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PSYCHOLOGICAL DRIVERS OF ACADEMIC PERSISTENCE: EXAMINING SELF-REGULATED LEARNING AND ACADEMIC MOTIVATION AMONG UNIVERSITY STUDENTS

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ABSTRACT

Purpose: *This study examines the contributions of self-regulated learning and academic motivation to student academic persistence among university students in East Java, Indonesia. It focuses on understanding how students' capacity to manage their learning processes and their motivation to sustain academic effort jointly contribute to academic persistence.*

Design/methodology/approach: *Quantitative explanatory survey was conducted involving 193 undergraduate students selected through purposive sampling. Data were collected using a structured questionnaire with a five-point Likert scale and analyzed through multiple linear regression to examine the partial and simultaneous contributions of the independent variables.*

Findings: *Self-regulated learning and academic motivation demonstrate positive and significant contributions to student academic persistence, both individually and simultaneously. The findings indicate that academic persistence is supported by two complementary psychological dimensions: students' ability to regulate their learning activities and their motivation to maintain academic commitment.*

Research limitations/implications: *The use of purposive sampling and the geographical focus on East Java limit the generalizability of the findings. Future research may employ broader sampling strategies and longitudinal designs to examine the development of academic persistence over time.*

Practical implications: *Higher education institutions should integrate learning strategies that strengthen self-regulation with learning environments that foster student motivation.*

Originality/value: *This study contributes an integrated empirical perspective on academic persistence by examining learning regulation and motivational drive within a single explanatory framework.*

Paper type: *Research paper*

Keyword: *Academic Motivation; Academic Persistence; Higher Education; Self-Regulated Learning; University Student.*

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A. INTRODUCTION

Higher education plays a strategic role in developing the quality of human resources by strengthening students' knowledge, skills, and adaptive capacity to cope with social, economic, and technological changes. As it has evolved, higher education is no longer solely focused on achieving academic competencies but also requires students to demonstrate independence, responsibility, and the ability to adapt to the dynamics of the learning process (Rawung et al., 2021). The transformation of an increasingly complex educational environment has also altered the nature of academic demands, ranging from the ability to deeply understand course material, complete various tasks independently, manage time, to maintaining consistency in achieving learning objectives (Azizah et al., 2023). These conditions position students as individuals who are not only required to acquire knowledge but must also be able to manage and sustain their engagement in the academic process over the long term. Therefore, success in higher education cannot be understood solely through academic achievements obtained during a specific learning period; rather, it must also be viewed through students' ability to persevere, overcome various obstacles, and continue their learning process until they achieve their established academic goals. This perspective positions academic persistence as a key aspect in understanding student success, while also drawing attention to the psychological factors underlying an individual's ability to persevere and remain consistent in meeting the demands of higher education.

Although academic persistence is crucial to success in higher education, students vary in their ability to sustain their learning efforts. Academic persistence describes a student's ability to remain committed and diligent in academic activities despite facing difficulties (Karimi & Pina, 2021). This ability is reflected in consistency in completing assignments, maintaining a passion for learning, coping with failure, and striving to achieve academic goals. However, during the learning process, students may experience a decline in motivation, difficulty managing their study activities, and a tendency to give up when faced with increasingly complex academic demands. These conditions indicate that student success is determined not only by their ability to understand the material but also by their ability to sustain their efforts throughout the learning process. Therefore, it is important to understand the psychological factors that support students in maintaining their academic perseverance and consistency.



Figure 1. Map of Achievements Knowledge Index in East Java 2025
Source: (Badan Pusat Statistik Kota Malang, 2025)

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The state of education in East Java reveals disparities in knowledge attainment across regions. Based on Figure 1, the "Map of the Knowledge Achievement Index in East Java 2025" shows that the provincial average index stands at 0.65, with Malang City achieving the highest score of 0.82, while Sampang Regency has the lowest score of 0.52 (Badan Pusat Statistik Kota Malang, 2025). These differences illustrate that knowledge achievement is not yet evenly distributed across all regions of East Java. This situation highlights the importance of focusing on the quality of the learning process and the factors that support students' academic success. However, the knowledge index scores do not fully explain students' ability to maintain effort and consistency in their studies. Therefore, further research is needed on individual psychological aspects, particularly students' ability to manage the learning process and sustain academic motivation as factors that have the potential to support academic persistence.

One psychological factor that plays a role in sustaining students' academic effort is self-regulated learning. This concept refers to students' ability to regulate their learning process through goal-setting, strategy selection, time management, progress monitoring, and evaluation of learning outcomes. Students with strong self-regulation skills tend to be better able to identify learning difficulties, determine solutions, and adjust strategies when facing academic obstacles. These skills help students stay on track toward achieving their learning goals despite facing diverse academic demands. From the perspective of Zimmerman, (2016), Self-Regulated Learning Theory, learning success depends not only on an individual's ability to understand the material but also on their ability to independently control and evaluate the learning process. Thus, self-regulated learning has the potential to support academic persistence because students possess the strategies and self-control needed to sustain their academic efforts.

