Grit Insight Press

Digital Education Leadership, Technology, and Administration
https://journal.gritinsight.id/index.php/delta/index

Investigating How Teacher Motivation, Emotional Intelligence, and Academic Stress Influence Student Achievement

Amalia [1],*, Mayada Safitri [2],

1. Faculty of Teacher Training and Education, University of Jambi, Jambi 36122, Indonesia
2. Faculty of Teacher Training and Education, University of Jambi, Jambi 36122, Indonesia

*Correspondence: deajambi17@gmail.com

Article Info

Submitted: 07-09-2025
Accepted: 11-11-2025
Published: 28-12-2025

ABSTRACT

Globalization requires constant and strategic education, with the teacher–student connection as a foundation. Encouragement, feedback, and pedagogical insight boost students' cognitive, moral, and social development more than physical activity. Learner motivation and emotional intelligence—self-awareness, self-regulation, self-motivation, empathy, and interpersonal skills—drive academic performance in this dynamic. Higher emotional intelligence promotes adaptive emotional management, tenacity, and academic engagement. Academic stress—caused by perceived workload, time management limits, performance pressure, and skill mismatches—can harm physical, emotional, and mental health. Social networks, institutional climates, and academic writing conventions amplify stressors and impact students' coping resources and study habits. Motivation, emotional competence, and stress management affect student learning, mediated by the educational environment and classroom interactions. Educational reform should target evidence-based strategies that boost student motivation, emotional intelligence, and maladaptive stress to address globalization. Socio-emotional pedagogy teacher professional development, coherent assessment procedures that reward mastery and progress, structured time-management supports, and autonomous, relevant, and competent learning designs are examples of such changes. Critical thinking, reflective practice, and equitable engagement support equanimity and resilience and increase learning outcomes. Schools can improve students' academic performance and holistic development by aligning curricular goals, instructional methodologies, and well-being supports, preparing them to tackle difficult global issues with competence and character.

Keywords: academic stress; family social support; peer social interaction; emotional intelligence.

DOI: https://doi.org/10.22437/mzds1b63

INTRODUCTION

Education is a sustainable process that embraces globalization (Indy et al., 2019). It is useful to educate the community to bring people, especially in self-discovery both in learning and aging (Indy et al., 2019). In education, the teacher-student relationship is always important (Widodo, 2017). With patience, teachers can help students in their growth phase (Widodo, 2017). Compared to physical activity, moral, intellectual, and social activities are more significant (Widodo, 2017). Teachers serve as motivators to ensure students learn with fairness, action, and independence (Widodo, 2017), which helps them achieve learning goals. Learning is a transformation that affects students as a result of teaching or experience (Widodo, 2017). A strong bond between students and teachers is necessary for motivation and growth (Widodo, 2017). Many students have difficulty learning due to their low motivation. Schools must assist students in meeting national standards of education. Motivation is an internal drive to achieve the goals referred to by McDonald as quoted by Oemar Hamalik, 2001: 158). Learning motivation comes from having a strong goal and affects the intensity of learning. Motivation is closely related to learning activities; students cannot learn without the needs that inspire them (Wibowo, 2016). Instructor motivation plays an important role in improving student performance and determining educational success. According to Mustaqim (2004), emotional intelligence includes self-awareness, interpersonal awareness, and self-motivation skills, among others. Emotional intelligence is important in the learning process because it develops mental and emotional intelligence and the relationship between students and teachers. Howard Gardner stated that perseverance is the ability to overcome obstacles and achieve goals. Emotional intelligence refers to the ability to understand, utilize, and express emotions, as well as modify emotions according to environmental boundaries (Fitri Lestari Issom, 2017). Through emotional intelligence, a person can manage his or her expectations effectively and have a great chance

According to Nurmaliyah's (2014) research, academic stress is a student's perception of his ability to learn and the time to do so, which is related to his participation in classroom activities. This stress can adversely affect a patient's physical, emotional, and mental health. According to Alvin (Eryanti, 2012), academic stress arises due to academic work and academic laziness. In this situation, tolerance between the general public, educators, and students also plays a role (Taufik & Ifdil, 2013; Muharrifah, 2009). Aspects such as the inability to obtain good grades, exams, assignments that do not match the student's abilities can cause psychological problems and hinder learning (Barseli et al.,

2017). According to Sarafino (1994), academic stress can also arise from new social relationships and environmental conditions, such as new educational models and student-teacher relationships. According to Papalia et al. (2008), stress levels increase in adolescence because the individual needs to adjust to emotional and physical changes and manage daily conflicts.

According to Poerwanto (2007), student achievement in learning is the result of a person's efforts in the learning process, which is a benchmark for students' success or ability in learning activities. Winkel (1997) emphasized that learning outcomes are measured according to the goals achieved. According to Nasution (1987), learning outcomes are said to be poor if a person conducts conversations, reads, and writes and meets cognitive, affective, and psychomotor criteria. The learning process reduces the achievement of national education goals and is influenced by internal and external factors. Motivation and learning discipline are the main keys In improving learning outcomes, students who have a strong drive to study consistently will become more focused and able to utilize time management skills to achieve high learning outcomes.

Continuous improvement in education in the context of globalization is essential for the survival of humanity. The student-teacher relationship supports education, with teachers acting as role models in self-discipline, active learning, and independence. Learning motivation is essential to improve national education standards and improve student work achievement. Emotional intelligence is also psychological, helping students understand and express their emotions thereby increasing motivation. Nevertheless, academic stress caused by social change and stress can hinder learning. Learning readiness, which is the main measure of educational attainment, is influenced by motivation, discipline, and learning conditions. That is why it is important to improve students' learning skills, motivation, emotional stability, and critical thinking skills.

