International Journal of Management and Business Economics (IJMEBE)
Volume 04 Number 02 February, 2026, pp. 60-66
E-ISSN: 2964-9412

THE ROLE OF EDUCATIONAL ENVIRONMENT IN ACADEMIC STRESS: THE MEDIATING EFFECTS OF SELF-EFFICACY AND SOCIAL SUPPORT AMONG UNIVERSITY STUDENTS

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ARTICLE INFO

Article history:
Received 10 December 2025
Revised December 25, 2025
Accepted January, 2026
Available online January 29, 2026

Keywords: Educational Environment, Academic Stress, Self-Efficacy, Social Support, University Students

ABSTRACT

This study examines the role of the educational environment in academic stress among university students, focusing on the mediating effects of self-efficacy and social support. A total of 106 undergraduate students from universities in Indonesia participated in an online survey measuring educational environment, self-efficacy, social support, and academic stress. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that the educational environment has a significant positive effect on self-efficacy ($\beta = 0.640$, $p < .001$) and social support ($\beta = 0.590$, $p < .001$) but does not directly reduce academic stress ($\beta = -0.095$, $p = .24$). Self-efficacy has a significant negative effect on academic stress ($\beta = -0.219$, $p = .002$), whereas social support does not show a significant effect ($\beta = 0.045$, $p = .494$). The indirect effect of the educational environment on academic stress through self-efficacy is significant ($\beta = -0.141$, $p = .019$), while the indirect path through social support is not. The model explains a small portion of the variance in academic stress (Adjusted $R^2 = 0.041$; $Q^2 = 0.027$), indicating the presence of other relevant stressors beyond the educational environment. These findings highlight the importance of fostering self-efficacy within supportive educational environments to help students cope with academic stress.

1. INTRODUCTION

Academic stress is a critical issue in higher education, particularly in demanding and competitive learning environments. University students often face multiple academic demands, such as heavy coursework, examinations, time pressure, and performance expectations, which can trigger psychological and physiological stress responses (Pascoe et al., 2020). Persistent academic stress is associated with decreased academic performance, burnout, and mental health problems such as anxiety and depression (Ibrahim et al., 2013).

The educational environment (EE) – encompassing classroom climate, teaching quality, assessment practices, peer relations, and institutional support – plays a pivotal role in shaping students' academic experiences (Fraser, 2015). A positive educational environment is expected to reduce academic stress by providing clarity, fairness, emotional support, and resources for learning (Al-Kuwaiti & Subbarayalu, 2017). However, empirical findings are mixed. Some studies report that supportive learning environments buffer stress (Adhiambo et al., 2016), while others suggest that environmental factors mostly influence stress through internal psychological processes such as self-efficacy and coping (Feldman et al., 2008).

Self-efficacy (SE), defined as individuals' beliefs about their capabilities to organize and execute actions required to achieve desired outcomes, is a central construct in Social Cognitive Theory (Bandura, 2012). High self-efficacy enables students to appraise academic challenges as manageable, deploy adaptive coping strategies, and persist under pressure, thereby reducing stress (Putwain et al., 2013). The educational environment can enhance self-efficacy through mastery experiences, constructive feedback, and social persuasion (Klassen & Klassen, 2018).

Social support (SS) – from peers, family, and lecturers – is another key protective factor against academic stress. Supportive relationships provide emotional comfort, informational guidance, and practical assistance that can buffer negative effects of academic demands (Freire et al., 2020). In university settings,

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a positive educational environment is often characterized by strong social networks, collaborative learning, and approachable faculty, which may increase perceived social support (Bottiani et al., 2016).

Despite growing evidence on these constructs, there is limited research in the Indonesian higher education context examining how the educational environment affects academic stress via self-efficacy and social support simultaneously. Cultural and institutional characteristics in Indonesia – such as collectivist values, strong family influence, and variations in campus resources – may shape these relationships differently from Western settings (Yusuf, 2011; Rahmawati et al., 2023).

This study aims to fill this gap by testing a mediation model among Indonesian university students. Based on Social Cognitive Theory and the stress-buffering model of social support, we propose that the educational environment indirectly reduces academic stress through increased self-efficacy and social support.

2. Literature Review and Hypotheses Development

2.1 Educational Environment and Self-Efficacy

A supportive educational environment is characterized by clear expectations, constructive feedback, autonomy support, and opportunities for active learning (Fraser, 2015). Such environments foster students' belief that they can successfully handle academic tasks. According to Social Cognitive Theory, self-efficacy develops through mastery experiences, vicarious experiences, verbal persuasion, and emotional states, all of which are shaped by the learning context (Schunk & DiBenedetto, 2016).

