

The Effect of Emotional Intelligence, Social Support, and Self-Adjustment on Self-Regulated Learning and its Impact on Academic Achievement

Sisrazeni ¹, Anizar Rahayu ², Erdina Indrawati ³, Sri Budhi Setiyaningsih ⁴,
Sutirto ⁵

Doctoral Student of Psychology Faculty, Indonesia Persada University YAI, Jakarta, Indonesia ¹
Indonesia Persada University YAI, Jakarta, Indonesia, ^{2,3,4,5}

E-mail: sisrazeni@uinmybatusangkar.ac.id ¹, anizar.rahayu@upi-yai.ac.id ², erdina.indrawati@upi-yai.ac.id ³,
sri.2366290008@upi-yai.ac.id ⁴, sutirto.2366290009@upi-yai.ac.id ⁵

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ABSTRACT:

This study aims to test a theoretical model of the influence of Emotional Intelligence, Social Support, and Self-Adjustment on Self-Regulated Learning and its impact on academic achievement. The variables tested in this study are Self-Regulated Learning, Emotional Intelligence, Social Support, Self-Adjustment, and Academic Achievement, with Academic Achievement as the endogenous variable, Self-Regulated Learning as the mediator variable, and Emotional Intelligence, Social Support, and Self-Adjustment as the exogenous variables. The major hypothesis in this study is that the theoretical model stating that emotional intelligence, social support, and self-adjustment towards self-regulated learning and its impact on academic achievement is fit with empirical data. Respondents in this study were students of the Sumatera Thawalib Parabek Bukittinggi Islamic Boarding School totaling 260 students. Data analysis used Structural Equation Model (SEM) using Analysis Moment of Structural (AMOS). Based on the model test, it was obtained p-value = 0.074, RMSEA = 0.025, GFI = 0.938, AGFI = 0.911, CFI = 0.982, and TLI = 0.977, where the majority of model fit indices met the goodness-of-fit parameters. This means that the research theoretical model can be accepted as a model that fits the empirical data. The results of this study indicate that emotional intelligence, social support, and self-adjustment have a positive and significant effect on Self-Regulated Learning, and Self-Regulated Learning has a positive and significant effect on academic achievement. However, emotional intelligence, social support, and self-adjustment do not directly affect academic achievement, but rather through the mediating mechanism of Self-Regulated Learning. This research provides an important contribution to the development of learning strategies in Islamic boarding schools in an effort to improve students' academic achievement through the development of self-regulation abilities.

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A. INTRODUCTION

Education within Islamic boarding schools (pondok pesantren) possesses distinct characteristics that differentiate it from conventional formal educational institutions. Pondok Pesantren Sumatera Thawalib Parabek Bukittinggi, established by Syekh Ibrahim Musa on September 20, 1910, stands as one of the oldest and most prominent Islamic educational institutions in Indonesia. A defining feature of this institution is the integration of a traditional religious curriculum, centered on classical Islamic texts (kitab kuning), with a formal academic curriculum. Consequently, students (santri) are expected to simultaneously master both domains within their daily routines. This dual requirement imposes a substantial academic burden, with daily study periods ranging from 12 to 14 hours comprising 6 to 8 hours of religious instruction and 6 hours of formal schooling. Such rigorous demands necessitate advanced self-management capabilities to ensure that learning objectives are optimally attained (Muzakki, 2020).

A prevalent phenomenon within the pesantren setting is the observable discrepancy between students' proficiency in religious studies and their academic performance in general educational subjects. While numerous students demonstrate exceptional aptitude in reading and comprehending classical Islamic texts, their academic outcomes in disciplines such as Mathematics, English, and Physics frequently remain suboptimal. This academic underachievement is hypothesized to stem not from inherent intellectual deficits (IQ), but rather from specific structural and behavioral impediments intrinsic to the pesantren environment. These constraining factors include the intensive demands of the dual curriculum, the utilization of ineffective study strategies such as the prevalent reliance on last-minute cramming prior to examinations and a fundamental deficit in both time management and the effective allocation of available educational resources (Zimmerman, 2002).

Academic achievement serves as a reflection of the success attained by students following their participation in the educational process, typically articulated in the form of quantitative scores or grades. According to Winkel (2004), academic achievement constitutes evidence of successful learning endeavors, accomplished in alignment with predetermined evaluative criteria. Within the context of Islamic boarding schools (pesantren), two primary categories of achievement function as indicators of student (santri) success: religious achievement, which encompasses the memorization of the Quran and the proficiency to comprehend classical Islamic texts, and general achievement, which is manifested in the formal report card grades of academic subjects. Ideally, an equilibrium should exist between these two domains of achievement; however, empirical observations indicate that religious achievement frequently supersedes general academic achievement in terms of dominance (Pintrich, 1991).

Fundamentally, every student possesses the inherent potential to self-regulate their learning. Nevertheless, not all students demonstrate the capacity to effectively manage or regulate themselves concerning their cognitive processes, affective states, and behavioral actions during learning. Based on preliminary observations and interviews conducted by the researcher in September 2022, involving 13 students at the Sumatera Thawalib Parabek Islamic Boarding School, it was identified that the students' level of Self-Regulated Learning (SRL) remains relatively low. This deficiency is characterized by the students' inability to manage their study time effectively, a lack of capacity to regulate emotions and motivation, and an inadequate proficiency in identifying appropriate learning resources. Furthermore, additional observed phenomena indicate that the students are not yet capable of employing effective learning strategies, frequently experience boredom and a lack of concentration during study sessions, lack definitive learning objectives, and encounter confusion when attempting to prioritize their educational activities (Schunk, 2001).

