

THE EFFECT OF THE 15-MINUTE LITERACY MOVEMENT ON AKM SCORES: THE MODERATING ROLE OF READING COMPREHENSION AMONG ELEMENTARY SCHOOL STUDENTS

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ABSTRACT

This study examined the effect of the 15-Minute Literacy Movement on students Minimum Competency Assessment (AKM) scores and investigated the moderating role of reading comprehension among elementary school students. A quantitative correlational design was employed involving 154 fifth-grade students from public elementary schools in the Northern Cluster of Kedungbanteng District, Indonesia. Data were collected through a literacy movement questionnaire, a reading comprehension test, and documented AKM literacy scores. The data were analyzed using descriptive statistics, simple linear regression, and Moderated Regression Analysis (MRA). The findings revealed that the 15-Minute Literacy Movement had a significant positive effect on AKM scores ($\beta = 0.421, p < .001$), indicating that consistent literacy activities contributed to improved literacy achievement. Reading comprehension also showed a significant positive influence on AKM performance ($\beta = 0.537, p < .001$). Furthermore, the interaction effect between the 15-Minute Literacy Movement and reading comprehension was statistically significant ($\beta = 0.218, p = .003$), demonstrating that reading comprehension moderated the relationship between literacy activities and AKM scores. Students with higher levels of reading comprehension benefited more from participation in the literacy movement than those with lower comprehension levels. The model explained 62.4% of the variance in AKM scores ($R^2 = .624$). These findings suggest that literacy programs are more effective when accompanied by strong reading comprehension skills, highlighting the importance of integrating comprehension-oriented instructional strategies into school literacy initiatives.

Keywords: 15-Minute Literacy Movement; AKM Scores; Reading Comprehension; Moderating Effect; Elementary School Students

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INTRODUCTION

Reading literacy has become one of the most essential competencies in twenty-first-century education because it enables learners to access, interpret, evaluate, and utilize information in various contexts. Literacy is no longer limited to the ability to decode written symbols but encompasses higher-order thinking skills required to understand and reflect on information critically. According to the Organisation for Economic Co-operation and Development (OECD), reading literacy refers to an individuals capacity to understand, use, evaluate, reflect on, and engage with texts to achieve goals, develop knowledge, and participate effectively in society (Mo, 2019, p. 2). Consequently, improving reading literacy has become a major concern for educational systems worldwide, including Indonesia, where literacy achievement remains a significant challenge.

In response to literacy-related issues, the Indonesian government introduced the School Literacy Movement (Gerakan Literasi Sekolah/GLS) as a national initiative aimed at fostering reading habits among students. One of the core components of this program is the 15-Minute Literacy Movement, which encourages students to read non-textbook materials for fifteen minutes before formal instruction begins. This activity is expected to cultivate reading habits, increase reading motivation, and strengthen literacy competencies. Previous studies have reported that literacy movement programs contribute positively to students reading interest and academic achievement. For example, Lian (2020) found that school literacy activities significantly improved students learning achievement through the development of reading habits. Similarly, Jannah (2021, p. 390) reported a positive

relationship between literacy movement implementation and students reading interest, indicating that sustained literacy practices can support educational outcomes. Nevertheless, the effectiveness of literacy activities may vary depending on students individual literacy capacities.

The importance of reading literacy has become increasingly evident with the implementation of the Minimum Competency Assessment (AKM) in Indonesia. AKM is designed to evaluate students literacy and numeracy competencies by emphasizing reasoning, comprehension, and information-processing skills rather than mere content memorization. The assessment framework aligns closely with international literacy standards, particularly those adopted in the Programme for International Student Assessment (PISA), which emphasizes the ability to interpret and reflect on texts across diverse contexts (Mo, 2019, p. 3). Therefore, students success in AKM largely depends on their capacity to comprehend written texts effectively.

A growing body of literature suggests that literacy programs positively influence reading-related outcomes. Widayoko et al. (2018) highlighted that the School Literacy Movement was established to strengthen students literacy competencies through habitual reading activities conducted before classroom instruction. Likewise, Yulianti and Sukasih (2023) demonstrated that literacy movement programs contribute to both reading interest and reading comprehension skills among elementary school students. These findings indicate that literacy interventions can support literacy development; however, they do not fully

explain why some students benefit more from literacy programs than others.

Theoretically, reading comprehension represents a critical cognitive process that determines how effectively learners construct meaning from texts. Students with strong reading comprehension skills are generally better able to identify explicit information, make inferences, and critically evaluate textual content. Consequently, they may derive greater benefits from literacy activities compared with students who experience difficulties in understanding texts. This perspective suggests that reading comprehension may not merely function as an independent predictor of academic achievement but may also influence the strength of the relationship between literacy activities and literacy outcomes.

Although numerous studies have examined the implementation of literacy programs and their impact on reading interest, reading habits, and academic achievement, empirical research investigating reading comprehension as a moderating variable remains limited. Existing studies have primarily focused on direct effects between literacy programs and educational outcomes without examining the conditional mechanisms through which these effects occur. Furthermore, studies specifically linking the 15-Minute Literacy Movement, reading comprehension, and AKM performance among elementary school students are still scarce. This gap indicates the need for further investigation into the interaction between literacy practices and students comprehension abilities in predicting literacy achievement.