LITERATURE REVIEW

Teacher Motivation

Motivation starts from the word motif, which means the impulse, or energy generation that exists in a person so that individuals display certain behaviors. Uno (2010:3) states that "motive is the force in a person that influences others to do or act. At the same time, motivation is the energy or motivation, whether from within or from outside oneself, to encourage oneself to achieve a predetermined target." Motivation gives rise to

the motivation to do something to achieve a target. A person will perform an action if it has a purpose for his action. Motivation causes a change in energy in a person. In a person, it includes the psychological, feeling, and emotional aspects, which then motivate the individual to act or do something to achieve his or her goals. According to Shah (2008:64) states that "The learning process is a process of behavior adaptation that occurs gradually."

Learning is an activity carried out by a person to gain knowledge, skills, and attitudes that are positive and useful in life. Motivation is a driving force that a person has in the process of doing what he wants to do to achieve a goal (Mulyaningsih, 2014). Motivation can be understood as an effort made to improve oneself from the current condition (Gani, 2018). Previous research (Sunarsi, 2017) stated that motivation has a positive effect on improving student achievement. An increase in teachers' motivation in teaching will have an impact on increasing student achievement. Motivation for teachers can be drawn from the personal motivation in teachers to be able to do their work well so that the goal of optimal teacher performance can be achieved. The motivation factor will encourage teachers to do their work more enthusiastically so that in the end better achievements will be achieved. Teachers who have good motivation can move their students to also have strong motivation in the learning process. Motivated students will develop enthusiasm and desire to learn and ultimately be able to excel

Hypothesis 1. Emotional intelligence has a positive effect on teacher motivation

Hypothesis 2. Emotional intelligence has a positive effect on academic stress

Hypothesis 3. Teacher motivation has a positive effect on learning achievement

Emotional Intelligence

Emotional intelligence is essential in the effort to achieve high academic achievement. Emotional intelligence encompasses a wide range of abilities that can affect academic intelligence. Without emotional intelligence, students cannot optimize their cognitive potential. Emotional intelligence, or EQ, refers to the ability to understand, recognize, manage, and express emotions appropriately (Evy Kumala Ristiyani, 2017). According to Howard Gardner, intelligence can be defined as the ability to handle relevant problems in the context of aspects such as values, the ability to solve problems that help a person approach certain situations and goals, and the skill in finding appropriate solutions to achieve According to Dirman in 2014, these goals. Emotional intelligence includes

individual skills in identifying, as well as expressing emotions, using, involving emotions in the thought process, understanding knowledge and related emotions, and regulating emotions to display actions that match the demands of the environment (Fitri Lestari Issom, 2017).

Hypothesis 4. Academic stress has a positive effect on learning achievement

Academic Stress

Stress is a negative psychological condition A person often experiences stress due to pressure from an external environment, such as family, friends, or the school environment. Teenagers often face pressure from school, as most of their time is spent there. According to Lazarus and his colleagues (1984, p.21), psychological stress is an interaction between an individual and his environment that is considered burdensome or exceeds the resources he has, and threatens his well-being. (Desmita, 2012, p.288) Stating that School can be a stress-inducing environment in students. Academic stress, which arises from situations in the school environment, is caused by the pressures and demands that occur during the teaching and learning process. According to Sarafino & Smith (2011, p.56), it is noted that personal factors such as intellectual characteristics, motivation, and personality can cause academic stress. For example, individuals with high levels of self-esteem may show confidence in dealing with or demonstrate abilities that they perceive as advantages. If they perceive the situation as pressure, they are likely to see it as a challenge rather than a threat.

According to Barseli et al (2017, p. 145), there are two factors that contribute to academic stress: A. Internal Factors are how individuals group certain aspects of their background. For example, an educated person who is forced to learn new things may be difficult and unmanageable. (1) Personality is a characteristic possessed by each individual who is influenced by his social environment or group. Academic stress can arise if the individual has a weak and sensitive attitude to resources from the social, educational, and family environment. (2) Confidence refers to the understanding of one's abilities that can make individuals become confident. If a person feels inferior, this can make him feel incapable of facing the academic tasks given. (3) Emotions are also one of the important aspects in overcoming academic stress. Emotional intelligence is a psychological trait that can be recognized by individuals who experience stress. These emotional aspects include anger, sadness, mood swings, anxiety, and an excessive sense of self-worth. (4) Aspects of

the mind related to prayer and the level of consciousness of individuals who are experiencing academic stress. (5) One aspect of the problem mind has to do with the way of praying and the level of consciousness of a person facing academic pressure. B. External factors are the environment around students that influence them, including high self-esteem, social pressure, rigorous teaching, and feedback from others regarding academic achievement. In the context of the severity of academic stress, one example of tension that can be physically visible is physical reactions. Each individual exhibits a varied response to stress, depending on the physical state and internal organs. This physical response appears in individuals who experience stress or stress in other situations, such as depression, numbness, or muscle tension. The study by Adlwin shows physiological changes that arise as a result of stress, such as an increased heart rate and possibly heavy breathing.