In addition to the ability to manage the learning process, the continuity of academic effort is also related to the motivation that drives students to achieve their learning goals. Academic motivation is an internal or external drive that influences students' willingness to engage in and maintain academic activities. Students with strong academic motivation tend to show interest in learning, have clear goals, and strive to fulfill their academic responsibilities even when facing difficulties. The Self-Determination Theory perspective, as outlined by Zimmerman, (2016) also emphasizes that motivation is linked to the fulfillment of basic psychological needs—namely, autonomy, competence, and social relatedness—which support the development of more self-directed and sustainable learning motivation. Such motivation can help students maintain their commitment to academic goals, especially when the learning process does not always go as expected. Therefore, academic motivation is an important psychological factor that has the potential to strengthen academic persistence. The ability to manage the learning process and the drive to continue learning must be understood together to explain how students maintain their academic persistence.(Pratama et al., 2026; Sakti & Luthfiyah, 2024)

The available literature indicates that research on self-regulation and academic motivation still tends to develop along two distinct paths. First, research on self-regulated learning (SRL) focuses more on academic achievement as the primary outcome. A meta-analysis of SRL training programs for college students shows that studies generally measure improvements in academic performance, the use of cognitive and metacognitive strategies, and learning motivation (Feng et al., 2025). A similar trend was found in a systematic review mapping the relationship between SRL phases and strategies and academic achievement(Suardipa et al., 2021), as well as in studies of online and blended learning environments that confirm the role of SRL in improving learning performance (Brenner, 2022). Furthermore, meta-analyses of SRL interventions have also placed greater emphasis on test performance measures (Hamzah et al., 2023). This focus is also evident in a study of health professional students linking SRL to academic achievement(Tinajero et al., 2024) and a study of EFL students associating SRL strategies with academic success and procrastination (Astuti & Rozikin, 2024). Thus, while existing SRL studies have largely explained how students manage their learning

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processes to achieve academic outcomes, they have not yet extensively explored its contribution to academic persistence.

Second, research on academic motivation has primarily focused on the factors that drive students' intentions and engagement in learning. From the perspective of self-determination theory, the fulfillment of psychological needs is linked to the development of students' motivation and intention to continue SRL activities in online learning(Luo et al., 2021). Other studies indicate that learning goal orientation may be linked to academic achievement through the roles of self-efficacy and student engagement in learning (Lan & She, 2023). Nevertheless, the motivational aspects of the self-regulation process have yet to receive adequate attention. This is evident from the limited number of studies that specifically examine the motivational framework in SRL (Lan & She, 2023), as well as the rarity with which motivational regulation is considered as a construct analyzed alongside its predictors and developmental patterns among students (Kryshko et al., 2026). These limitations are also reflected in the lack of exploration of motivational regulation strategies and the self-assessment phase (Liu et al., 2025), as well as the still limited understanding of how to apply SRL to produce outcomes beyond academic achievement(Anthonysamy et al., 2020).

In fact, a number of studies have indicated that self-regulation and motivation are interrelated in shaping the sustainability of students' learning activities. Self-regulation has been found to be associated with academic persistence and achievement motivation (Kausar & Haroon, 2025). Another study shows that the relationship between academic self-efficacy and learning persistence among adult students is fully mediated by SRL (Kim, 2025). Furthermore, learning interest and persistence were found to have a reciprocal relationship through the use of SRL strategies (Wu et al., 2024). From a motivational perspective, motivational regulation strategies have also been shown to contribute to academic performance while reducing students' intention to drop out (Kryshko et al., 2026). These findings align with the view that students manage their learning efforts through a combination of cognitive, volitional, and motivational strategies (Wolters, 1998). In fact, the implementation of SRL workshops demonstrates the potential for the formation of feedback mechanisms that can support students' academic persistence (Lambert & Hoggan, 2024).

Based on this discussion, the research gap lies not only in the limited number of studies on academic persistence as an outcome of SRL but also in the suboptimal integration of self-regulation and academic motivation within a single empirical testing framework. Previous research has shown that these two aspects are associated with various indicators of learning success and continuity; however, their combined contribution to academic persistence has not been extensively examined simultaneously. Therefore, this study offers a novel approach by simultaneously examining the contributions of self-regulation and academic motivation to the academic persistence of college students in East Java. This focus is expected to broaden our understanding of the factors that support students in maintaining their engagement and continuity in the learning process, while also filling a research gap in the context of higher education in Indonesia, particularly in East Java.

B. THEORETICAL FRAMEWORK

Self-Regulated Learning to Student Academic Persistence

Self-regulated learning is an active process in which students direct and control their learning activities to achieve academic goals. Zimmerman, (2000) explains that self-regulation in learning occurs through three interrelated stages: forethought, performance, and self-reflection. The forethought stage involves setting goals and planning strategies before learning activities take place. The performance stage involves implementing strategies, managing attention, and monitoring learning progress. Finally, the self-reflection stage involves evaluating learning outcomes and processes as a basis for refining strategies for future activities. These three stages demonstrate that students do not merely act as recipients of information but also as individuals who actively manage

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and evaluate their own learning processes. Thus, self-regulated learning provides a mechanism for students to maintain direction and consistency in their academic activities while facing various learning demands. (Liu et al., 2025; Pratama & Utomo, 2024)

This ability to regulate the learning process is conceptually linked to student academic persistence. Students' ability to maintain effort and commitment in meeting academic demands despite facing obstacles (Putra et al., 2025). Students who are able to set goals, monitor progress, and evaluate their learning strategies possess a stronger foundation of self-control to respond to academic difficulties. When the strategies used do not yield the expected results, students can make adjustments without having to stop their learning efforts. This process enables students to maintain their engagement in learning and consistently continue their efforts to achieve academic goals. Therefore, self-regulated learning is viewed as a factor with the potential to support student academic persistence. Based on this theoretical argument, this study proposes the hypothesis that self-regulated learning has a positive effect on student academic persistence.

H1: Self-regulated learning has a positive effect on student academic persistence among university students in East Java.

