



E-ISSN:  
2721-13988

# Transforming Motivation into Achievement: The Role of Self-Efficacy Among Senior High School Students in Eastern Indonesia

Dinda Eka Wulandary<sup>1\*</sup>

<sup>1</sup> Master of Management, Universitas Merdeka Malang

\*Corresponding author: [dindaekawulandary@gmail.com](mailto:dindaekawulandary@gmail.com)

## Abstract.

This study aims to examine the mediating role of self-efficacy in the relationship between academic anxiety, learning motivation, and student learning outcomes at SMA Negeri 2 Halmahera Timur. Understanding how these psychological factors interact is crucial, particularly in the context of schools in Eastern Indonesia. This research employed a quantitative explanatory approach, using a random sample of 228 students. Data were collected using questionnaires and analyzed using the Process Hayes macro within SPSS to test the mediation model. The instruments demonstrated strong validity ( $r > 0.355$ ) and reliability ( $\text{Alpha} > 0.665$ ). The results indicate that self-efficacy positively and significantly affects learning outcomes, confirming its role as a key psychological determinant of academic success. Crucially, the study found that self-efficacy acts as a full mediator between learning motivation and learning outcomes. This means that motivation alone is insufficient; its positive effect on achievement is primarily realized only when students possess high self-efficacy. Conversely, academic anxiety was found to have no significant direct or indirect effect on learning outcomes, suggesting that for this specific student population, anxiety is not a dominant factor impairing performance, either directly or through self-efficacy. These findings emphasize the need to focus on self-efficacy enhancement programs in educational settings.

**Keywords:** Academic Anxiety, Learning Motivation, Self-Efficacy, Learning Outcomes, Mediation

## 1. Introduction

Education is a key factor in improving the quality of human resources, with success measured through student learning outcomes. Learning outcomes can be seen in indicators such as test scores, transcripts, and graduation rates. Academic success is determined not only by cognitive factors but also by psychological aspects such as anxiety, motivation, and self-confidence.

Academic anxiety is a negative emotional response to pressure and fear of failure in learning, which can interfere with concentration and performance. Perkun et al. (2017) explain that achievement emotions, such as anxiety, have a reciprocal relationship with academic achievement in the long term. Students with high anxiety tend to experience decreased motivation due to perceived incompetence. However, Cassandy and Johnson (2002) state that cognitive anxiety at certain levels can affect student performance in varying ways depending on how students manage it. On the other hand, learning motivation is the primary driving force in achieving academic goals.

Previous research has shown that the influence of anxiety and motivation on learning outcomes is moderated by internal factors. Putwain et al. (2013) stated that the relationship between academic anxiety and achievement is strongly influenced by how students perceive



their own competence. Self-efficacy (belief in one's ability to complete a task) is a key construct in Bandura's (1997) cognitive theory and serves as a mediator between academic challenge and learning strength. Social Cognitive Theory (Bandura, 1986) and Self-Determination Theory (Deci & Ryan, 2000) support the crucial role of self-efficacy in strengthening intrinsic motivation and resilience to stress.

Although the role of self-efficacy is well supported theoretically, there remains a research gap, particularly in the context of secondary schools in Eastern Indonesia. Therefore, this study aims to examine the role of self-efficacy as a mediator between academic anxiety and learning motivation on student learning outcomes at SMA Negeri 2 East Halmahera.

## 2. Method

This study used a quantitative explanatory approach to examine the causal relationships among variables through the mediation of self-efficacy. The study was conducted at SMA Negeri 2 East Halmahera, one of the leading schools in East Halmahera Regency, North Maluku Province. The total population was 526 students, and the sample comprised 228 respondents selected using a random sampling technique.