Self-Regulated Learning (SRL) constitutes a fundamental concept within the educational context due to its strong correlation with students' capacity to enhance their academic achievement. According to Bandura (1977), SRL represents an endeavor to deepen and manipulate associative networks within a specific domain, alongside the monitoring and enhancement of underlying processes. Furthermore, SRL entails meticulous planning and the continuous monitoring of the cognitive and affective processes involved in the execution of academic tasks. Zimmerman (2002) elucidates that SRL is a self-directive process wherein students actively regulate their cognition, emotions, and behaviors to attain academic objectives, rather than depending exclusively on innate aptitude. Notably, students in Islamic boarding schools (*santri*) demonstrating high levels of SRL have been empirically shown to achieve superior academic outcomes, even when subjected to the demands of a dual curriculum system (Pritaningrum & Hendriani, 2013).

Academic achievement is not a spontaneous occurrence; rather, it is the product of a complex interaction between internal and external variables. Slameto (2010) posits that the determinants of academic achievement can be classified into two primary categories. Internal factors consist of intellectual capacity, interest and motivation in learning, learning methodologies (including Self-Regulated Learning), physical well-being, as well as general attitudes and study habits. Conversely, external factors encompass the familial environment, the quality of educators and instructional methods, the applied curriculum, the broader societal context, and the availability of educational infrastructure. Within the specific milieu of Islamic boarding schools (*pesantren*), the implementation of a dual curriculum presents a unique challenge. The cumulative academic workload for these students can extend to 12–14 hours daily, consequently resulting in physical fatigue and a restriction of available study time allocated for general academic subjects (Clemons, 2008; Chung, 2002).

Emotional intelligence is a fundamental internal factor that significantly influences Self-Regulated Learning (SRL) and academic achievement. Goleman (1995) defines emotional intelligence as the capacity to recognize one's own emotions and those of others, to self-motivate, and to effectively manage emotions both internally and within interpersonal relationships. This construct plays a pivotal role in motivating students to attain their academic objectives. The ability to navigate failure, sustain enthusiasm, and cultivate perseverance is essential for achieving educational success. Salovey and Mayer (1990) posit that emotional intelligence enables individuals to identify, comprehend, and regulate their own emotions, thereby facilitating a more effective Self-Regulated Learning process. Furthermore, research conducted by Mousavi et al. (2012) demonstrates that emotional intelligence correlates with the capacity to manage academic stress and adapt to environmental changes.

Similarly, social support serves as a highly influential external determinant of students' SRL and academic achievement. Zimet et al. (1988) define social support as an individual's belief in the availability of assistance from family, friends, and significant others during times of need. Sarafino (2006) further elaborates that social support constitutes the degree of assistance provided to an individual particularly when required by those with whom they share close emotional ties, manifesting as comfort, care, esteem, or various forms of tangible aid. Within the context of Islamic boarding schools, social support becomes critically important, as students reside away from their families and are compelled to establish new social networks within the dormitory setting. Aligning with this, Ryan and Deci (2000), in their self-determination theory, assert that social support is vital for enhancing emotional well-being and profoundly influences students' intrinsic motivation to learn.

Self-adjustment serves as another critical variable that influences Self-Regulated Learning (SRL). Schneiders (1964) conceptualizes self-adjustment as an autonomous process wherein

individuals endeavor to overcome or manage internal needs, tensions, frustrations, and conflicts. The primary objective of this process is to establish harmony and congruence between environmental expectations and internal demands. In an educational context, self-adjustment is highly essential, as it facilitates the enhancement of students' academic performance by enabling them to adapt to dynamic learning environments. Furthermore, Baker and Siryk (1984) posit that self-adjustment comprises academic adaptation, social adaptation, emotional adaptation, and institutional attachment or commitment (Arikunto, 2013).

Drawing upon the previously delineated theoretical framework, a profound correlation exists among emotional intelligence, social support, and self-adjustment in relation to Self-Regulated Learning, along with their subsequent impact on academic achievement. Empirical evidence from Lubis (2016) indicates a significant association between emotional intelligence and SRL, in addition to a substantial correlation linking both social support and emotional intelligence to students' SRL. Similarly, Ramdaniar and Rosiana (2019) identified a positive relationship between emotional intelligence and SRL among students. Moreover, research conducted by Maranressy and Rozali (2021) demonstrated that SRL exerts a significant influence on students' self-adjustment capabilities. Correspondingly, Fasikhah and Fatimah (2013) discovered that cohorts provided with SRL training exhibited superior academic achievement compared to those who did not receive such intervention (Thoits, 1995; Zeidner et al., 2004).

The conditions at Pondok Pesantren Sumatera Thawalib Parabek indicate a discrepancy between academic expectations and reality. Students are confronted with an intensive academic schedule encompassing a multitude of subjects, resulting from the integration of general and religious curricula. Furthermore, the educational process extends beyond formal schooling into the dormitory environment, which involves various extracurricular activities.