Academic Motivation on Student Academic Persistence

Academic motivation is a psychological factor that underlies students' willingness to engage, strive, and achieve goals in the learning process. One relevant theoretical foundation for explaining this concept is Self-Determination Theory (SDT), developed by Deci & Ryan, (2000). The need for autonomy reflects a sense of control over choices and actions in learning, while competence relates to an individual's belief in their ability to meet academic demands (Ulumiyah et al., 2025). Relatedness, meanwhile, describes the need to feel connected to and supported by one's social environment. When these needs are met, students have the opportunity to develop more self-directed motivation and possess strong reasons for engaging in academic activities. Thus, academic motivation is not only related to the drive to begin learning activities but also to the quality of the reasons underlying students' engagement in the learning process.

The quality of this motivation has the potential to influence students' ability to sustain their academic efforts when facing difficulties. Students with strong academic motivation tend to have clearer goals, view learning activities as valuable, and demonstrate a willingness to keep trying even when expected results are not immediately achieved Motivation stemming from personal awareness and values can also help students maintain their commitment to learning without relying entirely on external rewards or pressure. In this context, academic motivation serves as a psychological driving force that provides direction and a sense of purpose for students to continue their academic pursuits. Therefore, the stronger a student's academic motivation, the greater their potential to maintain perseverance and commitment in fulfilling the demands of higher education. Based on this theoretical argument, this study proposes the hypothesis that academic motivation has a positive effect on student academic persistence.

H2: Academic motivation has a positive effect on student academic persistence among university students in East Java.

Simultaneous Effect of Self-Regulated Learning and Academic Motivation on Student Academic Persistence

Student academic persistence is an academic behavior influenced not only by students' ability to manage the learning process but also by psychological motivations that drive them to maintain their efforts toward achieving academic goals. According to Campione et al., (2026) self-regulation helps students set goals, choose strategies, monitor progress, and evaluate learning outcomes. Meanwhile, Self-Determination Theory explains that academic motivation provides drive through the fulfillment of basic psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2000). These two perspectives explain different yet complementary aspects of the learning

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process. Self-regulated learning relates to students' ability to direct their learning actions, whereas academic motivation relates to the reasons and drives underlying the continuity of those actions (Utomo & Pratama, 2024a). Therefore, academic persistence can be understood as the result of a process involving both self-regulation skills and motivational forces in addressing the demands of higher education.

The interconnection between these two factors indicates that the ability to regulate the learning process and academic motivation must be considered together to understand student persistence. Students with self-regulation skills can devise strategies and adjust their actions when facing obstacles, but these skills must be supported by motivation so that students maintain the will to continue their efforts (Pratama, Hidayah, et al., 2025). Conversely, academic motivation can provide the drive to achieve goals, but these efforts will be more focused when students are able to manage their learning process effectively. (Pratama, Anisa, et al., 2025) Thus, these two factors make complementary contributions to supporting students' perseverance and consistency in meeting academic demands. Based on this argument, this study examines the simultaneous contributions of self-regulated learning and academic motivation to student academic persistence, while also identifying the individual contributions of each factor in explaining student academic persistence.

H3: Self-regulated learning and academic motivation simultaneously have a positive and significant effect on academic persistence among university students in East Java.

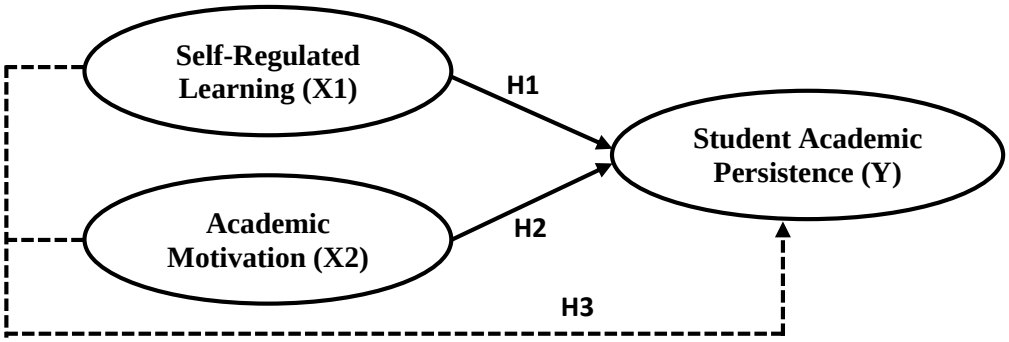

Figure 2. Conceptual Framework of The Research

C. METHODOLOGY

This study employs a quantitative approach using explanatory research to analyze the relationship between self-regulated learning, academic motivation, and student academic persistence among college students in East Java, Indonesia. The quantitative approach was chosen because, as noted by Arifin et al., (2023) quantitative research is appropriate when the aim is to test hypotheses formulated based on a theoretical framework through the collection of numerical data and statistical analysis. Meanwhile, the explanatory approach was used to explain the contribution of each independent variable as well as their combined contribution to students' academic persistence.. (Pratama et al., 2026)

A survey method was used as the data collection technique by distributing a structured questionnaire to students who met the study's respondent criteria. This method allows for the systematic collection of information regarding students' ability to manage the learning process, their academic motivation, and their consistency in fulfilling academic responsibilities. The research model consists of two independent variables (self-regulated learning and academic motivation) and one dependent variable (student academic persistence). Furthermore, multiple linear regression analysis was used to test the relationships among the variables and test the research hypotheses.