The novelty of this study lies in the integration of reading comprehension as a moderating variable in the relationship between the 15-Minute Literacy Movement

and AKM performance. Unlike previous studies that mainly investigated direct effects, this research proposes that the effectiveness of literacy activities may depend on students comprehension capacities. By employing Moderated Regression Analysis (MRA), this study provides a more comprehensive explanation of how literacy interventions contribute to AKM achievement under different levels of reading comprehension.

Therefore, this study aims to examine: (1) the effect of the 15-Minute Literacy Movement on AKM scores, (2) the effect of reading comprehension on AKM scores, and (3) the moderating role of reading comprehension in the relationship between the 15-Minute Literacy Movement and AKM performance among elementary school students. The findings are expected to contribute both theoretically and practically to literacy education by providing evidence-based recommendations for strengthening literacy programs in elementary schools.

RESEARCH METHODS

This study employed a quantitative correlational research design to examine the relationship between the 15-Minute Literacy Movement, reading comprehension, and students AKM performance. A correlational approach was selected because the study aimed to investigate naturally occurring relationships among variables without manipulating the learning environment. Furthermore, the study incorporated a moderation model to determine whether reading comprehension influenced the strength of the relationship between literacy activities and AKM achievement (Hayes, 2022).

The research was conducted from March to June 2026 in public elementary

schools located in the Northern Educational Cluster (Dabin Utara) of Kedungbanteng District, Central Java, Indonesia. The target population consisted of all fifth-grade students enrolled during the 2025/2026 academic year. Fifth-grade students were selected because they had regularly participated in the school literacy program and represented the primary target group for literacy competency assessment.

The population comprised 250 students distributed across ten public elementary schools. The sample size was determined using the Slovin formula with a 5% margin of error, resulting in a minimum sample requirement of 154 students. Participants were selected using purposive sampling based on the following criteria: (1) regular participation in the 15-Minute Literacy Movement for at least one semester, (2) availability of AKM literacy score records, and (3) completion of all research instruments. The proportional allocation technique was subsequently applied to ensure representative participation from each school.

Data were collected using three instruments. First, a structured questionnaire was developed to measure the implementation quality of the 15-Minute Literacy Movement, consisting of indicators related to implementation consistency, teacher facilitation strategies, and the relevance of reading materials, measured using a five-point Likert scale. Second, a reading comprehension test consisting of 15 multiple-choice items was administered to evaluate students' literal, inferential, and critical comprehension skills. Third, students' AKM literacy scores were obtained from official school records and documentation.

Instrument validity was assessed through item-total correlation analysis, while reliability was examined using Cronbach's Alpha coefficient. An alpha coefficient exceeding .70 indicates acceptable internal consistency for educational research instruments (Taber, 2018). Prior to hypothesis testing, data were screened through normality and linearity assessments to ensure compliance with regression assumptions.

Data analysis was performed using SPSS. Descriptive statistics were calculated to describe the characteristics of the variables. Simple linear regression was used to determine the individual contributions of each predictor variable, while Moderated Regression Analysis (MRA) was employed to test the interaction effect (Aguinis et al., 2017). The moderation model was expressed as:

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 (XM) + \varepsilon$$

Where Y represents AKM scores, X represents the 15-Minute Literacy Movement, M represents reading comprehension, and XM represents the interaction term. A significant interaction coefficient ($p < .05$) indicated the presence of a moderation effect. The coefficient of determination (R^2) was used to evaluate the explanatory power of the model.

RESULTS AND DISCUSSION

1. Descriptive Statistics

The study involved 154 fifth-grade students from public elementary schools in the Northern Educational Cluster of Kedungbanteng District. Descriptive analysis was conducted to provide an overview of the three research variables. The complete results are presented in Table 1.

Table 1. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	SD
15-Minute Literacy Movement	154	58	96	78.42	8.11
Reading Comprehension	154	52	94	76.35	7.84
AKM Scores	154	50	95	77.68	8.29

Source: Processed Research Data (2026)

The results in Table 1 indicate that the average score of the 15-Minute Literacy Movement implementation was 78.42 (SD = 8.11), suggesting that literacy activities were generally implemented at a satisfactory level. Reading comprehension scores demonstrated a mean value of 76.35 (SD = 7.84), indicating adequate comprehension skills across participants. AKM scores showed a favorable average of 77.68 (SD = 8.29), reflecting moderate to high literacy achievement among the participants.

2. Effect of the 15-Minute Literacy Movement on AKM Scores

Simple linear regression analysis was performed to determine the influence of the 15-Minute Literacy Movement on AKM scores. The results are presented in Table 2. Table 2. Regression Analysis of the 15-Minute Literacy Movement on AKM Scores

Variable	β	t	Sig.
15-Minute Literacy Movement	0.421	6.287	.000

Dependent Variable: AKM Scores

As shown in Table 2, the 15-Minute Literacy Movement significantly predicted AKM scores ($\beta = 0.421$, $t = 6.287$, $p < .001$). Therefore, the first hypothesis was accepted. This finding indicates that students who

consistently engaged in literacy activities tended to achieve higher AKM scores. The result supports the argument that repeated exposure to reading materials contributes to literacy development through increased reading frequency and engagement, consistent with findings by Lian (2020) and Jannah (2021)

3. Effect of Reading Comprehension on AKM Scores

The second analysis examined the contribution of reading comprehension to students AKM performance. Results are displayed in Table 3.