Consequently, numerous students are overwhelmed by the demands of managing their studies within the limited available time. Preliminary interviews reveal that students experience academic boredom, diminished concentration, an absence of clear learning objectives, poor time management, and a lack of academic motivation. Additionally, the phenomenon of academic procrastination is prevalent, evidenced by frequent failures to complete assignments punctually and recurrent requests for deadline extensions (Saguni, 2006; Djiwandono, 2002).

Based on the aforementioned context, this research is both critical and urgent, given the limited empirical studies comprehensively examining the influence of emotional intelligence, social support, and self-adjustment on Self-Regulated Learning (SRL), as well as their subsequent impact on academic achievement within the Islamic boarding school (pesantren) environment. Previous research has predominantly focused on isolated variables or has been conducted in mainstream educational settings, thereby creating a literature gap regarding the psychological dynamics that affect the academic achievement of pesantren students. Therefore, this study aims to test a theoretical model concerning the effects of emotional intelligence, social support, and self-adjustment on self-regulated learning, alongside their impact on the academic achievement of students at Pondok Pesantren Sumatera Thawalib Parabek Bukittinggi. It is anticipated that the findings will contribute to the development of more effective instructional strategies within the pesantren setting (Kumalasari & Ahyani, 2012; Smet, 1994).

The primary problem addressed in this study is the low level of Self-Regulated Learning (SRL) and academic achievement among students at the Sumatera Thawalib Parabek Bukittinggi Islamic Boarding School. Observed phenomena indicate that students encounter difficulties in managing their study time, regulating their emotions and motivation, and identifying appropriate learning resources. Furthermore, they exhibit a tendency to employ ineffective

learning strategies, such as last-minute cramming, and frequently experience boredom, poor concentration, a lack of clear learning objectives, and confusion in prioritizing activities. Consequently, despite demonstrating proficiency in religious studies, their academic performance in general subjects namely Mathematics, English, and Physics remains disproportionately low.

The research gap identified in this study stems from the scarcity of literature simultaneously examining the effects of emotional intelligence, social support, and self-adjustment on SRL and academic achievement within the context of a dual-curriculum Islamic boarding school. Previous studies have predominantly been conducted in conventional school settings or have limited their focus to isolated variables. As a result, a comprehensive understanding of the multifaceted factors influencing the academic achievement of boarding school students remains underexplored.

The urgency of this research is highly significant, given that Islamic boarding schools, as the oldest Islamic educational institutions in Indonesia, play a strategic role in cultivating human resources competent in both religious and secular domains. Nevertheless, the prevalent issue of low academic achievement in general subjects poses a critical challenge that necessitates immediate intervention. The objective of this study is to test a theoretical model regarding the influence of emotional intelligence, social support, and self-adjustment on Self-Regulated Learning, along with its subsequent impact on students' academic achievement. Furthermore, it seeks to provide empirical evidence demonstrating the model's goodness-of-fit with empirical data. Ultimately, this research is anticipated to contribute to the development of highly effective instructional strategies within the boarding school environment, thereby facilitating students in attaining optimal academic outcomes.

B. METHOD

This study is designed to examine a theoretical model regarding the influence of emotional

intelligence, social support, and self-adjustment on self-regulated learning, alongside its subsequent impact on the academic achievement of students at the Sumatera Thawalib Parabek Islamic Boarding School in Bukittinggi. A quantitative approach utilizing a cross-sectional research design was employed, wherein data were collected at a single point in time to assess the interrelationships among the variables under investigation. This quantitative methodology was selected to rigorously test hypotheses and theoretical models derived from a comprehensive literature review, thereby allowing the findings to be generalized to a broader population.

The variables in this study are categorized into three distinct types: exogenous, mediator, and endogenous variables. The exogenous variables consist of emotional intelligence, social support, and self-adjustment, which serve as independent variables influencing the other constructs. The mediator variable is self-regulated learning, functioning as an intermediary that elucidates the mechanistic relationship between the exogenous and endogenous variables. Furthermore, the endogenous variable is academic achievement, acting as the dependent variable that is influenced by the preceding factors.

The operational definition of each variable is delineated comprehensively to ensure that the measurements accurately reflect the intended constructs. Self-Regulated Learning is defined as an active and constructive process wherein students establish their learning objectives, subsequently monitoring, regulating, and controlling their cognition, motivation, and behavior. This is measured using a scale encompassing metacognitive, motivational, behavioral, and resource management dimensions. Emotional intelligence is defined as the capacity to recognize one's own emotions and those of others, the ability to self-motivate, and the proficiency to manage emotions effectively; it is assessed through a scale that covers self-awareness, emotional management, self-motivation, recognizing others' emotions, and relationship management. Social support is

defined as the perceived comfort, care, esteem, or assistance an individual receives from other persons or groups, measured via a scale comprising emotional, esteem, instrumental, and informational support. Self-Adjustment is defined as the process by which an individual independently endeavors to overcome or master internal needs, tension, frustration, and conflict, evaluated using a scale that includes recognition, participation, social approval, and altruism. Finally, academic achievement is defined as the outcome of a cognitive assessment expressed in the form of grades, measured based on the average scores in Arabic, Mathematics, English, and Islamic Theology and Morals (Akidah Akhlak).

The population of this study comprised 1,043 Tsanawiyah students at the Sumatera Thawalib Parabek Bukittinggi Islamic Boarding School, encompassing individuals from the first to the third grade. A stratified random sampling technique was employed, stratifying the population by grade level to ensure proportional representation of each cohort within the study sample. The sample size was established at 260 students, fulfilling the adequacy criteria required for Structural Equation Modeling (SEM) analysis.