### Equations

The conceptual framework in this study involves two independent variables, namely Academic Anxiety (X1) and Learning Motivation (X2), and one dependent variable, namely Learning Outcomes (Y). In addition, there is one mediating variable, namely Self-Efficacy (M), which serves to bridge the relationship between the independent variables (Academic Anxiety and Learning Motivation) and the Learning Outcomes. Academic Anxiety indicators include fear of failure, perfectionism, evaluation apprehension, and time pressure anxiety. Self-efficacy has indicators of task self-efficacy and coping self-efficacy. Learning motivation has indicators that include intrinsic motivation, extrinsic motivation, and amotivation. While Learning Outcomes indicators include cognitive, affective, and skills. Data were collected via a closed-ended questionnaire using a Likert scale from 1 to 5. All research instruments have undergone data quality testing to ensure accuracy. Validity testing shows that all statement items are valid, with a value ( $r$  count)  $> 0.355$ . Meanwhile, the reliability test proved that all variables were reliable with a value (Cronbach Alpha  $> 0.60$ ). Hypothesis testing was conducted using the SPSS macro Process Hayes for simple mediation analysis.

## 3. Result and Discussion

The analysis was conducted to understand how psychological variables, namely Academic Anxiety and Learning Motivation, interact with Self-efficacy in influencing student Learning Outcomes at SMA Negeri 2 East Halmahera. Prior to conducting hypothesis and mediation tests, instrument quality testing was conducted to ensure that the collected data were valid and met standards. Based on data processing, all instruments demonstrated good performance with strong significance values. A summary of the instrument testing results is presented in Table 1.



E-ISSN:  
2721-13988

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE OF GRADUATE  
SCHOOL ON SUSTAINABILITY (ICGSS)

10<sup>th</sup> International Conference on Sustainability (IcoS10)  
University of Merdeka Malang, November 15, 2025  
<https://jurnal.unmer.ac.id/index.php/icgss>

Table 1. Summary of Instrument Validity and Reliability Tests

Variable	Questionnaire	Validity Test (R)	Desc.	Reliability Test (Alpha)	Desc.
Learning Outcomes (Y)	Y.1.1 - Y.3.2	0.401 - 0.826	Valid	0.700	Reliable
Academic Anxiety (X1)	X1.1.1 - X1.2.2	0.474 - 0.692	Valid	0.665	Reliable
Motivation (X2)	X2.1.1 - X2.6.2	0.382 - 0.683	Valid	0.749	Reliable
Self Efficacy (M)	M.1.1 - M.3.2	0.497 - 0.787	Valid	0.735	Reliable

After ensuring data quality, the next step is to test the direct and indirect effects through mediation. This test uses a 95% confidence level and bootstrapping procedures to determine the significance of the mediation effect. The results of this hypothesis testing can be seen in the table 2.

Table 2. Summary of Hypothesis Test Results and Mediation Effects

Relation (Path)	Koefisien	p-value	BootLLCI	BootULCI	Keterangan
<b>Direct Effect</b>					
Kecemasan Akademik (X1) - Hasil Belajar (Y)	0.3022	0.3178	-	-	Non Sig
Motivasi Belajar (X2) - Self Efficacy (M)	0.5210	0.000	-	-	Signifikan
Self-efficacy (M) - Hasil Belajar (Y)	0.4155	0.0022	-	-	Signifikan
<b>Indirect Effect</b>					
X1 - M - Y	-0.0120	-	-0.0541	0.021	Non Sig
X2 - M - Y	0.2165	-	0.0845	0.3854	Signifikan

Based on the table above, it is known that the Direct Effect of  $X \rightarrow Y$ : The results of the data analysis show that Academic Anxiety (X1) does not have a significant effect on Learning Outcomes (Y) ( $\beta = 0.3022$ ;  $p = 0.3178 > 0.05$ ). This result is supported by Cassady's (2010) study, which states that moderate anxiety can be a motivator. Direct Effect of  $X \rightarrow M$ : The test results show that Learning Motivation (X2) has a significant effect on Self-Efficacy (M), which is contrary to several theories that predict that excessive anxiety can weaken self-efficacy. Direct Effect of  $M \rightarrow Y$ : Self-Efficacy (M) was found to have a positive and significant effect on Learning Outcomes (Y) ( $p = 0.0022$ ), supporting Zimmerman's (2000) research that high self-efficacy encourages effective learning strategies and better academic achievement.