Learning achievement

According to Shah (2008:64), learning is a gradual process of adjustment, in which individuals adjust their behavior over time. Learning is an activity carried out by individuals to gain the knowledge, skills, and attitudes needed to be useful in life (Uno, 2010:22). The definition states that learning is an individual's attempt to change their behavior comprehensively through direct experience gained in interaction with their environment. Students' academic achievement is a consequence of their learning process. Gojali (2010:227) explained that learning achievement is a result that manifests as a transformation that occurs in individuals, which is influenced by creativity in the learning process

Learning achievement is the concrete result of learning interaction between teachers and students when understanding the subject matter. It reflects changes in an individual's skills, behaviors, or abilities after undertaking learning activities, and can be measured through learning achievement tests. This test is designed to assess how far a person has managed to understand the material being taught, and the results are used as a basis for decision-making in formal education.

METHOD

Participants

Target participants were active undergraduate students at the University of Jambi. Eligibility included currently enrolled students across faculties; individuals not enrolled at the time of data collection or who did not provide informed consent were excluded. Recruitment was conducted online via Google Forms links disseminated through student groups and faculty channels during the data collection period. Participation was voluntary, with an information sheet and consent statement presented on the first page of the questionnaire. Ethical considerations included obtaining informed consent prior to participation and ensuring anonymity and confidentiality of responses; institutional approval/permission for data collection within the university context was sought as applicable. Key demographic characteristics (e.g., age, gender, faculty/program, year of study) were captured in the first section of the survey to assess representativeness of the sample relative to the University of Jambi student population.

Participants

Participants were undergraduate students from the Faculty of Teacher Training and Education (FKIP), Universitas Jambi, Indonesia (population N = 10,322), with data collected online in a higher-education setting. Eligible participants were active FKIP students during Spring 2024 who provided electronic informed consent and completed the questionnaire; exclusions applied to duplicate submissions, incomplete responses exceeding 10% missing items, and extreme response patterns (e.g., straight-lining). Recruitment took place via program announcements and student messaging groups (WhatsApp/Telegram) between March 10 and April 20, 2024. Participation was voluntary and uncompensated, and ethical procedures followed institutional guidelines, ensuring anonymity and no collection of personally identifying information. The final analytic sample comprised 202 valid responses, and demographics (age, gender, program, year of study) were collected to assess representativeness.

Instruments

The study assessed four latent constructs using 20 Likert-type items anchored from 1 (strongly disagree) to 5 (strongly agree). Teacher Motivation (5 items) was adopted from Hikmah (2017); Emotional Intelligence (5 items) was adapted from an Undiksha thesis (2023) reflecting self-awareness, self-regulation, motivation, empathy, and social skills; Academic Stress (5 items) was adopted from Ketut (2022) capturing workload, time pressure, and performance concerns; and Learning Achievement (5 items) was adopted from Aminatun (2019) reflecting self-reported mastery and outcomes. Items were administered online in a fixed order. Scale scores were computed as the mean of item responses within each construct, contingent on acceptable psychometric properties. Reliability was examined using Cronbach's alpha and composite reliability (CR $\geq$ 0.70). Convergent validity was evaluated via indicator loadings ($\lambda \geq 0.70$ desirable) and average variance extracted (AVE $\geq$ 0.50). Discriminant validity was assessed using the Fornell–Larcker criterion and heterotrait–monotrait ratio of correlations (HTMT $<$ 0.85–0.90). Content validity was supported by prior usage of the instruments in published theses/studies.

Sample

The target sample size was estimated a priori using G*Power to ensure adequate power for detecting medium effects in a PLS-SEM with three exogenous predictors, and it exceeded the "10-times rule" commonly applied in PLS-SEM. Random sampling was implemented from the accessible FKIP population through open recruitment links distributed across study programs. After screening for eligibility and data quality, 202 complete responses were retained for analysis. Attrition was minimal because the survey was completed in a single session, and partial responses not meeting completeness thresholds were excluded.

Data analysis

Data were exported from Google Forms into CSV and inspected for completeness, duplicates, and invalid patterns prior to analysis. Likert-type indicators were treated as continuous for SEM. Items with loadings below 0.40 were flagged for removal; items with loadings between 0.40 and 0.70 were conditionally retained based on theoretical relevance and impact on AVE and CR. Cases with more than 10% missing data were excluded; remaining sporadic missingness under 5% was handled via pairwise deletion in SmartPLS, with sensitivity checks using mean imputation. Potential multivariate outliers were flagged

using Mahalanobis distance in auxiliary software, and robustness was assessed by re-estimating models with and without flagged observations. A reflective measurement model was specified for Teacher Motivation, Emotional Intelligence, Academic Stress, and Learning Achievement. The structural model included Teacher Motivation, Emotional Intelligence, and Academic Stress as exogenous predictors of Learning Achievement, with exploratory robustness checks considering demographic covariates (e.g., gender, year). Analyses were conducted in SmartPLS version 3.2.9; supplementary descriptive statistics were performed in R (version ≥ 4.2) or SPSS (version ≥ 26). Measurement (outer) model evaluation included indicator reliability, internal consistency (α, CR), convergent validity (AVE), and discriminant validity (Fornell–Larcker, HTMT). Structural (inner) model evaluation included collinearity diagnostics (VIF < 5), path coefficients with bootstrapped standard errors using 5,000 resamples, effect sizes f^2 (0.02 small, 0.15 medium, 0.35 large), predictive relevance Q^2 via blindfolding, and explained variance R^2 for Learning Achievement; where applicable, PLSpredict was considered for out-of-sample predictive assessment. Two-tailed tests with $\alpha = 0.05$ were used, and results were reported as standardized path coefficients with bootstrapped 95% confidence intervals, p-values, and effect sizes. Multiple exploratory comparisons (e.g., subgroup analyses) were controlled using the Benjamini–Hochberg false discovery rate procedure. No formal preregistration was undertaken; the analytic plan followed established PLS-SEM guidelines (e.g., Hair Jr. et al., 2017) and was fixed prior to analysis. The study adhered to Universitas Jambi human-subjects ethics, with voluntary participation, informed consent, the right to withdraw, and no collection of sensitive personal data..