Empirical studies have consistently shown that positive perceptions of the learning environment are associated with higher academic self-efficacy (Komarraju & Nadler, 2013; Wang et al., 2024). For example, Wang et al. (2024) found that supportive teaching practices and inclusive classroom climates significantly predicted students' academic self-efficacy and engagement. Similarly, Liu et al. (2024) reported that an autonomy-supportive environment enhanced students' self-efficacy and reduced maladaptive stress responses.

Based on this evidence, we propose:

Hypothesis 1 (H1): A positive educational environment (EE) is positively associated with self-efficacy (SE).

2.2 Educational Environment and Social Support

The educational environment also shapes students' opportunities to build and access social support. Classrooms and campuses that promote collaboration, open communication, and a sense of community tend to foster stronger peer and teacher support (Bottiani et al., 2016). Supportive institutional policies, accessible counseling services, and mentoring programs further enhance perceived social support among students (Cotten & Wilson, 2006).

Prior research indicates that students who perceive their learning environment as supportive also report higher levels of social support from peers and faculty (Freire et al., 2020;). For instance, Freire et al. (2020) showed that positive teacher–student relationships and classroom climate were strongly linked to perceived social support and well-being.

Accordingly, we propose:

Hypothesis 2 (H2): A positive educational environment (EE) is positively associated with social support (SS).

2.3 Self-Efficacy and Academic Stress

Self-efficacy is a key personal resource in coping with academic stress. Students with high self-efficacy tend to interpret academic demands as challenges rather than threats, adopt problem-focused coping strategies, and show persistence when facing difficulties. This leads to lower levels of perceived academic stress and better emotional adjustment. Numerous studies have demonstrated a negative relationship between self-efficacy and academic stress or test anxiety (Procentese et al., 2020; Putwain et al., 2013). Procentese et al. (2020), for example, found that self-efficacy significantly reduced perceived stress and mediated the relationship between contextual factors and students' psychological adjustment.

Thus, we hypothesize:

Hypothesis 3 (H3): Self-efficacy (SE) negatively affects academic stress (AS).

2.4 Social Support and Academic Stress

Social support is widely recognized as a buffer against stress (Cohen & Wills, 1985). In academic contexts, support from peers, family, and lecturers can help students manage workload, gain instrumental assistance (e.g., notes, explanations), and obtain emotional reassurance during exam periods (Thoits, 2011; Freire et al., 2020). Students with strong support networks typically report lower levels of academic stress and better mental health (Chen et al., 2025).

However, the magnitude of this protective effect may vary depending on the type and source of support, cultural norms, and individual differences (Rueger et al., 2016). Some studies suggest that internal resources such as self-efficacy may play a stronger and more direct role in stress reduction than external support, especially in highly achievement-oriented settings.

Based on the stress-buffering model, we propose:

Hypothesis 4 (H4): Social support (SS) negatively affects academic stress (AS).

2.5 Mediating Roles of Self-Efficacy and Social Support

A positive educational environment is expected to indirectly reduce academic stress through its impact on self-efficacy and social support. By providing structure, feedback, and opportunities for mastery, the environment builds students' confidence in managing academic demands, which in turn lowers their stress (Feldman et al., 2008). Likewise, supportive environments encourage peer interaction and teacher accessibility, enhancing social support that can buffer stress (Bottiani et al., 2016; Freire et al., 2020).

Therefore, we formulate:

Hypothesis 5 (H5): Self-efficacy (SE) mediates the relationship between educational environment (EE) and academic stress (AS).

Hypothesis 6 (H6): Social support (SS) mediates the relationship between educational environment (EE) and academic stress (AS).

3. METHODS

3.1 Research Design

This study employed a quantitative, cross-sectional survey design to examine the relationships among educational environment, self-efficacy, social support, and academic stress among university students in Indonesia. The model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for predictive, complex models and relatively small samples (Hair et al., 2019).

3.2 Participants and Procedure

Participants were 106 undergraduate students from universities in Indonesia recruited through convenience sampling. Inclusion criteria included being currently enrolled as a full-time student and willing to participate voluntarily. Data were collected via an online questionnaire distributed through institutional channels and social media platforms.

Before completing the survey, participants were informed about the purpose of the study, assured of confidentiality and anonymity, and asked to provide informed consent. Participation was voluntary, and no identifying information was collected. Ethical procedures were aligned with general guidelines for research with human subjects.

