

RESEARCH ARTICLE

## THE EFFECT OF EMOTIONAL INTELLIGENCE ON THE ACADEMIC ACHIEVEMENT OF HIGH SCHOOL STUDENTS WITH LEARNING MOTIVATION AS A MEDIATING VARIABLE

Enggar Putri Kusuma<sup>1\*</sup>, Santi Aji Astuti<sup>2</sup>, Nur Ilmiyah Izzah<sup>3</sup>, Rara Jufita Sari<sup>4</sup>  
[enggarputri1987@gmail.com](mailto:enggarputri1987@gmail.com)<sup>1\*</sup>, [santiaji270@gmail.com](mailto:santiaji270@gmail.com)<sup>2</sup>, [nilmiyah16@gmail.com](mailto:nilmiyah16@gmail.com)<sup>3</sup>,  
[rarajs11@gmail.com](mailto:rarajs11@gmail.com)<sup>4</sup>

<sup>[1-4]</sup> Fakultas Psikologi, Universitas Muhammadiyah Surabaya, Surabaya

### ABSTRACT

This study examines the influence of emotional intelligence on academic achievement with learning motivation as a mediating variable among high school students. The research involved 320 students from three high schools in Surabaya, selected through stratified random sampling. Data were collected using the Emotional Intelligence Scale, Academic Motivation Scale, and academic achievement scores from school records. Path analysis using SPSS 26 and PROCESS Macro revealed that emotional intelligence significantly predicted academic achievement, and this relationship was partially mediated by learning motivation. The findings indicate that students with higher emotional intelligence tend to have better learning motivation, which subsequently contributes to improved academic performance. This study provides empirical evidence for the importance of integrating emotional intelligence development in educational curricula to enhance student academic outcomes.

**Keywords:** Academic Achievement, Emotional Intelligence, High School Students, Learning Motivation, Mediation Analysis

### INTRODUCTION

Academic achievement is one of the primary indicators of educational success, reflecting students' competence across various areas of study. In the Indonesian educational context, academic achievement functions not only as an individual benchmark but also as a parameter of institutional quality. However, current findings indicate that students' academic achievement is not solely determined by cognitive ability or intelligence. Instead, it is also influenced by complex psychological factors.

Contemporary developments in educational psychology highlight that emotional intelligence plays a significant role in determining students' academic success. Goleman (2020) asserts that emotional intelligence—which encompasses the ability to recognize, understand, and regulate one's own emotions and those of others—contributes up to 80% to an individual's success, including academic performance. A recent meta-analysis by MacCann et al. (2020) involving 158 studies also revealed a strong and significant correlation between emotional intelligence and academic achievement across educational levels.

In Indonesia, particularly in Surabaya, preliminary observations show that many high-performing students do not achieve optimal

academic outcomes. This condition suggests the presence of additional psychological variables influencing academic achievement. Teachers report that students with better emotional regulation tend to handle academic pressure more effectively and maintain learning consistency. These observations align with Salovey and Mayer (2021), who emphasize that emotional intelligence helps individuals adapt to environmental demands, including academic settings.

Nonetheless, the mechanism through which emotional intelligence influences academic achievement remains insufficiently understood. Valiente et al. (2020) suggest that learning motivation may serve as a mediating variable within this relationship. Students with high emotional intelligence generally demonstrate stronger self-regulation, leading to greater intrinsic motivation. Learning motivation itself has consistently been identified as a strong predictor of academic achievement (Widodo & Prasetyo, 2023; Ryan & Deci, 2020).

Although earlier studies have examined the relationship between emotional intelligence and academic achievement, a research gap persists regarding the mediating role of learning motivation—particularly among Indonesian high school students. Most related studies have been conducted in Western countries with different cultural orientations. The collectivist culture and unique educational characteristics of Indonesia necessitate further empirical examination.

To address this gap, the present study investigates the effect of emotional intelligence on academic achievement with learning motivation as a mediating variable among high school students in Surabaya. The contribution of this study lies in providing a comprehensive understanding of the psychological mechanisms underpinning students' academic performance and offering empirical foundations for holistic educational interventions.

This study aims to:

- 1) Analyze the effect of emotional intelligence on academic achievement.
- 2) Analyze the effect of emotional intelligence on learning motivation.
- 3) Analyze the effect of learning motivation on academic achievement.
- 4) Analyze the mediating role of learning motivation in the relationship between emotional intelligence and academic achievement.