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The population in this study consists of students currently enrolled in higher education institutions in the East Java region of Indonesia. The target population includes active undergraduate students who have experience participating in higher education learning activities. East Java was chosen as the research context because it has a higher education environment with diverse institutional characteristics and student academic experiences. These conditions provide an empirical framework for examining the psychological factors related to students' ability to maintain their academic effort and commitment.

This study used a purposive sampling technique, in which respondents were selected based on specific criteria tailored to the study's objectives. The respondent criteria include: (1) active undergraduate students at universities in the East Java region; (2) students who have completed at least one semester of coursework and thus have experience managing academic activities and demands; and (3) students willing to voluntarily participate by completing the research questionnaire. These criteria were established to ensure that respondents had relevant experience to provide assessments regarding self-regulation in learning, academic motivation, and academic persistence.

The number of respondents used in the statistical analysis was 193 students. This number exceeds the sample adequacy guidelines proposed by (Green, 1991) for multiple regression analysis with two independent variables. Based on these guidelines, the minimum sample size required to test the regression model as a whole is calculated using the formula 50 + 8m, while testing individual predictors requires the formula 104 + m, where m represents the number of independent variables. Thus, the minimum sample sizes are 66 and 106 respondents, respectively. The total of 193 respondents met both guidelines for the regression analysis. However, the use of purposive sampling must be taken into account when interpreting the research results because the sample was not selected through a probabilistic mechanism that ensures the representativeness of all students in East Java.

Data collection in this study was conducted using a structured questionnaire designed to measure three research variables: self-regulated learning, academic motivation, and student academic persistence. The questionnaire was developed based on the operational definitions and indicators for each variable, which were established according to the theoretical framework. Each statement in the questionnaire was designed to gather information regarding students' behaviors in managing their learning processes, their drive to achieve academic goals, and their ability to persist in fulfilling their academic responsibilities.

Table 1. Items on the Likert Scale

Response Options	Scale	Weight
Strongly Agree	SA	5
Agree	A	4
Somewhat Disagree	SD	3
Disagree	D	2
Strongly Disagree	STD	1

Source: (Riduwan, 2018)

Respondents' answers were measured using a five-point Likert scale. The purpose of this scale was to identify the respondents' level of agreement with each statement describing the research construct. The questionnaire was then distributed to students in East Java who met the respondent criteria. Before completing the questionnaire, respondents were provided with information regarding the research objectives and the voluntary nature of their participation. The collected data was subsequently reviewed and organized for statistical analysis, while ensuring the confidentiality of respondents' information and limiting data use strictly to research purposes. (Utomo & Pratama, 2024b)

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Next, reliability testing was conducted using Cronbach's Alpha to assess the internal consistency of the research instrument. A Cronbach's Alpha value of 0.70 or higher was used as a benchmark to indicate an acceptable level of reliability (Creswell & Creswell, 2022). This test was applied to the instruments measuring self-regulated learning, academic motivation, and student academic persistence. The results of the validity and reliability tests were used as the basis for evaluating the quality of the instruments before the data were further analyzed to test the relationships among the research variables.

Data analysis in this study used multiple linear regression to test the relationships between self-regulated learning, academic motivation, and student academic persistence. This analytical technique was used to determine the contribution of each independent variable, as well as their combined contribution, in explaining the variation in the dependent variable. The regression model used in this study is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \quad (1)$$

The regression model's ability to explain the variation in academic persistence was analyzed using the coefficient of determination (R^2) and adjusted R^2. These values were used to determine the proportion of variation in student academic persistence that can be explained by the variables self-regulated learning and academic motivation. Furthermore, the regression coefficient table was used to identify the direction and magnitude of each independent variable's contribution to the dependent variable. (Pratama & Farida, 2025)

Partial hypothesis testing was conducted using the t-test to determine the contribution of each independent variable to student academic persistence. Meanwhile, simultaneous testing was conducted using the F-test via analysis of variance (ANOVA) to determine the combined contribution of self-regulated learning and academic motivation to student academic persistence. The significance level used in hypothesis testing was 0.05. A significance value below 0.05 indicates a statistically significant relationship or contribution. All of these analytical procedures were used to test H1 regarding the relationship between self-regulated learning and student academic persistence, H2 regarding the relationship between academic motivation and student academic persistence, and H3 regarding the simultaneous contribution of both independent variables to student academic persistence.

D. RESULTS AND DISCUSSION

Results

Validity testing was conducted to evaluate the suitability of each item in measuring the research variables, namely self-regulated learning, academic motivation, and student academic persistence. This test used Pearson's product-moment correlation, taking into account the correlation coefficient and significance level for each item. The results of the validity testing are presented in Table 2 as a basis for assessing the suitability of the instrument items before conducting further analysis of the relationships among the research variables.

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Table 1. Validation Test Results with Pearson Correlation

Correlations			
Item	**Pearson Correlation**	**Sig. (2-tailed)**	**Description**
X1.1.1	.624	.000	Valid
X1.1.2	.683	.000	Valid
X1.2.1	.571	.000	Valid
X1.2.2	.746	.000	Valid
X1.2.3	.659	.000	Valid
X1.3.1	.712	.003	Valid
X1.3.2	.593	.000	Valid
X1.4.1	.778	.000	Valid
X1.4.2	.641	.000	Valid
X2.1.1	.695	.000	Valid
X2.1.2	.617	.000	Valid
X2.1.3	.704	.000	Valid
X2.2.1	.663	.000	Valid
X2.2.2	.752	.000	Valid
X2.2.3	.589	.000	Valid
X2.2.4	.731	.000	Valid
X2.3.1	.678	.000	Valid
X2.3.2	.795	.000	Valid
X2.3.3	.642	.000	Valid
Y1.1.1	.718	.003	Valid
Y1.1.2	.691	.000	Valid
Y1.2.1	.743	.000	Valid
Y1.2.2	.625	.000	Valid
Y1.3.1	.776	.000	Valid
Y1.3.2	.654	.000	Valid
Y1.4.1	.719	.000	Valid
Y1.4.2	.682	.000	Valid
Y1.4.3	.758	.003	Valid
Y1.5.1	.603	.003	Valid
Y1.5.2	.731	.000	Valid