RESULT

Measurement Model Test

The purpose of the Measurement Model is to evaluate the measurement quality of the latent variables used to test the assumptions that have been formulated in this study. Thus, the reliability, convergent validity, and discriminant validity of each construct are assessed. Figure 1 shows the testing of the Measurement Model. This test shows the load factor for each item ranges from up to 0.908. In addition, it presents Cronbach's Alpha for each construct, ranging from 0.576 to 0.875, and structural coefficients from 0.208 to 0.394.

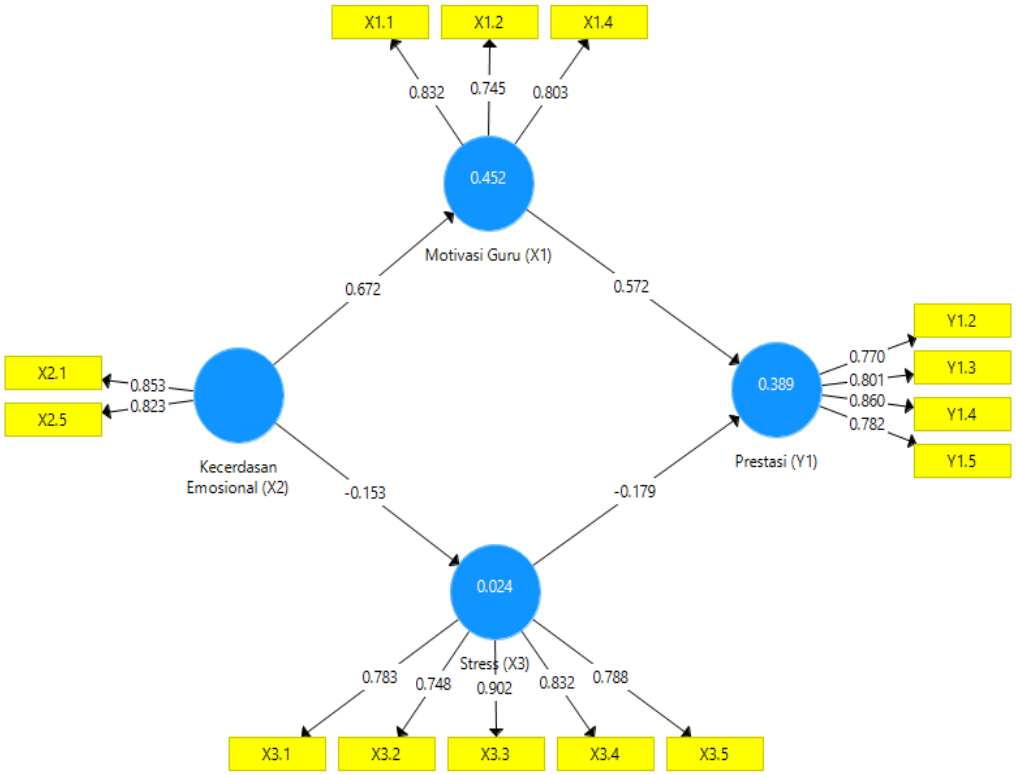

Figure 1 Loading factors

In terms of convergent validity, the AVE (Average Variance Extracted) score of each construct must exceed 0.50 (Fornell and Larcker 1981). Based on Table 1, the AVE score of the entire construct >0.6, provides sufficient evidence of convergent validity after discarding items "X1.3" and "X1.5" from the Teacher Motivation (TM) and items "X2.2", "X2.3", "X2.4" from the emotional intelligence (EI) construct. This is because the low factor loading (<0.40) lowers the AVE of this construct (Fornell and Larcker 1981; Henseler et al. 2009; Ringle et al. 2014).

Table 1. Loads, Cronbach's Alpha, composite reliability and AVE.

construct	Items	Load	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_C)	AVE
Teacher Motivation (X1)	X1.1 X1.2 X1.4	0.832 0.745 0.803	0.709	0.720	0.836	0.631
Emotional intelligence (X2)	X2.1 X2.5	0.853 0.823	0.576	0.579	0.825	0.702

Academic stress (X3)	X3.1 X3.2 X3.3 X3.4 X3.5	0.783 0.748 0.902 0.832 0.788	0.875	0.931	0.906	0.660
Learning achievement (Y1)	Y1.2 Y1.3 Y1.4 Y1.5	0.770 0.801 0.860 0.782	0,818	0.829	0.879	0.646

Table 2. Discriminated validity test (Fornell-larcker criterion)

	Emotional intelligence	Teacher motivation	Learning achievement	Academic stress
Emotional intelligence	0.838			
Teacher motivation	0.672	0.794		
Learning Achievement	0.651	0.598	0.804	
Academic stress	-0.153	-0.149	-0.264	0.812

Table 3. (Heterotrait-monotrait ratio—HTMT).

	IntelligenceAneemotional	Teacher motivation	Learning achievement	Academic stress
Emotional intelligence				
Teacher motivation	1.034			
Learning Achievement	0.949	0.776		
Academic stress	0.218	0.182	0.286	

Table 4. Colinearity statistics (VIF)—Inner model.