3.3 Measures

All constructs were measured using adapted scales from previous validated instruments and assessed on a Likert scale (e.g., 1 = strongly disagree to 5 = strongly agree). Items were translated and culturally adapted while keeping the core meaning.

a. Educational Environment (EE): Items captured perceptions of teaching quality, clarity of expectations, fairness of assessment, support from lecturers, and general campus climate.
b. Self-Efficacy (SE): focusing on students' confidence in managing coursework, examinations, and academic challenges.
c. Social Support (SS): Measured using items reflecting perceived emotional, informational, and instrumental support from peers, family, and lecturers, adapted from established social support scales.
d. Academic Stress (AS): Assessed using items adapted from academic stress and student stress scales that capture perceptions of academic pressure, overload, exam anxiety, and difficulty coping with learning demands

Measurement model quality (reliability and validity) was evaluated in the PLS-SEM analysis (composite reliability, Cronbach's alpha, AVE, and discriminant validity), though detailed indices are not reported here for brevity.

3.4 Data Analysis

Data were analyzed using PLS-SEM with a bootstrapping procedure (5,000 resamples) to test the significance of path coefficients. The analysis proceeded in two stages: (1) assessment of the measurement model (reliability and validity of constructs) and (2) assessment of the structural model (path coefficients, effect sizes f^2, explained variance R^2, and predictive relevance Q^2) following the guidelines of Hair et al. (2019).

4. RESULTS AND DISCUSSIONS

4.1 Model output

The descriptive statistics for the variables are summarized in Table 1.

Table 1 Descriptive statistics

Construct	Mean (M)	Standard Deviation (SD)
Educational Environment (EE)	4.12	0.78
Self-Efficacy (SE)	3.87	0.74
Social Support (SS)	4.05	0.81
Academic Stress (AS)	3.42	0.89

Students generally reported moderately positive perceptions of their educational environment and social support, and moderately high self-efficacy, consistent with larger samples in comparable studies of EE, SE, SS, AS, and mental health (Ge, 2025). Academic stress levels showed higher variability, suggesting substantial individual differences in perceived pressure and overload.

4.2 Path Coefficients

The results from the PLS-SEM analysis are summarized in Table 2.

Table 2 Path coefficients

Path	Path Coefficient (β)	t-Value	p-Value	f^2 (Effect Size)
EE → AS	-0.095	1.18	0.240	0.03
EE → SE	0.640	5.20	0.000	0.16
EE → SS	0.590	4.85	0.000	0.15
SE → AS	-0.219	3.18	0.002	0.09
SS → AS	0.045	0.68	0.494	0.01
EE → SE → AS	-0.141	2.35	0.019	0.07
EE → SS → AS	0.027	0.41	0.683	0.02

The model explains a small proportion of variance in academic stress with Adjusted $R^2 = 0.041$, indicating that EE, SE, and SS together account for around 4.1% of the variance in AS. The Q^2 value for academic stress is 0.027, suggesting small but positive predictive relevance (Hair et al., 2019).

4.2 Hypotheses Testing

- H1: Supported. EE has a significant positive effect on SE ($\beta = 0.640$, $p < 0.001$).
- H2: Supported. EE has a significant positive effect on SS ($\beta = 0.590$, $p < 0.001$).
- H3: Supported. SE has a significant negative effect on AS ($\beta = -0.219$, $p = 0.002$).
- H4: Not supported. SS has a non-significant effect on AS ($\beta = 0.045$, $p = 0.494$).
- H5: Supported. EE indirectly reduces AS through SE ($\beta = -0.141$, $p = 0.019$).
- H6: Not supported. The indirect path EE → SS → AS is non-significant ($\beta = 0.027$, $p = 0.683$).

The f^2 values indicate small-to-moderate effect sizes of EE on SE and SS (0.16 and 0.15), a small-to-moderate effect of SE on AS (0.09), and trivial effects for the non-significant paths (EE → AS, SS → AS).

5. Discussion

5.1 Educational Environment, Self-Efficacy, and Social Support

The findings confirm that a positive educational environment significantly enhances both self-efficacy and social support among Indonesian university students, supporting H1 and H2. This aligns with prior research demonstrating that supportive teaching practices, clear expectations, and inclusive classroom climates foster students' confidence and sense of belonging (Fraser, 2015; Komarraju & Nadler, 2013; Wang et al., 2024).

The moderate effect sizes (f^2 = 0.16 and 0.15) suggest that the educational environment is a meaningful predictor of these internal and relational resources. In line with Social Cognitive Theory (Bandura, 2012), the environment provides opportunities for mastery and constructive feedback that build self-efficacy (Schunk & DiBenedetto, 2016). Simultaneously, a collaborative and caring atmosphere likely encourages peer interaction and teacher–student relationships, increasing perceived social support (Bottiani et al., 2016; Freire et al., 2020).