Source: data processed by researchers using SPSS, (2026)

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Based on the test results in Table 2, all items for the three variables showed significance values below 0.05. For the self-regulated learning variable (X1), nine items had Pearson correlation coefficients ranging from 0.571 to 0.778. Meanwhile, ten items in the academic motivation variable (X2) showed correlation values ranging from 0.589 to 0.795. As for the eleven items in the student academic persistence variable (Y), they had correlation values ranging from 0.603 to 0.776. These results indicate that all items listed in the table meet the validity criteria based on the significance level used in this study. Thus, these items are deemed valid and can be used to represent the research construct in the subsequent analysis stages.

After the validity of the instrument items was evaluated through validity testing, the next step was to test the instrument's internal consistency through reliability testing. This test was conducted to ensure that the instrument possesses an adequate level of measurement consistency for each research variable.

Table 2. Reliability Test Results

Reliability Statistic			
	Cronbach's Alpha	N of Items	Description
X1	.887	9	Reliable
X2	.864	10	Reliable
Y	.891	11	Reliable

Source: data processed by researchers using SPSS, (2026)

Based on the test results in Table 3, all research variables showed Cronbach's Alpha values above 0.70. The self-regulated learning variable (X1) obtained a value of 0.887, while academic motivation (X2) showed a value of 0.864. Meanwhile, the student academic persistence variable (Y) had a reliability value of 0.891. These results indicate that all three variables possess acceptable internal consistency based on the criteria used in this study. Thus, the research instrument is deemed reliable and possesses adequate measurement consistency for use in analyzing the relationship between students' ability to manage the learning process, academic motivation, and academic persistence.

After the research instrument met the reliability criteria, the analysis proceeded to regression model testing to determine the extent to which self-regulated learning and academic motivation could explain the variation in student academic persistence. An initial evaluation of the model's explanatory power was conducted through an analysis of the coefficient of determination.

In line with the focus of this study, the analysis is limited to three variables: self-regulated learning and academic motivation as the two psychological predictors, and student academic persistence as the outcome. Other constructs mentioned in previous studies, such as academic achievement and self-efficacy, were not measured and are therefore not interpreted as findings of this study.

Table 3. Correlation Coefficient Output

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658[a]	.433	.427	.753

a. Predictors: (Constant), Self-Regulated Learning, Academic Motivation

b. Dependent Variable: Student Academic Persistence

Source: data processed by researchers using SPSS, (2026)

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Table 4 summarizes the multiple linear regression model, with self-regulated learning and academic motivation as predictors and student academic persistence as the dependent variable. All variables were measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) among 193 undergraduate students in East Java. The multiple correlation coefficient (R) of 0.658 illustrates the combined relationship between self-regulated learning and academic motivation with student academic persistence, which is categorized as strong according to (Sugiyono, 2013) (0.60 to 0.799). The R-squared value of 0.433 indicates that the two independent variables account for 43.3% of the variation in student academic persistence, while the remaining 56.7% is attributed to factors outside the research model. This contrast between explained and unexplained variance serves as the basis for evaluating the model.

The Adjusted R-Square value of 0.427 indicates the model's explanatory power after adjusting for the number of predictors and sample size. It is relatively close to the R-Square value (a difference of only 0.006), suggesting that the model is not overfitted. The Standard Error of the Estimate value of 0.753 indicates the magnitude of the model's estimation error in predicting academic persistence, meaning that on a scale of 1 to 5, predicted scores deviate from observed scores by approximately 0.75 points on average.

Overall, these results indicate that self-regulated learning and academic motivation have a strong and statistically significant explanatory power regarding the variation in student academic persistence ($F = 72.407$, $p = 0.001$; see Table 6). These findings provide an empirical basis for further testing the partial contributions of each variable, in order to determine whether students' ability to manage their learning process and their motivational drive contribute to academic persistence, as well as to identify differences in the magnitude of these two factors' contributions. All values reported in Table 4 have been verified against the original SPSS output.

Table 4. Partial Hypothesis Testing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.100	.045		2.212	.028
	Self-Regulated Learning	.315	.044	.420	7.199	.001
	Academic Motivation	.284	.044	.380	6.513	.001

a. Dependent Variable: Student Academic Persistence

Source: data processed by researchers using SPSS, (2026)

Based on the test results in Table 5, the self-regulated learning variable (X1) yielded a positive regression coefficient of 0.315 with a t-value of 7.199 and a significance level of 0.001. Since this significance level is less than 0.05, it indicates that self-regulated learning has a positive and significant contribution to student academic persistence. These results support H1, which states that self-regulated learning has a positive effect on student academic persistence. These findings indicate that students' ability to regulate their learning process is positively related to their tendency to persist in meeting academic demands.