Data collection instruments for the four psychological constructs utilized a five-point Likert scale. These encompassed a 40-item Self-Regulated Learning scale, modified from the instrument developed by Zimmerman (1989); a 36-item Emotional Intelligence scale developed by Goleman (2003); a 34-item Social Support scale developed by Sarafino (2006); and a 20-item Self-Adjustment scale developed by Schneiders (1964). Furthermore, the academic achievement variable was measured by extracting students' report card grades in four specific subjects: Arabic, Mathematics, English, and Islamic Theology and Morals (Akidah Akhlak). Prior to their implementation in the study, all instruments underwent comprehensive validity and reliability testing.

The validation of the research instrument was conducted in three distinct phases: content

validity, convergent validity, and discriminant validity. Initially, content validity was estimated utilizing the Aiken's V formula, involving a panel of seven experts with comprehensive knowledge of the measured variables and the principles of rigorous item construction. These experts evaluated the appropriateness of the researcher-developed items using a four-point rating scale: Highly Relevant, Relevant, Moderately Relevant, and Highly Irrelevant. Items yielding an Aiken's V coefficient > 0.75 were deemed suitable for inclusion in the psychological scale.

Subsequently, convergent validity was assessed via Confirmatory Factor Analysis (CFA) to ascertain the efficacy of the indicators as measurement instruments for the latent variables. The established criteria for convergent validity necessitated a factor loading > 0.5 , an Average Variance Extracted (AVE) > 0.5 , and a Composite Reliability (CR) > 0.7 . Discriminant validity was then evaluated by comparing the square root of the AVE for each construct against the inter-construct correlations within the model. A model is considered to possess adequate discriminant validity if the square root of the AVE for every construct surpasses its correlation with any other construct. Finally, instrument reliability was examined using Cronbach's Alpha, wherein a research instrument is classified as reliable if it achieves a Cronbach's Alpha coefficient > 0.60 .

This study employed Structural Equation Modeling (SEM) utilizing AMOS software for data analysis. This approach facilitates the simultaneous execution of three distinct analytical procedures: validity and reliability assessments via Confirmatory Factor Analysis (CFA), comprehensive structural relationship modeling using SEM, and Goodness of Fit evaluations for predictive accuracy within the structural model. Prior to the SEM procedures, descriptive statistics were computed using SPSS 26.0 for Windows to establish a foundational overview of the research data. Hypothesis testing was conducted by evaluating the p-value and critical ratio (CR) associated with each structural relationship among the variables;

hypotheses were supported if the p-value was less than 0.05 and the CR exceeded 1.96. Furthermore, indirect effects were analyzed using the Sobel test to determine the significance of self-regulated learning as a mediator in the relationships between emotional intelligence, social support, and self-adjustment regarding academic achievement.

C. RESULTS AND DISCUSSION

1. Results

a. Instrument Validity and Reliability Test Results

Prior to hypothesis testing, all research instruments were subjected to a comprehensive validity and reliability evaluation to ensure that the measurement tools accurately and consistently assessed the intended constructs. Content validity was examined by a panel of seven experts who evaluated the appropriateness of each item within the scales. Based on the Aiken's V calculations, all research scales demonstrated robust content validity. The values ranged from 0.64 to 0.89 for the Self-Regulated Learning scale, 0.64 to 0.86 for the Emotional Intelligence scale, 0.61 to 0.86 for the Social Support scale, and 0.64 to 0.82 for the Self-Adjustment scale. All scales were deemed suitable for use, as the obtained Aiken's V values exceeded the established critical threshold.

Subsequently, convergent validity was assessed using Confirmatory Factor Analysis (CFA) for each variable. The initial analysis revealed that not all items possessed a loading factor above 0.5; therefore, model modifications were implemented by removing items with deficient loading factors. For the Self-Regulated Learning variable, the initial pool of 40 items was refined through this modification process, yielding 9 valid final items with loading factors ranging from 0.583 to 0.863. The goodness-of-fit evaluation for the Self-Regulated Learning construct produced a Probability value of 0.051, an RMSEA of 0.046, a GFI of 0.973, a CFI of 0.980, a TLI of 0.966, and an AGFI of 0.942, all of which satisfied the predetermined fit criteria. Furthermore, the construct exhibited a composite reliability (CR) of 0.902 and an

Average Variance Extracted (AVE) of 0.811, indicating that the Self-Regulated Learning instrument possesses excellent reliability and convergent validity.

Regarding the Emotional Intelligence variable, an initial pool of 36 items was tested. Following a modification process, 12 final valid items were retained, demonstrating factor loadings ranging from 0.552 to 0.915. The goodness-of-fit evaluation for the Emotional Intelligence construct yielded a probability value of 0.104, an RMSEA of 0.033, a GFI of 0.966, a CFI of 0.982, a TLI of 0.972, and an AGFI of 0.940, all of which satisfied the established fit criteria. Additionally, the CR value was 0.904 and the AVE was 0.811, indicating that the Emotional Intelligence instrument exhibits robust reliability and convergent validity.