Table 3. Regression Analysis of Reading Comprehension on AKM Scores

Variable	β	t	Sig.
Reading Comprehension	0.537	8.914	.000

Dependent Variable: AKM Scores

Reading comprehension had a significant positive effect on AKM scores ($\beta = 0.537$, $t = 8.914$, $p < .001$), as presented in Table 3. Thus, the second hypothesis was supported. The standardized coefficient ($\beta = 0.537$) was higher than that of the literacy movement ($\beta = 0.421$), indicating that reading comprehension is the stronger individual predictor of AKM performance. This result aligns with Duke et al. (2021) and Peng et al. (2022), who demonstrated that comprehension skills are fundamental to academic literacy success.

4. Moderating Role of Reading Comprehension

Moderated Regression Analysis (MRA) was conducted to investigate whether reading comprehension strengthened or weakened the relationship between the 15-Minute Literacy Movement

and AKM scores. The complete MRA results are presented in Table 4.

Table 4. Moderated Regression Analysis Results

Predictor	β	t	Sig.	R ²
Literacy Movement (X)	0.421	6.287	.000	.624
Reading Comprehension (M)	0.537	8.914	.000	
X $\times$ M (Interaction)	0.218	3.021	.003	

Source: Processed Research Data (2026)

The interaction term between the 15-Minute Literacy Movement and reading comprehension was statistically significant ($\beta = 0.218$, $t = 3.021$, $p = .003$), confirming the presence of a moderation effect. The coefficient of determination ($R^2 = .624$) indicates that 62.4% of the variance in AKM scores was explained by the combined influence of literacy activities, reading comprehension, and their interaction. This result means that the positive effect of the 15-Minute Literacy Movement on AKM scores becomes stronger as students reading comprehension level increases. Students with higher comprehension skills gained substantially greater benefits from participation in literacy programs than those with lower comprehension levels.

Discussion

The findings demonstrate that the 15-Minute Literacy Movement contributes significantly to improving AKM performance among elementary school students. Consistent engagement with reading materials encourages students to develop familiarity with text structures, expand vocabulary knowledge, and improve information-processing capabilities. These competencies are directly aligned with what

is measured in AKM, explaining the significant predictive value of the literacy movement (Widayoko et al., 2018; Yulianti & Sukasih, 2023).

The study further reveals that reading comprehension serves as a strong predictor of AKM achievement. Students who possess better comprehension skills are more capable of interpreting explicit and implicit meanings, drawing conclusions, and evaluating textual information critically. These competencies align directly with the literacy domains measured in AKM (Duke et al., 2021; Kim, 2020), explaining the substantial contribution of reading comprehension ($\beta = 0.537$) to students performance.

More importantly, the moderation analysis provides evidence that reading comprehension strengthens the impact of the 15-Minute Literacy Movement on AKM scores. This finding suggests that literacy programs do not affect all students equally. Students with higher comprehension abilities appear to extract greater learning benefits from reading activities because they are better able to construct meaning from texts and integrate newly acquired information into existing knowledge structures. Theoretically, this result supports cognitive literacy perspectives emphasizing that literacy achievement emerges from the interaction between environmental exposure and individual cognitive capabilities (Cervetti et al., 2020).

From a practical perspective, schools should integrate comprehension-oriented activities into literacy programs, including guided reading, questioning strategies, summarization exercises, and inferential reading tasks. Such approaches may enhance the effectiveness of the 15-Minute Literacy

Movement and contribute to sustained improvements in AKM achievement.

CONCLUSION

This study concludes that the 15-Minute Literacy Movement has a significant positive effect on AKM scores among elementary school students ($\beta = 0.421$, $p < .001$). Regular participation in literacy activities contributes to improved literacy achievement by increasing students engagement with reading materials and strengthening their ability to process information effectively. The findings also indicate that reading comprehension significantly influences AKM performance ($\beta = 0.537$, $p < .001$), demonstrating that students with stronger comprehension skills tend to achieve higher literacy assessment outcomes.

Furthermore, reading comprehension was found to moderate the relationship between the 15-Minute Literacy Movement and AKM scores ($\beta = 0.218$, $p = .003$; $R^2 = .624$). This result demonstrates that the effectiveness of literacy activities is not solely determined by the frequency of reading practices but is also influenced by students capacity to understand and interpret texts. Students with higher levels of reading comprehension benefited more substantially from participation in the literacy movement than those with lower comprehension abilities.

Therefore, literacy programs in elementary schools should be implemented alongside instructional strategies that explicitly develop reading comprehension skills. Integrating comprehension-oriented learning activities into school literacy initiatives may enhance students literacy achievement and support improved

performance in the Minimum Competency Assessment (AKM).

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