Furthermore, the academic motivation variable (X2) showed a positive regression coefficient of 0.284 with a t-value of 6.513 and a significance level of 0.001. These results indicate that academic motivation also makes a positive and significant contribution to student academic persistence, as its significance level is below 0.05. Thus, H2—which states that academic motivation has a positive

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effect on students' academic persistence—is supported by the test results. These findings suggest that students' drive and reasons for engaging in learning activities are related to their ability to maintain academic commitment.

A comparison of the standardized beta coefficients shows that self-regulated learning has a value of 0.420, while academic motivation has a value of 0.380. These values indicate that self-regulated learning makes a relatively larger contribution to student academic persistence than academic motivation in this research model. Nevertheless, both variables still demonstrate positive and significant contributions. These results demonstrate that academic persistence is related to two distinct psychological aspects: students' ability to manage the learning process and the drive underlying the continuation of learning activities. These differences in contribution form the basis for a deeper understanding of the role of each variable in the subsequent discussion.

Table 5. Simultaneous Hypothesis Testing

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.284	2	41.142	72.407	.001[b]
	Residual	107.916	190	.568		
	Total	190.200	192			

a. Dependent Variable: Student Academic Persistence

b. Predictors: (Constant), Self-Regulated Learning, Academic Motivation

After partial tests revealed the contribution of each independent variable, further analysis was conducted through a simultaneous test using the F-test (Table 6). This test aimed to determine whether self-regulated learning and academic motivation together make a significant contribution to student academic persistence. Based on the results of the ANOVA analysis in Table 6, an F-value of 72.407 was obtained with a significance level of 0.001. This significance level is less than 0.05, indicating that both independent variables simultaneously contribute significantly to student academic persistence. Thus, H3—which states that self-regulated learning and academic motivation simultaneously have a positive and significant effect on student academic persistence—is supported by the test results.

These findings demonstrate that student academic persistence can be explained through the interplay of two psychological factors that serve distinct yet complementary functions. Self-regulated learning relates to students' ability to manage and direct their learning processes, while academic motivation relates to the drives and reasons underlying students' willingness to maintain academic engagement. When these two factors are considered together, the research model is able to explain variations in student academic persistence through the aspects of learning process management and the sustained drive to achieve academic goals. These results provide an empirical basis for further discussion regarding academic persistence as a behavior that is not only related to students' ability to manage their learning activities but also to the psychological reasons that keep them striving to fulfill the demands of higher education.

Discussion

1. The Influence of Self-Regulated Learning on Student Academic Persistence

The results of the study show that self-regulated learning has a positive and significant effect on student academic persistence. This finding is indicated by a regression coefficient of 0.315 with a t-value of 7.199 and a significance level of 0.001. These results suggest that improvements in students' ability to manage their learning process are associated with an

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increase in their ability to maintain academic effort. Thus, students who are able to set goals, devise strategies, monitor progress, and evaluate the learning process tend to have a greater capacity to remain engaged in academic activities when facing learning demands or obstacles. These findings support the first hypothesis that self-regulated learning has a positive effect on student academic persistence.

Theoretically, this relationship can be explained through the perspective of Self-Regulated Learning Theory, which positions students as active individuals in directing and controlling their learning processes.(Zimmerman, 2000) explains that self-regulation in learning occurs through three interrelated phases: forethought, performance, and self-reflection. In the forethought phase, students set goals and plan learning strategies. Next, the performance phase involves implementing strategies, managing attention, and monitoring learning progress. The self-reflection phase, meanwhile, allows students to evaluate outcomes and adjust their strategies based on the experiences gained. This sequence of processes provides a foundation for students to respond to difficulties in a purposeful manner, rather than merely reacting to obstacles that arise. Therefore, self-regulation not only helps students complete learning activities but also provides the necessary control mechanisms to sustain academic effort over the long term.

These mechanisms are crucial because academic persistence is not always fostered through a smooth learning process. Students may encounter material that is difficult to understand, an increasing workload, time constraints, or learning outcomes that fall short of expectations. In such situations, self-regulation skills help students identify the sources of difficulty, evaluate ineffective strategies, and determine corrective actions. When initial strategies fail to yield progress, students with strong self-regulation are more likely to adjust their learning approaches rather than abandon their efforts. Thus, the contribution of self-regulated learning to academic persistence can be understood through students' adaptive capacity to manage obstacles and maintain a focus on academic goals. Persistence in this context is not merely the length of time a student remains in the learning process, but rather the consistency of effort accompanied by the ability to adjust strategies when facing challenges.

These findings also demonstrate that academic persistence must be understood as an outcome related not only to students' ability to complete assignments or achieve learning outcomes but also to the regulatory processes that occur during learning. Students may have academic goals, but these goals are not always followed by consistent effort if they are unable to organize their learning activities and evaluate their progress. Conversely, the ability to regulate the learning process enables students to translate academic goals into more focused and measurable actions. This explains why self-regulated learning makes a positive contribution in this research model. In other words, the ability to manage the learning process provides a behavioral foundation for students to maintain academic engagement, especially when learning demands require them to take initiative and assume responsibility independently.

The results of this study are consistent with a number of previous studies that demonstrate the relationship between self-regulation and various aspects of the success and sustainability of the learning process. (Kausar & Haroon, 2025), as cited in this study, reported a relationship between self-regulation, academic persistence, and achievement motivation (Kim, 2025) also demonstrated that self-regulated learning acts as a mediator in the relationship between academic self-efficacy and learning persistence among adult students. Meanwhile, (Wu et al., 2024) identified a reciprocal relationship between interest in learning and persistence through the use of self-regulation strategies. These findings provide empirical support for the argument that self-regulation is related to students' ability to sustain learning activities. Nevertheless, this study places a more specific emphasis by examining the direct contribution of self-regulated learning to student academic persistence in the context of college students in East Java, rather than merely positioning it as a factor related to academic achievement or as a mediating mechanism.