Meanwhile, for the results of the Mediation Effect of Self-Efficacy on Academic Anxiety (X1): The results show that self-efficacy is not a mediator between academic anxiety and learning outcomes (H6 is rejected, BootCI passes 0). This means that anxiety does not significantly affect learning outcomes, either directly or through its effects on student self-efficacy. Mediation Results of Learning Motivation (X2): The results show a significant indirect effect (BootCI does not pass 0), while the direct effect is not significant. Thus, self-



efficacy functions as a full mediator (full mediation) between Learning Motivation and Student Learning Outcomes.

### Discussion of Findings

Based on Table 2 above, an interesting finding emerged: Academic Anxiety (X1) did not significantly influence student learning outcomes ( $p > 0.05$ ). This is in line with the opinion of Cassady and Johnson (2002), who stated that, at certain levels, anxiety can actually be a motivator. Furthermore, Zeinder (2014) also emphasized that the impact of anxiety often depends on how individuals perceive the exam situation. Therefore, if individuals or students can view anxiety as a form of motivation, this will improve learning outcomes.

However, the most crucial finding in this study is the role of Self-efficacy as a full mediator in the relationship between Learning Motivation and Learning Outcomes. Learning motivation was found to have a positive and significant effect on Self-Efficacy, and subsequently Self-Efficacy had a significant effect on Learning Outcomes ( $p = 0.0022$ ). This shows that Learning Motivation (X2) will not have a real impact on Learning Outcomes (Y) or student achievement, if students do not have high self-confidence or Self-efficacy (M). This finding supports Bandura's Social Cognitive Theory (1997), which positions self-confidence as a central mechanism in moving one's abilities into real action.

The significant mediation results show that learning motivation will not have its greatest impact on student achievement or learning outcomes unless it is accompanied by strong self-confidence. As stated by Deci & Ryan (2000) in Self-determination theory, intrinsic motivation is more effective when the individual or student feels competent in their field. Therefore, for students in eastern Indonesia, developing self-efficacy is a crucial psychological bridge to transform motivation to learn into real academic achievement.

## 4. Conclusion

Based on the analysis and discussion, this study concludes that Learning Motivation does not have a significant direct influence on student Learning Outcomes at SMA Negeri 2 East Halmahera. However, it was found that Learning Motivation influences student Learning Outcomes indirectly through Self-efficacy (full mediation), indicating that building students' self-confidence is a crucial factor in transforming learning motivation into real academic achievement. Learning Motivation will only have a positive impact on academic achievement if students have strong self-confidence in their abilities.

In contrast, academic anxiety was found to have no significant impact, either directly or indirectly, on learning outcomes in this student population. This finding has important implications for schools and educators in Eastern Indonesia to focus more on student self-efficacy development programs as a primary strategy for improving academic achievement, rather than simply boosting motivation without building student confidence.



E-ISSN:  
2721-13988

## Acknowledgment

SMA Negeri 2 Halmahera Timur  
Universitas Merdeka Malang

## References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman and Company.
- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology*, 27(2), 270–295.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Nunez, J. C., Regueiro, E., Tuero, E., Vallejo, R. E., Valle, A., & Rosário, P. (2019). The relationship between academic anxiety and academic performance: The mediating role of self-efficacy. *Journal of Learning and Individual Differences*, 76(3), 101732.
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18(4), 315–341.
- Pekrun, R., Lichtenfeld, S., Marsh, H. W., Murayama, K., & Goetz, T. (2017). Achievement emotions and academic performance: Longitudinal models of reciprocal effects. *Child Development*, 88(5), 1637–1655.
- Putwain, D., Chamberlain, S., & Pescod, M. (2013). The nature of the relationship between academic self-efficacy and academic anxiety. *Educational Psychology*, 33(7), 726–742.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation: Classic definitions and new directions. *Contemporary Educational Psychology*, 61, 101860.
- Schiefele, U., Streblow, V., & Schreyer, I. (2012). Dimensions of academic motivation and their relationship to academic achievement and test anxiety. *Educational Psychology*, 32(1), 17–31.
- Zeidner, M. (2014). *Test anxiety: The state of the art*. Academic Press.