The hypotheses proposed are:

(H1) emotional intelligence has a positive and significant effect on academic achievement;

(H2) emotional intelligence has a positive and significant effect on learning motivation;

(H3) learning motivation has a positive and significant effect on academic achievement; and

(H4) learning motivation mediates the relationship between emotional intelligence and academic achievement.

## METHOD

### Research Design

This study employed a quantitative correlational design with mediation analysis. A cross-sectional approach was implemented to collect data at a single point in time.

### Participants

Participants were 320 Grade XI students (165 females, 155 males) aged 16–17 years ( $M = 16.4$ ,  $SD = 0.52$ ) from three public senior high schools in Surabaya. Inclusion criteria included:

- 1) Active enrollment as Grade XI students;
- 2) Voluntary participation; and
- 3) Availability of complete previous semester report card scores.

Students undergoing intensive remedial programs or professional psychological treatment were excluded.

Sample size was determined using Slovin's formula with a 5% margin of error. Stratified random sampling was used based on school and class to ensure proportional representation.

### Measurement

Three instruments were used:

1. Emotional Intelligence Scale (adapted from Salovey & Mayer, 2021;  $\alpha = .89$ ), consisting of 32 items covering emotional perception, utilization, understanding, and regulation. CFA results showed good fit ( $CFI = .94$ ,  $RMSEA = .06$ ).
2. Learning Motivation Scale (based on Ryan & Deci, 2020;  $\alpha = .87$ ), consisting of 24 items assessing intrinsic motivation, extrinsic motivation, and amotivation (reverse-scored). CFA indicated acceptable fit ( $CFI = .92$ ,  $RMSEA = .07$ ).
3. Academic Achievement, measured using students' average report card scores converted to a 0–100 scale.

Pilot testing on 50 non-sample students confirmed item validity and reliability. Normality, linearity, and multicollinearity assumptions were met.

### Data Analysis

SPSS 26 and PROCESS Macro 4.0 (Model 4) were used. Analyses included descriptive statistics, Pearson correlation, multiple regression, and mediation analysis with 5,000-sample bootstrapping ( $\alpha = .05$ ). Mediation was considered significant when the 95% confidence interval did not include zero.

## RESULTS

### Descriptive Statistics

Table 1. Results data Analysis

Variable	M	SD
Emotional Intelligence	112.34	15.67
Learning Motivation	86.72	12.45
Academic Achievement	78.45	8.92

All variables were positively correlated:

- Emotional intelligence–learning motivation:  $r = .624$ ,  $p < .01$
- Emotional intelligence–academic achievement:  $r = .548$ ,  $p < .01$
- Learning motivation–academic achievement:  $r = .612$ ,  $p < .01$

### Hypothesis Testing

Mediation analysis yielded:

- Emotional intelligence  $\Rightarrow$  academic achievement:  $b = .312$ ,  $p < .001$
- Emotional intelligence  $\Rightarrow$  learning motivation:  $b = .495$ ,  $p < .001$
- Learning motivation  $\Rightarrow$  academic achievement:  $b = .389$ ,  $p < .001$

The indirect effect through learning motivation was significant:  $b = .193$ , 95% CI [.140, .251], indicating partial mediation. Motivation accounted for 61.9% of the total effect.

## DISCUSSION

This study demonstrates that emotional intelligence significantly predicts academic achievement and that this relationship is partially mediated by learning motivation. The findings are consistent with MacCann et al. (2020), Valiente et al. (2020), and the Self-Determination Theory (Ryan & Deci, 2020). Students with higher emotional intelligence are better able to understand and regulate emotions, leading to higher intrinsic motivation and more consistent learning engagement—ultimately improving academic performance.

These results highlight the importance of integrating emotional intelligence development into educational practices. Social-Emotional Learning (SEL)-based programs and motivation-

enhancing strategies may be highly beneficial for Indonesian high school students.

## CONCLUSION

This study provides empirical evidence that:

- Emotional intelligence has a positive and significant effect on academic achievement.
- Emotional intelligence has a positive and significant effect on learning motivation.
- Learning motivation has a positive and significant effect on academic achievement.
- Learning motivation partially mediates the relationship between emotional intelligence and academic achievement.

The findings emphasize the need for holistic educational interventions that combine emotional intelligence training and motivation enhancement to optimize students' academic outcomes.

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