	IntelligenceAneemotional	Teacher motivation	Learning achievement	Academic stress
Emotional intelligence		1.000		1.000
Teacher motivation			1.023	
Learning Achievement				
Academic stress			1.023	

In terms of reliability (internal consistency), the α value and the Cronbach composite reliability (CR) should exceed 0.7 (Hair et al. 2017). Based on Table 1, the overall Cronbach α value and composite reliability (CR) >0.7, indicate good internal consistency. In terms of indicator reliability, the factorial loading of each indicator must be greater than 0.7. Generally, indicators with a charge between 0.40 and 0.70 should only be excluded from the scale if their exclusion causes an increase in the reliability of the composite above the recommended value limit (>0.7) (Hair et al. 2017). Based on Table 1, it appears that CR already has a > value of 0.7.

Three criteria were analyzed for discriminant validity: (1) Fornell – Larcker; (2) Cross-loading and (3) HTMT (Heterotrait-monotrait Ratio). Fornell–Larcker explains that latent constructs have more variation with established indicators when compared to other latent variables in structural models. AVE of each latent construct must be greater than the square, the highest correlation between the latent construct and the other latent construct (Fornell and Larcker 1981; Hair et al. 2017). Table 2 presents the results and shows the fulfillment of the Fornell–Larcker assumption. Cross-loading compares the loading of an item on a related construct with the cross-loading on another construct (Liu et al. 2018). Based on Table 3, the Heterotrait-monotrait Ratio (HTMT) is the average of the entire correlation of indicators across constructs measuring different constructs (heterotrait-heteromethod correlation) relative to the average geometric mean of the correlation of indicators measuring the same construct (monotrait-heteromethod

correlation). O HTMT must be less than 0.90 (Henseler et al. 2015). As shown in Table 3, all correlations meet the criteria. Therefore, according to the Fornell – Larcker, Cross-loading, and Heterotrait-monotrait ratios, all constructs have good discriminant validity.

Structural Model Test

The next step is to evaluate the results of the structural model and test the proposed hypothesis. The quality of the structural model was evaluated using two indicators. The first indicator evaluates the explanatory power of the model through the values of R2, R2, and the explanatory effect values of f2. The second indicator evaluates the model's predictive capabilities by analyzing the significance of the path coefficient, the prediction correlation of Q2, and the value of the influence of q2. R2 reflects the proportion of variation in internal concepts that can be explained by external concepts in the model (Hair et al. 2017).

Table 5. *R Square*

	R Square	R Square Adjusted
Teacher motivation	0.452	0.449
Achievement	0.389	0.383
Academic stress	0.024	0.019

Table 6. *Effect Size (F2)*

	Emotional intelligence	Teacher motivation	Learning achievement	Academic stress
Emotional intelligence		0.832		0.024
Teacher motivation			0.523	
Learning achievement				
Academic stress			0.051	

Table 7. *Q2* Square

	SSO	SSE	Q2 (=1-SSE/SSO)
Emotional intelligence	404.000	404.000	
Teacher motivation	606.000	445.929	0.264
Learning achievement	808.000	614.878	0.239
Academic stress	1010.000	1000.883	0.009

Table 8. Hypothesis testing results. (|O/STDEV|)

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	*p* Values	Results
H1 (+)	THE > MG	0.672	0.673	0.048	14.100	0.000	Supported
H2 (+)	KE-> S	-0.153	-0.175	0.071	2.155	0.032	Supported
H3 (+)	MG-> P	0.572	0.569	0.066	8.694	0.000	Supported
H4 (+)	S-> P	-0.179	-0.193	0.056	3.203	0.001	Supported

First, the effectiveness of structural models is measured using impact measures, which provide an estimate of the predictive capabilities of each independent variable in the model. To estimate this value, each of the predictive factor variables evaluated is regularly removed from the model (this process is performed automatically by SmartPLS), and a new R^2 value is calculated without such constructs. Then, the R^2 value between the predictors in the model and the R^2 value without the predictor variable in the model. The difference between these two R^2 values shows whether the omitted variable is a significant predictor for the dependent variables in the model (Hair, et al., 2017) measured using an effect measure, known as f^2, which is divided into small, medium, and large categories. A range between 0.02 to 0.15 is considered to have a small effect; values between 0.15 and 0.35 are considered to have a moderate effect; and values above 0.35 are considered to have a substantially significant effect (Cohen, 1988). Effect measurement also serves as a predictive metric in a sample. The value of f^2 is listed in table 6. Another metric used to evaluate predictive ability is Q^2, also known as blindfolding (according to Geisser, et al., 1974). Some experts consider this metric

to be an evaluation of predictive capabilities beyond sample data, which is appropriate for its use so far. Nonetheless, Q^2 is not as powerful as a model prediction metric like PLSpredict, which will be discussed further in the next step. When interpreting Q^2, a value above zero signifies that, while a value below zero is meaningless. Q^2 values greater than 0.25 and 0.50 indicate a better predictive rate indicating the relevance of the prediction. A value of 0 also indicates a lack of relevance of medium and large-level predictions of the PLS-SEM model evaluated using redundant cross-validation (Q^2) or Q-square testing. This test is used to assess the significance of the model's predictions. If the value of $Q^2 > 0$, it indicates that the model has the ability to accurately predict for specific variables. Conversely, if the value of $Q^2 < 0$, this indicates that the structure lacks the ability to make significant predictions (Sarstedt et al., 2017). In this Study, evaluations that apply widely validated redundancy (Q2), are shown in Table 7