For the Social Support variable, 34 initial items were tested. Subsequent to the modification process, 17 final valid items were established, with factor loadings ranging between 0.520 and 0.914. The goodness-of-fit results for the Social Support construct demonstrated a probability value of 0.366, an RMSEA of 0.012, a GFI of 0.951, a CFI of 0.996, a TLI of 0.995, and an AGFI of 0.933, entirely fulfilling the requisite fit criteria. Furthermore, a CR value of 0.912 and an AVE of 0.802 were obtained, confirming that the Social Support instrument possesses highly satisfactory reliability and convergent validity.

Regarding the Self-Adjustment variable, an initial pool of 20 items was evaluated. Following a modification procedure, 10 final valid items were retained, demonstrating loading factors ranging from 0.543 to 0.745. The goodness-of-fit analysis for the Self-Adjustment construct yielded a Probability value of 0.268, an RMSEA of 0.024, a GFI of 0.974, a CFI of 0.990, a TLI of 0.984, and an AGFI of 0.951, all of which satisfy the established model fit criteria. Furthermore, the construct exhibited a Composite Reliability (CR) of 0.871 and an Average Variance Extracted (AVE) of 0.735, indicating robust reliability and convergent validity for the Self-Adjustment instrument.

Concerning the Academic Achievement variable, the convergent validity assessment revealed that all four indicators (Mathematics, English, Arabic, and Islamic Theology and Ethics) possessed adequate loading factors. This construct achieved a CR of 0.847 and an AVE of 0.858, thereby confirming the strong reliability and convergent validity of the Academic Achievement instrument. Additionally, the discriminant validity analysis demonstrated that the square of the AVE values along the diagonal exceeded the inter-construct correlations. Consequently, it can be concluded that all evaluated constructs exhibit a satisfactory degree of discriminant validity, rendering them suitable for subsequent analytical procedures.

b. Description of the Study Respondents

The participants in this study comprised 260 students from Pondok Pesantren Sumatera Thawalib Parabek Bukittinggi, exhibiting diverse demographic characteristics. In terms of gender, the sample consisted of 124 male students (47.69%) and 136 female students (52.30%). This distribution reflects a relatively balanced representation between the sexes, despite a slight female majority. Regarding age, the respondents ranged from 11 to 15 years old. The largest cohort was 13-year-olds ($n = 92$, 35.38%), followed by 14-year-olds ($n = 78$, 30%), 12-year-olds ($n = 65$, 25%), 15-year-olds ($n = 23$, 8.84%), and 11-year-olds ($n = 2$, 0.78%). This age distribution indicates that the majority of the respondents are situated in the early stages of adolescent development, a critical period for the formation of self-regulation and social adjustment capabilities. Based on the descriptive analysis of the research variables, the students' academic achievement yielded a mean score of 84.9687 with a standard deviation of 8.50819, ranging from a minimum of 44.10 to a maximum of 97.24. This mean exceeds the established standard threshold of 75, indicating that the students generally demonstrate proficient academic performance.

For the Self-Regulated Learning variable, the mean response score was 2.2171 with a standard deviation of 0.48736 (minimum = 1.11, maximum = 3.78). This outcome falls within the low category, suggesting a deficiency in the students' capacity to systematically activate and sustain the cognitive, affective, and behavioral processes directed toward achieving their learning objectives. Regarding Emotional Intelligence, the analysis revealed a mean score of 3.9637 with a standard deviation of 0.49909 (minimum = 2.58, maximum = 5.00). Positioned in the high category, this indicates that the students possess a strong aptitude for self-motivation and emotional regulation, both intrapersonally and interpersonally. The Social Support variable produced a mean score of 3.8662 with a standard deviation of 0.36205 (minimum = 3.18, maximum = 5.00). This high categorization implies that the students perceive a substantial level of comfort, care, and assistance from their social networks. Finally, the Self-Adjustment variable demonstrated a mean score of 3.9092 with a standard deviation of 0.35291. Falling within the high category, this result signifies that the students exhibit robust adaptive capabilities within the Islamic boarding school (pesantren) environment.

c. Theoretical Model Fit Test Results

Prior to conducting hypothesis testing, an evaluation of the full model was performed to assess the overall fit of the structural equation model with the existing data. The purpose of this evaluation was to determine whether the proposed theoretical model could accurately elucidate the relationships among the variables within the dataset. Based on the initial analysis, the model did not fully satisfy the predetermined fit criteria; consequently, modifications were implemented by correlating several indicators that exhibited high covariance values. Following these modifications, the goodness-of-fit results for the full model demonstrated that all utilized fit indices met the expected criteria. The Probability value was 0.074 (> 0.05), RMSEA was 0.025 (≤ 0.08), GFI was 0.938 (≥ 0.90), CFI was 0.982 (≥ 0.95), TLI was 0.977 (≥ 0.95), and AGFI was 0.911 ($\geq$

0.90). Therefore, it can be concluded that the theoretical model which examines the influence of emotional intelligence, social support, and self-adjustment on self-regulated learning, as well as its subsequent impact on academic achievement is accepted as a model that adequately fits the empirical data. This indicates that the proposed model in this study aligns with the data obtained from the field and can be validly utilized to explain the relationships among the investigated variables.

d. Hypothesis Testing Results

Hypothesis testing was conducted to determine whether the independent variables (emotional intelligence, social support, and self-adjustment) significantly affect the dependent variables (self-regulated learning and academic achievement). The analysis yielded several distinct findings. The first hypothesis, which posited that emotional intelligence has a positive effect on self-regulated learning, was supported, demonstrating a statistically significant positive influence ($p = 0.003 < 0.05$; estimate = 0.432). This indicates that higher levels of emotional intelligence among students correspond to improved self-regulated learning capabilities. The second hypothesis, proposing that social support positively impacts self-regulated learning, was also supported, revealing a significant positive effect ($p = 0.021 < 0.05$; estimate = 0.171). Consequently, an increase in the social support received by students translates to enhanced self-regulated learning proficiency.

