VIF  $< 10$ . Thus, the model is deemed free of multicollinearity. Additionally, a heteroscedasticity test was conducted, yielding significance values

of 0.062 for X1 and 0.405 for X2, both of which are greater than 0.05. Therefore, it can be confirmed that the regression model does not exhibit heteroscedasticity, as the data distribution is random and does not show any specific pattern.

**Figure 1. P-Plot Normality**



**Figure 2. Heteroscedasticity Scatter Plot**



After all model prerequisite tests were met, the analysis continued with multiple regression. Based on the results in Table 4, the remedial activities variable showed a significance value of 0.000, which is below the 0.05 threshold. This indicates that remedial activities have a significant effect on learning outcomes. Similarly, the self-efficacy variable obtained a significance value of  $0.000 < 0.05$ , confirming that students' self-efficacy also has a positive impact on their academic achievement. Looking at the regression coefficients, the remedial activities variable has a value of 0.166. This means that a one-unit increase in the intensity of remedial activities results in a 0.166-unit increase in learning outcomes. Meanwhile, self-efficacy shows a regression coefficient of 0.198, indicating that a one-unit increase in this variable will improve learning outcomes by 0.198. Thus, both independent variables play a positive role in influencing students' learning outcomes.

The results of the simultaneous test also support these findings. The calculated F-value of 115.961 far exceeds the critical F-value (3.048) at a significance level of  $0.000 < 0.05$ . This indicates that remedial activities and self-efficacy together have a significant effect on learning outcomes. The Adjusted R-Square value of 0.568 indicates that 56.8% of the variation in learning outcomes can be explained by these two variables, while the remaining 43.2% is influenced by other factors outside the research model. Therefore, the research results confirm that both remedial activities and self-efficacy are important factors contributing to students' academic success. Consequently, both should be the focus of attention in efforts to improve the quality of learning and learning outcomes.

**Table 3. Results of the Multicollinearity Test and Regression Analysis**

Model	Unstandardized Coefficients (B)	t	Sig.	Collinearity Statistics	
				Tolerance	VIF
(Constant)	62.251	43.477	.000		
Remedial Activities	.166	6.321	.000	.705	1.418
Self Efficacy	.198	8.201	.000	.705	1.418
Uji F = 115.961 (Sig. 000)					
Coefficient of Determination (R Square) = .573 (57.3 %)					

*Source: Data compiled by the researcher (2026)*

Based on Table 3, the results of the regression analysis indicate that the variables Remedial Activities and Self-Efficacy have a positive and significant effect on the dependent variable. Remedial Activities has a regression coefficient of 0.166 with a significance level of 0.000 ( $p < 0.05$ ), indicating a positive and significant effect. Meanwhile, Self-Efficacy has a regression coefficient of 0.198 with a significance level of 0.000 ( $p < 0.05$ ), indicating a positive and significant influence with a greater contribution compared to Remedial Activities. The F-test results showed a value of 115.961 with a significance of 0.000 ( $p < 0.05$ ), indicating that the regression model is simultaneously significant and valid for use. Additionally, the coefficient of determination (R-squared) of 0.573 indicates that 57.3% of the variation in the dependent variable can be explained by the Remedial Activities and Self-Efficacy variables, while the remaining 42.7% is influenced by other factors outside the model. The results of the multicollinearity test showed that the Tolerance value was 0.705 ( $> 0.10$ ) and the VIF value was 1.418 ( $< 10$ ), so it can be concluded that there was no multicollinearity among the independent variables in the regression model.

The findings of this study align with Albert Bandura's view that self-efficacy is an individual's belief in their ability to complete a specific task. In the context of learning, students with high levels of self-efficacy tend to demonstrate greater motivation to learn, greater perseverance in the face of challenges, and stronger self-confidence. The results of this study also indicate that self-efficacy has a greater influence than remedial activities. This suggests that internal factors within students play a dominant role in determining learning success. Students with high self-efficacy not only grasp learning material more easily but also tend to be more active and engaged in the learning process. In addition, remedial activities have also been shown to have a positive impact on learning outcomes. This can be understood through the concept of "mastery experience" in Albert Bandura's theory, which refers to the sense of success students gain after correcting their mistakes and revisiting material they had not yet understood. Through remedial activities, students have the opportunity to deepen their understanding while boosting their self-confidence in the learning process. Thus, the results of this study indicate that remedial activities and self-efficacy play complementary roles in improving student learning outcomes, both through external support and from within the students themselves. To reinforce these findings, this study also incorporates qualitative data analysis obtained through interviews.

Based on the results of interviews conducted with 5 students, 1 subject teacher, and the vice principal for curriculum, the researcher gained insight into how remedial instruction and self-efficacy manifest in the learning process. This qualitative data helps clarify the statistical findings and provides a real-world context regarding students'

experiences and educators' perspectives at the school. To facilitate the presentation of the data, a summary of the interview results is presented in the following table.

**Table 4. Summary of Interview Findings**

<b>Infoman</b>	<b>Reduction and Triangulation</b>
Students	Based on interviews with students, it was found that remedial activities are considered helpful in understanding the material and improving grades. The methods deemed most effective include re-explaining the material, practice problems, discussions, and the use of visual aids. However, some students noted that the timing of remedial sessions is often inconvenient because they are held after school hours, which leaves them feeling tired. Overall, remedial sessions also have a positive impact on increasing their motivation to learn and their confidence in social studies.
Subject Teacher	The teacher explained that remedial sessions are provided to students who have not met the minimum competency standard (KKM) using various methods, such as slowly reviewing the material, additional practice problems, small-group discussions, and educational media if needed. The teacher also acknowledged challenges regarding motivation and scheduling, but overall, remedial activities have proven effective in improving grades while fostering students' self-confidence.
Curriculum Coordinator	Based on an interview with the vice principal for curriculum, it was learned that the school has designated remedial instruction as a mandatory program for students who have not met the required standards. The school provides teachers with the necessary resources, additional time, and flexibility in their teaching methods to implement the program. The program is evaluated periodically at the end of each semester, and the results indicate that remedial instruction helps improve students' understanding while supporting the achievement of more optimal learning outcomes.