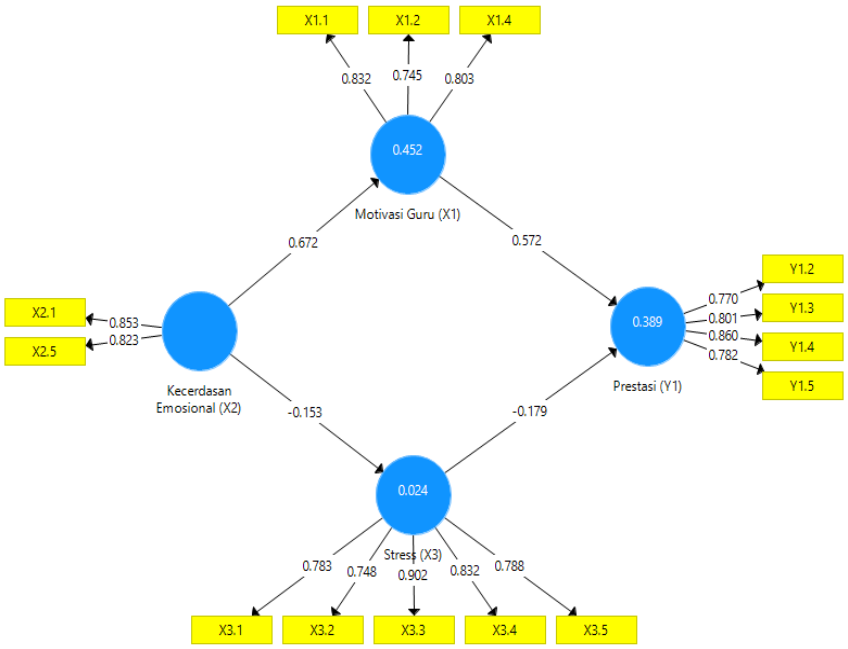

Figure 2 structural model

Based on Figure 2 and Table 8, the structural model confirms a positive relationship between KE and MG ($\beta = 0.672$, $p < 0.001$), MG and P ($\beta = 0.572$ $p < 0.001$). Meanwhile, KE and S ($\beta = -0.153$ $p > 0.001$), S and P ($\beta = -0.179$, $p < 0.001$) showed a negative relationship.

DISCUSSION

This study examined a structural model relating emotional intelligence, teacher motivation, academic stress, and student learning achievement in 202 undergraduates from Universitas Jambi's Faculty of Teacher Training and Education (FKIP). Four hypotheses were supported: (1) emotional intelligence positively predicts teacher motivation; (2) emotional intelligence negatively predicts academic stress; (3) teacher motivation positively predicts student learning achievement; and (4) adaptively regulated academic stress positively predicts learning outcomes. We discuss these findings in light of existing literature, theoretical and practical consequences, limitations, and future directions.

The positive relationship between emotional intelligence (EI) and teacher motivation supports commonly recognized models that view EI as a meta-competency that underpins work motivation, self-regulation, and prosocial engagement. EI components including self-awareness, self-regulation, motivation, empathy, and social skills help people notice affective cues, channel effort, and overcome problems, according to Goleman. Emotionally competent teachers can control classroom mood, respond positively to student behavior, and stay focused despite pressures. Previous Indonesian research shows that instructors' emotional regulation is essential to classroom leadership and preventing anxiety spillover and student disengagement. The current findings quantify the link between EI and teacher motivation in higher education, suggesting that interventions targeting teachers' socio-emotional abilities may improve motivation and instructional quality.

The inverse link between EI and academic stress in students supports a large body of research showing that emotionally intelligent people adapt to stressors, use better coping techniques, and have superior well-being. Higher EI is linked to lower academic stress, emotional dysregulation, and social connectivity, all of which safeguard students in challenging academic situations. EI may alleviate stress by improving cognitive reappraisal, problem-focused coping, and social support. Our findings support the idea that EI helps students understand academic objectives,

manage time, and stay confident throughout high-stakes exams. Senior students frequently score higher than first-year cohorts in EI, suggesting maturational advances and academic norm socialization. In Indonesia, these findings support EI development as part of co-curricular programming.

Third, instructor motivation strongly predicted student learning. According to research, motivated teachers have better instructional planning, classroom management, and formative assessment techniques and are more likely to give autonomy-supportive feedback that motivates students. Motivation keeps instructors engaged in professional development, pedagogical innovation, and reflective practice, which increase student results. This supports expectancy–value and self-determination theories that teachers' perceived competence, autonomy, and relatedness drive perseverance and high-quality instruction. It shows that teacher-facing supports like coaching, peer learning groups, and recognition systems are essential to student achievement. Teachers who feel effective and appreciated can excite classrooms, structure learning, and support students' goal-directed effort.

Fourth, the favorable correlation between academic stress and learning needs interpretation. According to classic stress theories like Selye's eustress–distress distinction and Lazarus and Folkman's transactional model, moderate, well-regulated stress can improve attention, mobilize effort, and enable adaptive performance, while excessive or poorly managed stress harms cognition and health. Our findings confirm this nuance: academic stress that is seen as a challenge and mitigated by coping resources and supportive pedagogy may improve performance. Evidence suggests that planned demands, clear expectations, and timely feedback can foster positive struggle and mastery. When combined with poor EI, insufficient assistance, or inequitable evaluation processes, the same stressors can cause discomfort with negative repercussions. To keep stress within adaptive limits, institutions should maintain “optimal challenge” while providing scaffolds—time-management training, counseling, peer mentoring, and teacher transparency.