Similarly, the third hypothesis, asserting that self-adjustment positively influences self-regulated learning, was supported ($p = 0.003 < 0.05$; estimate = 0.886). This estimate represents the highest coefficient among the three exogenous variables, signifying that self-adjustment exerts a profound and highly robust effect on self-regulated learning. The fourth hypothesis, which postulated a positive effect of emotional intelligence on academic achievement, was rejected. The analysis yielded a p -value of 0.604 ($p > 0.05$) and an estimate of -1.015, indicating a negative yet statistically insignificant effect. This finding suggests that emotional

intelligence does not directly influence the academic achievement of the students. Similarly, the fifth hypothesis, proposing a positive relationship between social support and academic achievement, was rejected. The results revealed a p -value of 0.828 ($p > 0.05$) and an estimate of 0.190, demonstrating a positive but non-significant effect. The sixth hypothesis, which asserted that self-adjustment positively impacts academic achievement, was also rejected, with a p -value of 0.358 ($p > 0.05$) and an estimate of -4.163, denoting a negative and statistically insignificant influence.

Conversely, the seventh hypothesis, which posited that self-regulated learning positively affects academic achievement, was accepted. The data indicated a p -value of 0.044 ($p < 0.05$) and an estimate of 8.565, signifying a significant positive effect. This finding demonstrates that self-regulated learning serves as a pivotal factor directly influencing students' academic achievement. Consequently, greater proficiency in self-regulated learning corresponds to higher levels of academic achievement attained by the students.

Furthermore, the results of the indirect effect analysis using the Sobel test indicate that the eighth hypothesis which posited that emotional intelligence influences academic achievement through self-regulated learning is rejected. This conclusion is supported by a t -statistic of 1.659 (< 1.96) and a probability value of 0.097 (> 0.05). Similarly, the ninth hypothesis, which asserted that social support affects academic achievement via self-regulated learning, is rejected, yielding a t -statistic of 1.519 (< 1.96) and a probability value of 0.129 (> 0.05). The tenth hypothesis, suggesting that self-adjustment impacts academic achievement through self-regulated learning, is also rejected, with a t -statistic of 1.676 (< 1.96) and a probability value of 0.094 (> 0.05). Although all three indirect effects exhibit a positive trajectory (with estimates of 3.700, 1.465, and 7.589, respectively), they remain statistically insignificant at the 95% confidence level.

e. Coefficient of Determination Results

The coefficient of determination analysis was conducted to measure the proportion of variance in the dependent variables that can be elucidated by the independent variables within the model. Based on the analytical findings, the structural model designating self-regulated learning as the dependent variable yielded an estimated value of 0.713. This signifies that 71.3% of the variance in self-regulated learning is collectively explained by emotional intelligence, social support, and self-adjustment, whereas the remaining 28.7% is attributable to extraneous factors not accounted for in this study.

Additionally, the structural model designating academic achievement as the dependent variable produced an estimate of 0.480. This indicates that 48% of the variance in academic achievement is explained by self-regulated learning, with the residual 52% influenced by external variables such as intellectual aptitude, instructional quality, the learning environment, and other unmeasured factors. Ultimately, these findings demonstrate that the proposed research model possesses a robust predictive capacity, particularly concerning the self-regulated learning variable, which is substantially explained by the three exogenous variables.

2. Discussion

This study aimed to evaluate a theoretical model concerning the effects of emotional intelligence, social support, and self-adjustment on self-regulated learning, alongside their subsequent impact on the academic achievement of students at the Sumatera Thawalib Parabek Bukittinggi Islamic Boarding School. Overall, the findings demonstrate that the proposed theoretical model exhibits a robust fit with the empirical data. This indicates that emotional intelligence, social support, and self-adjustment collectively play a pivotal role in cultivating students' self-regulated learning capabilities, which in turn significantly influences their academic performance. The following discussion provides a comprehensive analysis of each empirical

finding, contextualizing them within relevant theoretical frameworks and prior literature.

a. The Influence of Emotional Intelligence on Self-Regulated Learning

The results of this study establish that emotional intelligence exerts a positive and statistically significant effect on students' self-regulated learning, as evidenced by an estimated value of 0.432 and a p-value of 0.003. These findings suggest that higher levels of emotional intelligence correlate with enhanced self-regulatory abilities during the learning process. Emotional intelligence serves as a fundamental mechanism that empowers students to effectively identify, comprehend, and regulate their emotional states, thereby facilitating self-regulation in their studies. Students possessing high emotional intelligence are better equipped to mitigate negative psychological responses such as boredom, anxiety, and frustration that frequently emerge from the rigorous academic demands of the boarding school environment. Consequently, this emotional regulation enables them to maintain focus and sustain the motivation required to achieve their academic objectives.