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The main contribution of this study lies in positioning self-regulated learning as a direct predictor of academic persistence, so that the analysis is not limited to students' success in achieving learning outcomes but also encompasses their ability to sustain effort throughout the higher education process. While previous studies have largely examined self-regulation in relation to academic performance, the use of cognitive and metacognitive strategies, or engagement in learning, this study broadens that focus by examining academic persistence as a distinct outcome. The findings of positive and significant coefficients reinforce the argument that students' ability to regulate, monitor, and evaluate the learning process is a crucial aspect in maintaining academic persistence. Thus, this study broadens the understanding of the function of self-regulated learning from merely a strategy for achieving learning goals to a capacity for self-management that supports the continuity of students' academic efforts.

2. The Effect of Academic Motivation on Student Academic Persistence

The results of the study show that academic motivation has a positive and significant effect on student academic persistence. This is indicated by a regression coefficient of 0.284 with a t-value of 6.513 and a significance level of 0.001. These findings suggest that the stronger students' academic motivation, the more likely they are to maintain their effort and commitment to their learning activities. Academic motivation provides students with the drive to remain engaged in the learning process, fulfill their academic responsibilities, and continue striving toward their goals despite facing various obstacles. These results support the second hypothesis that academic motivation has a positive effect on student academic persistence. These findings also reinforce the view that persistence is not only related to the ability to manage learning activities but also to the psychological drive underlying students' willingness to keep trying.

Hubungan tersebut dapat dijelaskan melalui *Self-Determination Theory* (Deci & Ryan, 2000) which emphasizes that autonomy is reflected in students' ability to feel they have control over their learning choices and responsibilities. Competence relates to the belief that one is capable of meeting academic demands, while relatedness refers to the feeling of being connected to and supported by one's social environment. The fulfillment of these three needs can foster the development of more self-directed motivation, thereby providing students with personal reasons to maintain their academic engagement. This explanation aligns with Luo et al., (2021), who demonstrated that the fulfillment of psychological needs within the framework of Self-Determination Theory is associated with students' motivation and intentions to continue self-regulated learning activities in online learning. Thus, academic motivation not only serves as an initial trigger for learning engagement but also forms the psychological foundation for the sustainability of students' efforts.

This role of motivation becomes increasingly relevant when students face learning situations that demand perseverance and resilience over a certain period of time. Students who view education as valuable and have meaningful academic goals tend to be more willing to persevere even when expected results are not immediately achieved. Internalized motivation also enables students to fulfill their academic responsibilities based on personal awareness, rather than solely due to external demands such as grades, rewards, or environmental pressure. In this context, research (Lan & She, 2023) indicates that learning goal orientation is associated with academic achievement through the roles of self-efficacy and student engagement in learning. Additionally, found that motivation regulation strategies contribute to academic performance while reducing students' intention to drop out. Both findings demonstrate that motivational drive and the ability to sustain engagement are interconnected in the learning process. Therefore, academic motivation can be understood as a source of drive that helps students maintain their commitment to educational goals when facing difficulties or uncertainty regarding learning outcomes.

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The findings of this study also indicate that the influence of academic motivation on persistence must be understood based on the quality of the drive underlying learning behavior, not merely on the strength or weakness of the desire to achieve academic outcomes. Motivation rooted in an awareness of the value of learning and personal goals has the potential to yield more sustainable commitment compared to engagement that relies entirely on external pressure or rewards. This perspective aligns with Wolters, (1998) who explains that students use cognitive, volitional, and motivational strategies to manage and sustain their learning efforts. This means that the continuity of academic activities requires motivations that enable students to remain goal-oriented even when their attention, interest, or enthusiasm for learning fluctuates. In the context of this study, the positive and significant coefficients indicate that academic motivation is one of the relevant psychological factors in explaining variations in students' academic persistence. Thus, the stronger students' personal reasons and motivations for pursuing their education, the greater their tendency to maintain engagement and fulfill their academic responsibilities.

The main contribution of this study lies in affirming that academic motivation must be understood not only as a factor that drives participation or academic achievement, but also as a direct determinant of students' persistence in higher education. Previous research has focused on the relationship between motivation and learning intentions, engagement, goal orientation, and academic performance. This study expands on that focus by examining student academic persistence as an outcome specifically tested through the contribution of academic motivation. Conceptually, these findings shed light on the "why" dimension of student persistence—that is, the psychological reasons and drives that motivate students to continue their academic efforts when facing obstacles. Thus, this study contributes to a broader understanding of academic persistence from a motivational perspective, while also complementing existing explanations regarding the role of self-regulation in sustaining students' learning processes.

3. The Simultaneous Effect of Self-Regulated Learning and Academic Motivation on Student Academic Persistence

The results of the simultaneous test indicate that self-regulated learning and academic motivation together have a positive and significant effect on student academic persistence. These results are indicated by an F-value of 72.407 with a significance level of 0.001, thus supporting the third hypothesis (H3). This finding indicates that students' academic persistence cannot be adequately explained solely through their ability to manage the learning process or their drive to achieve academic goals in isolation. Both factors contribute to a single explanatory model that encompasses aspects of managing learning behaviors and the psychological drive to sustain those behaviors. These results reinforce the argument that students' ability to persevere in meeting the demands of higher education is related to their capacity to direct the learning process while simultaneously maintaining the will to achieve academic goals.