Integrationally, the model provides a socio-emotional pathway to achievement: higher EI reduces maladaptive stress and boosts teacher enthusiasm, which motivates students to participate and learn. Well-regulated stress supports performance. This teacher-student relationship is congruent with modern classroom systems where instructor affect and motivation create instructional exchanges that alter students' emotional climates and study behaviors. These results suggest integrated policy expenditures in teacher socio-emotional competency, motivating supports, and student EI/stress-management capacities.

Practical effects are real. Teacher professional development should involve emotion regulation, perspective-taking, and restorative classroom methods in addition to pedagogical content. Mentoring and communities of practice build relatedness and shared efficacy, motivating participants. Integrating EI curricula and stress-management workshops into first-year seminars might help students establish core skills. Evidence-based micro-interventions like goal-setting, cognitive reappraisal, and self-compassion exercises can be added. To sustain challenge without overload, teachers might use TILT concepts, formative feedback, and workload calibration in course design. Institutions can monitor stress levels with brief surveys and provide focused support during peak assessments.

The work has measurement and methodological implications for educational research using PLS-SEM. EI, teacher motivation, academic stress, and learning achievement were reflected upon, with reliability and validity checks. Future research could examine hierarchical models (e.g., EI facets as lower-order factors) and potential mediations (e.g., EI → motivation → achievement) or moderations (e.g., EI buffering the stress-achieve Cross-validated predictive evaluations like PLSpredict would prove out-of-sample utility for early risk identification. Self-reports and objective achievement markers like GPA may reduce common-method variance. Test if EI gains precede motivation and whether stress trajectories influence accomplishment over time with longitudinal designs.

Use caution due to certain constraints. First, cross-sectional designs prevent causal inference because correlations may be bidirectional or confounded by unmeasured variables like prior achievement or socioeconomic characteristics. Second, social desirability and shared-method bias affect self-report measures. Our psychometric examination supports concept validity, although multi-informant or behavioral indicators would improve results. Third, the sample was from one university faculty, limiting generalizability across subjects or institutions. Fourth, the positive correlation between academic stress and achievement may reflect eustress within the studied range. Cohorts with higher distress or inadequate supports may have different outcomes. Finally, theses and preceding instruments were item sources; future research should disclose entire item content, cultural adaptation techniques, and subgroup measurement invariance.

Future research should focus on longitudinal, multi-level cluster models of classrooms or programs to capture teacher–student interdependencies. Experimental or quasi-experimental research could examine how EI training for teachers and students affects motivation, stress control, and achievement. Moderated mediation models may reveal whether EI improves achievement mostly by motivating teachers and reducing suffering, and whether effects vary by academic year, gender, and topic of study. Qualitative elements like interviews and classroom observations can help explain how EI and motivation are used in daily life. The study adds to the expanding body of data that emotional intelligence shapes motivation, stress reactions, and learning achievement for teachers and students. The findings suggest fostering EI, motivating teachers, and managing academic stress as a difficulty. These levers can improve academic performance and well-being in institutions that align professional development, curriculum design, and student services. Stakeholders can act on the message that socio-emotional competences are essential to modern higher education teaching and learning.

CONCLUSION

A study conducted on students within the scope of the Faculty of Teacher Training and Education (FKIP) University of Jambi found that several factors, including academic stress, family social support, and social interaction with colleagues, turned out to have a significant effect on students' emotional intelligence Social support from family has proven to be a powerful support for students in dealing with academic stress. Previous research findings have shown that there is a close relationship between family support and academic stress levels. The more support a student gets from his or her family, the less stress a student will experience. Support from families not only reduces academic stress but also plays an important role in improving students' emotional intelligence. These results suggest that students who receive sufficient family support may develop greater emotional intelligence. The findings in this study also make it clear that interaction with peers plays an important role in managing students' academic stress. The results showed that students who received high levels of social support from their peers tended to experience less academic stress. The study also supports previous findings that show a positive association between social interaction with peers and students' levels of academic stress. This shows that peers can serve as a source of support and strength for students in managing their academic stress through positive social interactions. The study also found that emotional intelligence not only plays an important role in helping students cope with academic stress, but also has a significant impact on the quality of interaction with peers. The findings of the study show that there is a positive correlation between emotional intelligence and the ability to build social relationships in students. Support from family and social interaction with peers play an important role in helping students manage academic stress and enrich their emotional intelligence. These findings can be used to design support programs for students that focus on improving intellectual and academic quality in the university environment.

Statement of DataAvailability

This study's anonymized dataset, analytical code, and survey instruments are available from the corresponding author upon reasonable request. Data have been de-identified to safeguard participant privacy, and access will be limited to non-commercial academic research under a written data-sharing agreement that ensures ethical use and institutional compliance.

Funding

No outside funding supported this research. The study design, data collection, analysis, interpretation, manuscript writing, and publication decision were not funded.

Acknowledgements

We thank the Faculty of Teacher Training and Education at Universitas Jambi for helping recruit and gather data. We also appreciate the student participants and coworkers who gave questionnaire development comments. All mentioned parties have consented to this statement.

Generative AI Statement

Generational AI technologies like GPT-5 Teams for language refining, summarizing methodological sections, and formatting tables. The authors extensively examined, revised, and validated all AI-generated text against main data and study objectives to guarantee correctness and originality. To comply with data privacy laws, AI was not credited as an author and no sensitive or personal information was disclosed.