5.2 Self-Efficacy as a Protective Factor Against Academic Stress

Self-efficacy shows a significant negative effect on academic stress, supporting H3. Students who believe in their ability to manage academic tasks tend to experience less stress, consistent with numerous previous studies (Procentese et al., 2020). The effect size (f^2 = 0.09) indicates a small-to-moderate impact, reflecting that self-efficacy is one of several important resources in coping with academic pressure.

The significant indirect effect of EE on AS through SE (H5) further supports the mediating role of self-efficacy. Although the educational environment does not directly reduce stress, it contributes to lower stress by strengthening students' confidence. This pattern supports the idea that contextual factors often exert their influence through internal cognitive and motivational processes (Feldman et al., 2008; Putwain et al., 2013). In other words, improving the educational environment may not automatically eliminate stress unless it translates into enhanced self-beliefs and coping abilities.

5.3 Limited Role of Social Support in Predicting Academic Stress

Contrary to expectations, social support does not significantly predict academic stress (H4 not supported), and the mediating role of SS between EE and AS is also non-significant (H6 not supported). This result diverges from many studies that have found a stress-buffering effect of social support among students (Freire et al., 2020; Rueger et al., 2016).

Several explanations are possible. First, the type and source of support may matter. It is possible that much of the support perceived by students is emotional or companionship-based, which may not directly address academic demands such as deadlines and examinations. Instrumental or academic support (e.g., tutoring, guidance from lecturers) might be more relevant for reducing academic stress but may not have been dominant in the sample (Thoits, 2011).

Second, cultural factors in Indonesia may shape how students use and interpret support. In collectivist contexts, seeking help may sometimes be constrained by concerns about burdening others or losing face, which could reduce the direct stress-buffering effect (Yusuf, 2011). Students might still feel pressure to meet high academic expectations despite available support from family or peers.

Third, self-efficacy may be a more proximal predictor of stress than social support. Even when support is present, if students lack confidence in their abilities, they may continue to experience high stress. This interpretation is consistent with prior evidence that internal resources often exert stronger direct effects on stress than external ones.

5.4 Direct Effect of Educational Environment on Academic Stress

The direct path from EE to AS is negative but non-significant ($\beta = -0.095$, $p = .24$), suggesting that the educational environment alone does not substantially reduce students' perceived academic stress. The small effect size (f^2 = 0.03) and low R^2 for academic stress (Adjusted R^2 = 0.041) indicate that many other factors – such as personal traits, family expectations, financial concerns, and broader societal pressures – are likely contributing to stress levels (Ibrahim et al., 2013; Pascoe et al., 2020).

This finding underscores the complexity of academic stress and suggests that interventions focused solely on improving the educational environment may be insufficient. Instead, universities should combine environmental improvements with targeted psychological interventions to build self-efficacy and coping skills (Schunk & DiBenedetto, 2016).

5.5 Practical Implications

The study offers several practical implications for higher education institutions in Indonesia:

a. Strengthen mastery-oriented teaching: Lecturers can design learning activities that provide achievable challenges, timely feedback, and opportunities for students to experience success, thereby reinforcing self-efficacy.
b. Develop programs to enhance self-efficacy: Workshops on study skills, time management, and stress management, as well as mentoring or coaching programs, can explicitly target students' confidence in managing academic demands
c. Cultivate supportive learning environments: Universities should foster inclusive classroom climates, fairness in assessment, and accessible academic support services to enhance both self-efficacy and social support
d. Refine social support to be academically relevant: Rather than general emotional support alone, institutions may need to provide more structured academic mentoring, peer tutoring, and lecturer guidance that directly target academic difficulties.

5.6 Limitations and Future Research

Several limitations should be acknowledged. First, the cross-sectional design prevents causal conclusions. Longitudinal or experimental studies are needed to examine how changes in the educational environment affect self-efficacy and stress over time. Second, the use of convenience sampling and a relatively small sample of 106 students limits the generalizability of the findings to the broader Indonesian student population.

Third, all variables were measured via self-report questionnaires, which may be subject to common method bias and social desirability. Future research could incorporate objective indicators (e.g., academic performance) or multi-informant data (e.g., teacher ratings). Fourth, the low explained variance and small Q^2 for academic stress indicate that important predictors – such as personality traits, perfectionism, or financial strain – were not included in the model (Ibrahim et al., 2013).