These findings align with the theoretical framework established by Goleman (1995), which posits that emotional intelligence is a fundamental factor in enhancing self-regulation, thereby impacting students' capacity to adapt to dynamic and stressful learning environments. Furthermore, Salovey and Mayer (1990) articulate that emotional intelligence empowers individuals to identify, comprehend, and manage their own emotions, which in turn fosters a more effective Self-Regulated Learning process.

Empirical research by Zeidner, Matthews, and Roberts (2004) demonstrates a significant correlation between emotional intelligence and Self-Regulated Learning aptitude. Their study indicates that individuals with elevated emotional intelligence generally exhibit superior Self-Regulated Learning capabilities, particularly concerning the regulation of emotions and motivation. Similarly, Parker et al. (2004) underscore the critical role of emotional

intelligence in Self-Regulated Learning, noting that individuals with high emotional intelligence are more adept at managing their emotional and motivational states, which consequently amplifies their self-regulatory proficiency. Brackett and Salovey (2006) further corroborate this significant relationship, emphasizing the specific impact of emotional intelligence on emotional and motivational regulation.

Consequently, these findings reinforce the scientific consensus that emotional intelligence acts as a pivotal predictor of self-regulated learning capacity. In the specific context of Islamic boarding schools (*pesantren*), the development of emotional intelligence is exceptionally crucial, given the complex academic and social demands confronted by the students (*santri*).

b. The Influence of Social Support on Self-Regulated Learning

The findings of this study reveal significant evidence regarding the impact of social support on self-regulated learning, demonstrating an estimated value of 0.171 and a p-value of 0.021. Although the coefficient of this effect is smaller in comparison to those of emotional intelligence and self-adjustment, these results indicate that social support plays a substantial role in facilitating students' self-regulation within an educational context. The social support that students receive from their families, peers, and teachers fosters a sense of security, validation, and care, which subsequently enhances their intrinsic motivation and self-confidence in independently managing their learning processes. Consequently, students who perceive active support from their social environment tend to exhibit greater self-efficacy when confronting academic challenges and demonstrate a higher capacity to overcome obstacles that emerge throughout their academic endeavors.

These findings align with Ryan and Deci's (2000) self-determination theory, which asserts that social support is fundamental in enhancing emotional well-being and influencing students' intrinsic motivation to learn. Empirical evidence

further substantiates this relationship; Rozali (2014) identified a significant effect of social support on students' Self-Regulated Learning (SRL), demonstrating that greater perceived social support corresponds to higher levels of SRL. Similar positive correlations between social support and SRL have been documented in subsequent studies by Marisa and Rahayu (2020) and Lubis and Aminah (2018).

However, it is crucial to recognize that within the context of Islamic boarding schools (*pesantren*), the nature of social support received by students (*santri*) may be predominantly emotional and spiritual, rather than practical assistance directly targeted at improving academic performance. As Thoits (1995) elucidates, while social support plays a vital role in alleviating stress and fostering psychological well-being, it does not invariably have a direct nexus with structured learning strategies. Therefore, although social support positively contributes to SRL, its mechanism of action may be primarily indirect. It functions by enhancing emotional well-being and motivation, which in turn facilitates the broader process of self-regulation in learning.

c. The Effect of Self-Adjustment on Self-Regulated Learning

The findings of this study demonstrate that self-adjustment exerts a highly significant positive effect on self-regulated learning, as evidenced by an estimate value of 0.886 and a p-value of 0.003. This coefficient is the highest among the three exogenous variables, indicating that adaptability is the most dominant factor in shaping the students' (*santri*) capacity for self-regulated learning. These results are particularly pertinent to the context of Islamic boarding schools (*pondok pesantren*), where students are required to acclimate to a novel environment distinct from their familial settings, adhere to stringent institutional regulations and discipline, and navigate the substantial academic pressures associated with a dual curriculum. Consequently, students who exhibit robust self-adjustment capabilities are better equipped to overcome these multifaceted challenges, thereby enabling

them to manage their educational processes with greater focus and efficacy.

These findings are consistent with the theoretical framework postulated by Schneiders (1964), which defines self-adjustment as a process wherein individuals autonomously strive to resolve internal needs, tension, frustration, and conflicts to achieve equilibrium between environmental imperatives and intrinsic demands. Furthermore, Lazarus and Folkman (1984) posit in their coping theory that the capacity to adapt to a dynamic environment serves as a fundamental component of stress management, which is closely interconnected with Self-Regulated Learning. Zimmerman (2002) additionally emphasizes that students capable of adapting to fluctuations within their educational environment are more adept at self-management and self-motivation for effective learning, a hallmark of successful self-regulation.

Empirical evidence further substantiates this relationship; Maranressy and Rozali (2021) identified a significant impact of Self-Regulated Learning on self-adjustment, while Fattuberty (2019) demonstrated a positive correlation between Self-Regulated Learning and academic adjustment, noting the former as the most critical determinant of the latter. Similarly, Rismi and Aulia (2023) observed a positive association between self-adjustment and Self-Regulated Learning among university students during the post-COVID-19 period. Consequently, the present findings corroborate that the aptitude for self-adjustment constitutes an essential foundation for cultivating Self-Regulated Learning, particularly within demanding educational settings such as Islamic boarding schools (pondok pesantren).

d. The Effect of Self-Regulated Learning on Academic Achievement

The results of this study indicate that Self-Regulated Learning exerts a positive and significant effect on the academic achievement of santri, evidenced by an estimate value of 8.565 and a p-value of 0.044. This constitutes a key finding of the research, as it demonstrates that self-regulatory learning capabilities

contribute directly to the enhancement of academic performance. Santri who are capable of autonomously regulating their learning ranging from goal setting and strategy planning to progress monitoring and outcome evaluation tend to exhibit higher academic achievement compared to those with limited self-regulatory skills. This competency is exceptionally crucial within the pesantren environment, where students are required to independently manage a substantial and complex academic workload.