Conceptually, the simultaneous contribution of these two variables can be explained through the integration of Self-Regulated Learning Theory and Self-Determination Theory. Self-regulated learning explains how students manage learning activities through goal-setting, strategy selection, progress monitoring, and outcome evaluation. Meanwhile, academic motivation explains the reasons and psychological drives underlying students' willingness to engage in and sustain these activities. These two perspectives indicate that academic persistence involves a process that is not only behavioral and strategic but also motivational. Students need the ability to determine the next steps when facing difficulties, as well as the drive to continue taking those steps even when the expected results have not yet been achieved. This view aligns withWolters (1998), who emphasizes the interconnection of cognitive, volitional, and motivational strategies in managing learning efforts. Thus, academic persistence can be

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understood through the interplay between students' capacity to regulate their learning process and the psychological reasons that keep them committed to their academic goals.

This interplay demonstrates that while the two factors serve distinct conceptual functions, they complement one another in explaining the continuity of academic effort. Self-regulation skills enable students to devise and adjust strategies when facing obstacles, while academic motivation provides direction and reasons for maintaining the use of those strategies. The ability to manage the learning process without adequate motivation may make it difficult for students to sustain their efforts when facing academic pressure. Conversely, strong motivation without directed learning management does not necessarily result in consistent action toward meeting learning demands. This conceptual relationship aligns with the findings of Kausar et al. (2025) regarding the association between self-regulation and academic persistence and achievement motivation, as well as those of Kryshko et al. (2026) who demonstrated the contribution of motivational regulation strategies to academic performance and a reduction in the intention to drop out. Thus, the simultaneous contribution of these two variables provides insight that academic persistence depends not only on the presence of a drive to learn but also on the ability to transform that drive into purposeful and sustained learning actions.

In terms of the model's explanatory power, the coefficient of determination value of 0.433 indicates that self-regulated learning and academic motivation together explain 43.3% of the variation in student academic persistence, while the remaining 56.7% is not explained by the two predictors in this study's model. The adjusted R-squared value of 0.427 also indicates that the model retains explanatory power after accounting for the number of predictors used. These results demonstrate that both psychological dimensions are relevant to understanding academic persistence, although they are not the sole determining factors. These findings align with which highlighted the role of self-regulated learning in the relationship between academic self-efficacy and learning persistence, as well as (Wu et al., 2024), which identified the relationship between learning interest and persistence through the use of self-regulation strategies. Meanwhile, (Lambert & Hoggan, 2024) highlight the potential of self-regulation workshops in establishing feedback mechanisms that support academic persistence. Overall, these prior studies reinforce the relevance of self-regulation and motivation in learning persistence, while the results of this study integrate both into a single empirical model to explain variations in students' academic persistence.



Figure 3. Two Psychological Dimensions of Academic Persistence

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A synthesis of these findings yields a central argument: student academic persistence is a psychological and behavioral learning outcome that can be understood through two complementary dimensions—namely, the ability to manage the learning process (how students persist) and the motivation to maintain academic effort (why students persist). Based on this framework, three contributions stand out as the primary findings of this study. First, the theoretical contribution involves expanding our understanding of academic persistence by integrating Self-Regulated Learning Theory and Self-Determination Theory into a single explanatory framework, while maintaining the distinct conceptual functions of the two variables. Second, the empirical contribution provides evidence that self-regulated learning and academic motivation each have a positive and significant influence and, together, contribute to explaining the academic persistence of college students in East Java. Third, the practical contribution lies in providing a foundation for the development of higher education learning that is not only oriented toward strengthening self-regulation strategies but also toward maintaining academic motivation through the provision of autonomy, the enhancement of competencies, and support for social connectedness. Thus, this study offers a more comprehensive understanding that efforts to strengthen academic persistence should be directed toward developing students' ability to manage their learning process while simultaneously fostering personal reasons that motivate them to persevere in achieving their educational goals.

E. CONCLUSION

This study concludes that self-regulated learning and academic motivation are two psychological dimensions that play a role in supporting student academic persistence. Students' ability to manage the learning process provides a foundation for directing, monitoring, and adjusting their academic efforts, while academic motivation provides the drive and rationale for sustaining those efforts. These findings confirm that academic persistence is not only related to students' ability to implement learning strategies but also to their willingness to continue striving toward their educational goals. The main contribution of this study is to expand our understanding of academic persistence through a perspective that integrates the dimensions of learning process management and sustained motivational drive as two complementary aspects.

In practical terms, these findings have implications for higher education institutions and faculty to develop learning experiences that are not only oriented toward achieving academic outcomes but also toward building students' ability to sustain the learning process. Such efforts can be achieved by strengthening skills in goal-setting, strategy planning, progress monitoring, and evaluation of learning outcomes. At the same time, the learning environment must provide space for student autonomy, reinforce a sense of competence, and foster social connections that support academic motivation. Integrating these two approaches can serve as the foundation for developing academic mentoring programs and learning designs that are more responsive to students' needs as they navigate the demands of higher education.

This study has limitations regarding the use of purposive sampling and a respondent pool focused on college students in East Java; therefore, the application of its findings to a broader higher education context should be approached with caution. Additionally, the research model does not yet encompass all factors that could potentially explain academic persistence. Future research could expand the characteristics and scope of the respondents, examine other psychological and educational environmental factors, and use a longitudinal approach to understand the development of student persistence throughout their academic careers. The development and testing of learning interventions that integrate self-regulation and academic motivation also represent a potential long-term research direction for generating more measurable and sustainable strategies to strengthen academic persistence.

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