*Source: Data compiled by the researcher (2026)*

Although the previous table summarizes the opinions of all informants, the interview results indicate that each student's experience with remedial activities was not entirely uniform. These differences are particularly evident in how they perceive the benefits of remedial activities, the obstacles they face, and the impact on their motivation and self-confidence in learning. To provide a clearer picture of these experiences beyond mere summaries the following are two student quotes considered representative of these varied perspectives.

**Student 1 (DA)**

*"I once attended remedial classes because my grade at the time hadn't met the minimum passing score. At first, I felt insecure and was a bit embarrassed because I thought I was the only one who didn't understand. But after finding out that other classmates were attending too, I felt more at ease. During the remedial sessions, the teacher explained the material more slowly and provided example problems, so I was finally able to understand the parts that had previously confused me. My grade didn't improve by much, but it was enough to meet the minimum passing grade, and that made me feel more relieved and confident. In my opinion, remedial classes are quite helpful, even though they can sometimes feel tiring because they're held after school hours."* (Student 1 (DA), interview result, 2026)

Meanwhile, another student expressed a slightly different view on the implementation of remedial classes, as conveyed by the following informant.

**Student 2 (MRA)**

*"I've attended social studies remedial sessions several times because I often struggle to memorize the large amount of material. Usually during these sessions, the teacher goes over the material again, gives us practice problems, or leads a discussion to help us understand better. For me, remedial sessions are quite helpful because after reviewing the material, I understand it better and my grades have improved. However, I sometimes feel overwhelmed because the remedial sessions are held after school, so I'm already tired and my*

*focus wanes. But after seeing my grades improve, I feel more motivated and no longer feel as burdened when studying Social Studies.” (Student 1 (DA), interview result, 2026)*

From interview. s conducted with several students, subject teachers, and the curriculum coordinator, it can be concluded that remedial activities have a significant impact on students. Most students feel that remedial sessions help them understand material that was previously difficult and contribute to improving their grades. Additionally, these sessions also make some students more confident in participating in subsequent lessons. Nevertheless, there are still challenges, such as the timing being less than ideal since they are held after school hours, causing some students to feel tired. Overall, remedial sessions are considered beneficial and support the school’s efforts in helping students achieve academic mastery.

## DISCUSSION

The results of the study indicate that remedial activities and self-efficacy play a significant role in improving student learning outcomes. In general, students who participate in remedial activities and have confidence in their learning abilities demonstrate better academic achievement. Based on Albert Bandura’s social cognitive theory, which states that learning success is not only determined by instructional processes but also by an individual’s belief in their ability to succeed (Tullah & Amiruddin, 2020). Student success in the remedial process not only impacts grades but also strengthens self-confidence as a psychological asset in learning (Maleno et al., 2022). Field findings from interviews reinforce this explanation. Students revealed that remedial instruction helped them understand previously difficult material because teachers re-explained it more slowly, provided example problems, and allowed them to ask questions more freely. They also felt more confident after participating in remedial instruction because their grades improved. From Bandura’s perspective, this experience of successfully re-understanding the material is called a mastery experience a successful experience that serves as the primary source for the development of self-efficacy (Afif, 2024; Lesilolo, 2019). In other words, remedial instruction does not merely improve grades but simultaneously creates positive experiences that shape students’ self-confidence in their learning abilities.

Subject teachers also confirmed that remedial instruction provides students with an opportunity to catch up on missed material in a more flexible and focused learning environment. Teachers reported that most students demonstrated improved understanding and self-confidence when receiving direct guidance. This aligns with Bandura’s concept of social persuasion specifically, the social influence of others, in this case teachers, through guidance, encouragement, and positive feedback that reinforces students’ belief in their ability to grasp the material (Mayalianti et al., 2024). Thus, the remedial process also serves as a means of psychological reinforcement, in addition to being an academic intervention. In addition, institutional support from schools through mandatory remedial policies and the provision of facilities further strengthens the students’ learning process (Khaidir et al., 2025). Interviews with the vice principal for curriculum revealed that remedial instruction is conducted systematically, evaluated every semester, and allowed flexible implementation based on the needs of teachers and students. Within Bandura’s theoretical framework, this highlights the role of environmental factors in influencing the development of self-efficacy (Nurul Mubin et al., 2021). A supportive environment that offers opportunities for retaking lessons and provides space for success enhances students’ confidence in their academic abilities.

However, the implementation of remedial instruction is not without challenges. Some students feel burdened because remedial sessions are often held after school hours when they are already tired. Teachers also explained that student motivation varies; some participate in remedial sessions because they want to learn, while others do so merely out of a sense of obligation. This situation illustrates that the success of remedial instruction is determined not only by teaching methods but also by students’ internal readiness. Self-efficacy also influences how individuals persevere and strive when facing challenges (Sodiq et al., 2024). Students with low self-efficacy tend to participate in remedial sessions without full engagement, whereas students with high self-efficacy are more motivated to understand the material (Selliyani, 2023). Ultimately, the findings of this study can be understood through the lens of Bandura’s Social Cognitive Theory. Remedial instruction provides students with opportunities to build mastery experiences,



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