These findings are consistent with research conducted by Fasikhah and Fatimah (2013), which revealed that cohorts receiving SRL training achieved higher academic performance than those without such training. Similarly, Rahmiyati (2017) identified a significant effect of Self-Regulated Learning on student achievement, noting that higher levels of student SRL corresponded to a greater positive impact on their academic success. Handayani (2017) reported a positive and significant influence of Self-Regulated Learning on university students' academic achievement during online learning. Furthermore, Zimmerman (2000) asserted that the capacity to autonomously regulate the learning process directly affects academic achievement, while Schunk and Ertmer (2000) added that Self-Regulated Learning contributes to academic success by enhancing self-efficacy and motivation. Ultimately, these findings corroborate that Self-Regulated Learning is not merely a theoretical construct, but rather possesses tangible, practical implications for improving the academic achievement of santri. Consequently, initiatives to cultivate SRL must be prioritized within the pedagogical strategies implemented in pesantren.

e. The Direct and Indirect Effects of Emotional Intelligence, Social Support, and Self-Adjustment on Academic Achievement

The findings of this study indicate that emotional intelligence, social support, and self-adjustment do not exert a direct influence on the academic achievement of Islamic boarding school students (santri). These three variables demonstrate statistically insignificant p-values

(0.604, 0.828, and 0.358, respectively), alongside varying estimate values (-1.015 for emotional intelligence, 0.190 for social support, and -4.163 for self-adjustment). These results suggest that rather than directly impacting academic performance, the influence of these variables operates through the mediating mechanism of self-regulated learning. In other words, emotional intelligence, social support, and self-adjustment indirectly affect academic achievement by initially fostering self-regulated learning capabilities within the students. This conceptual framework elucidates why the direct effects of these three variables on academic achievement lack significance, proposing instead that their meaningful impact is channeled through self-regulated learning.

Nevertheless, the Sobel test results reveal that the indirect effects of these three variables on academic achievement via self-regulated learning are also not statistically significant. The *t*-statistics for emotional intelligence (1.659), social support (1.519), and self-adjustment (1.676) all fall below the critical threshold of 1.96. Despite this lack of statistical significance, the indirect effects exhibit a positive trajectory, with estimate values of 3.700, 1.465, and 7.589, respectively. This indicates a potential positive trend that could achieve statistical significance with an expanded sample size or a more comprehensive model incorporating additional variables. These findings are consistent with the research conducted by Perry (2002), which posits that while self-regulated learning is crucial, its impact on academic achievement may be heavily influenced by extraneous factors such as resource accessibility, instructional support, and extrinsic motivation. Within the specific context of an Islamic boarding school (*pesantren*), other elements including the quality of instruction, the availability of educational resources, and the overarching institutional climate may assume a more dominant role in directly determining academic achievement.

D. CONCLUSION

Based on the research findings, it can be concluded that the theoretical model examining

the effects of emotional intelligence, social support, and self-adjustment on self-regulated learning, as well as their subsequent impact on academic achievement, demonstrates a strong fit with the empirical data. This indicates that the model accurately elucidates the interrelationships among these variables. The study substantiates that emotional intelligence, social support, and self-adjustment collectively exert a positive and significant influence on the self-regulated learning of santri (Islamic boarding school students). Self-adjustment emerges as the most dominant factor influencing self-regulated learning, followed by emotional intelligence and social support. These findings imply that students exhibiting high levels of adaptability, emotional intelligence, and social support are predisposed to superior self-regulatory capacities in their learning processes. Furthermore, self-regulated learning is empirically proven to have a positive and significant effect on academic achievement. Consequently, enhanced self-regulatory skills correlate directly with higher academic performance. Nevertheless, emotional intelligence, social support, and self-adjustment do not exert a direct impact on academic achievement; rather, their effects are mediated through self-regulated learning. This underscores the critical role of self-regulated learning as a mediating variable that bridges the impact of psychological and social factors on academic success.

The findings of this study offer significant implications for the advancement of education within Islamic boarding schools (*pondok pesantren*), particularly concerning initiatives to elevate students' academic achievement. First, the cultivation of self-regulated learning must be prioritized within institutional instructional strategies, given its critical function in determining academic outcomes. Training programs designed to augment self-regulatory skills such as time management training, effective learning strategies, and metacognitive development should be systematically integrated into the curriculum. Second, efforts to foster students' emotional intelligence must be

implemented through targeted programs that assist them in identifying, comprehending, and managing their emotions effectively. Interventions such as psychological counseling, emotional intelligence workshops, and socio-emotional skill development should be incorporated into the institution's character education framework. Third, social support from various stakeholders, including families, peers, and educators, must be strengthened

through transparent communication, genuine attentiveness, and the provision of practical assistance required during the learning process. Fourth, structured programs designed to facilitate student adaptation, including comprehensive orientations for new students, character-building initiatives, and psychological mentoring, must be developed to assist students in navigating the adaptive challenges inherent to the boarding school environment.

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