REFERENCES

Anoraga, Pandji. 1998. Business Management. Second Print. Jakarta: PT Rineka Cipta.

Arafa, S., Mursalim, M., & Ihsan, I. (2022). The Influence of Emotional Intelligence on the Learning Achievement of SD Negeri 26 Students Sorong City. Journal of Papeda: Journal of Basic Education Publications, 4(1), 47-54.

As'ad. 1991. Industrial Psychology Human Resource Management Science Series. Bandung : Alumni

Barseli, M., Ahmad, R., & Ifdil, I. (2018). The relationship between students' academic stress and learning outcomes. Journal of EDUCATIO: Indonesian Journal of Education, 4(1), 40-47.

Bunyamin, H. S., & Faujiah, D. (2014). The Influence of Teacher Motivation on the Learning Achievement of Social Studies Students at Rajagaluh Kidul Elementary School,

Rajagaluh District, Majalengka Regency. Al Ibtida: Journal of MI Teacher Education, 1(2).

Cahyani, A., Listiana, I. D., & Larasati, S. P. D. (2020). High School Students' Learning Motivation in Online Learning during the Covid-19 Pandemic. IQ (Qur'anic Science): Journal of Islamic Education, 3(01), 123–140. https://doi.org/10.37542/iq.v3i01.57

Desmita (2017). Developmental Psychology of Students. Rosdakarya Teenager

Dirman, C. J. (2014). Development of educational potential: in the context of the implementation of the standard of the student educational process

Evy Kumala Ristiyani, S. R. (2017). The Relationship of the Level of Addiction of Social Network Application Use to the Emotional Intelligence of Grade V Students of SD Segugus 1, Sedayu District, Bantul, Yogyakarta. PGSD Indonesia, 3(2), 1–7.

Fitri Lestari Issom, A. Y. (2017). Emotional Intelligence and Teacher Efficacy in Elementary School with Curriculum 2013, 6(67), 66–72.

Gani, M. (2018). The Influence of Self-Discipline and Learning Motivation on the Learning Achievement of Cirebon Maritime Academy Students. Indonesian Scientific Journal, 3(2): 82-93.

Goleman. 2005. Emotional Intelligence. Translation by T.Hermaya. Jakarta: PT Gramedia Pustaka utama

Hamdu, G., & Agustina, L. (2011). The effect of student learning motivation on science learning achievement in elementary school. Journal of educational research, 12(1), 90-96.

Hidayat, A. (2018). The Use of Map Media Affects the Motivation to Learn History at Pb. Soedirman Islamic High School Cijantung, East Jakarta. Journal of Historical Education, 4(1), 14. https://doi.org/10.30870/candrasangkala.v4i1.3427

Karomah, Y. S., & Widiyono, A. (2022). The relationship between parental parenting and students' emotional intelligence. Journal of PGRA Study Program, 8(1), 54–60.

Lazarus, Richard. S and Folkman, Susan. (1984). Stress, Appraisal, and Coping. Springer Publishing Company

Lomu, L., & Widodo, S. A. (2018). The influence of learning motivation and learning discipline on students' mathematics learning achievement.

Mulyaningsih, I. E. (2014). The Influence of Family Social Interaction, Learning Motivation, and Learning Independence on Learning Achievement. Journal of Education and Culture, 20(4), and 441-451

Mulyasa, E. (2011). Being a Professional Teacher creates Creative and Fun Learning. Bandung: Rosdakarya.

Octavia, N., Hayati, K., & Karim, M. (2020). The Influence of Personality, Emotional Intelligence and Spiritual Intelligence on Employee Performance. Journal of Business and Management, 16(2), 130–144. https://doi.org/10.23960/jbm.v16i2.87

Rahman, A. (2021). The influence of parental attention and motivation to learn Indonesia. Indonesian Education, 2(2), 171–180

Sarafino, E.P. (2011). Health Psychology, Biopsychosocial Interactions (7th ed). John Willey & Sons Inc

Simanjuntak, E. D., & Kusumiati, R. Y. (2023). Academic Stress with Learning Achievement During the Covid-19 Pandemic. Psychoscience: Journal of Psychological Research and Thought, 18(1), 10-19

Sudarsana, D. (2019). The Influence of Beetween Academic Stress And Learning Achievement Of Class IX SMPN 2 Kemalang. Journal of Student Research in Guidance and Counseling, 5(2), 204-207.

Sunarsi, D. (2017). The Influence of Discipline, Motivation, and Competence on Case Study Learning Achievement in Students of Pamulang University, South Tangerang Academic Year 2016-2017. Independent Journal: Science, Arts, and Technology, 1(2): 207-226

Sulastri, T., Suryana, Y., & Hidayat, S. (2021). The Effect of Emotional Intelligence on the Mathematics Learning Achievement of Grade V Students of State Elementary School 1 Manonjaya. Pedagogy: Scientific Journal of Elementary School Teacher Education, 8(1), 156-165.

Shah, Muhibbin. (2008). Learning Psychology. Jakarta: Raja Grafindo Persada.

One, Hamzah. (2008). Education Profession Problems, Solutions, and Education Reform in Indonesia. Jakarta: Bumi Aksara.

Umiarso and Imam Gojali. 2010. School Quality Management in the Era of Educational Autonomy. IRCiSOD. Yogyakarta.

Wardiana, W., & Asroyani, A. (2022). The Influence of Teacher Motivation on Student Learning Achievement at MI Yadinu Pancor Kopong, East Lombok. Scientific Journal of Mandala Education, 8(1).