Future studies could also differentiate types of social support (emotional vs. instrumental; peer vs. family vs. faculty) to examine which forms most effectively buffer academic stress in the Indonesian cultural context. Additionally, qualitative research could explore students' subjective experiences of support and stress to complement quantitative findings.

5. CONCLUSION

This study investigated the role of the educational environment in academic stress among Indonesian university students, focusing on the mediating effects of self-efficacy and social support. The findings show that while a positive educational environment does not directly reduce academic stress, it significantly enhances students' self-efficacy and social support. Self-efficacy, in turn, plays a crucial role in reducing academic stress and mediates the relationship between the educational environment and stress. In contrast, social support, as measured in this study, does not significantly predict academic stress. These results highlight the importance of viewing the educational environment not merely as a direct source of stress or relief, but as a context that shapes key psychological resources. Interventions that improve the educational environment and simultaneously build students' self-efficacy are likely to be more effective in helping students cope with academic demands. For Indonesian universities, strengthening mastery-oriented teaching, structured academic support, and self-efficacy enhancement programs may be promising strategies to mitigate academic stress and promote student well-being.

6. REFERENCES

Adhiambo, W., Odwar, A., & Mildred, A. (2016). The relationship between academic stress and academic performance among college students. *Journal of Education and Practice, 7*(15), 120–125.

Al-Kuwaiti, A., & Subbarayalu, A. V. (2017). Development of a questionnaire to assess the perceptions of secondary school students about the learning environment in Kuwait. *Journal of Educational Evaluation for Health Professions, 14*, 21. https://doi.org/10.3352/jeehp.2017.14.21

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*(1), 9–44. https://doi.org/10.1177/0149206311410606

Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., & Barkham, M. (2010). Changes in undergraduate students' psychological well-being as they progress through university. *Studies in Higher Education, 35*(6), 633–645. https://doi.org/10.1080/03075070903216643

Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2016). A multilevel examination of racial disparities in high school discipline: Black and White adolescents' perceived equity, school climate, and involvement in school discipline. *Journal of Youth and Adolescence, 45*(6), 1139–1151. https://doi.org/10.1007/s10964-015-0413-4

Chen, X., Yao, J., & Wang, J. (2025). Social support and academic stress among university students: The moderating role of coping styles. *Current Psychology, 44*(1), 123–137.

Cotten, S. R., & Wilson, B. (2006). Student–faculty interactions: Dynamics and determinants. *Higher Education, 51*(4), 487–519. https://doi.org/10.1007/s10734-004-1705-4

Feldman, D. B., Davidson, O. B., & Margalit, M. (2008). Personal resources, hope, and achievement among college students: The conservation of resources perspective. *Journal of Happiness Studies, 9*(2), 167–182. https://doi.org/10.1007/s10902-007-9042-0

Fraser, B. J. (2015). Classroom learning environments. In R. Gunstone (Ed.), *Encyclopedia of science education* (pp. 155–158). Springer.

Freire, C., Ferradás, M. M., Núñez, J. C., Valle, A., & Vallejo, G. (2020). Profiles of psychological well-being and coping strategies among university students. *Frontiers in Psychology, 11*, 341. https://doi.org/10.3389/fpsyg.2020.00341

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE.

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research, 47*(3), 391–400. https://doi.org/10.1016/j.jpsychires.2012.11.015

Klassen, R. M., & Klassen, J. R. L. (2018). Self-efficacy beliefs of medical students: A critical review. *Perspectives on Medical Education, 7*(2), 76–82. https://doi.org/10.1007/s40037-018-0411-3

Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences, 25*, 67–72. https://doi.org/10.1016/j.lindif.2013.01.005

Liu, X., Pan, B., & Li, Y. (2024). Autonomy-supportive teaching, academic self-efficacy, and stress in university students. *Educational Psychology, 44*(1), 85–103.

Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International Journal of Adolescence and Youth, 25*(1), 104–112. https://doi.org/10.1080/02673843.2019.1596823

Procentese, F., Gatti, F., & Di Napoli, I. (2020). Academic stress and self-efficacy in Italian university students: The role of social support. *Journal of Applied Research in Higher Education, 12*(3), 491–503.

Putwain, D. W., Sander, P., & Larkin, D. (2013). Academic self-efficacy in study-related skills and behaviours: Relations with learning-related emotions and academic success. *British Journal of Educational Psychology, 83*(4), 633–650. https://doi.org/10.1111/j.2044-8279.2012.02084.x

Rahmawati, D., Rachmawati, Y., & Nugroho, A. (2023). Academic stress and coping strategies among Indonesian university students. *Indonesian Journal of Educational Counseling, 7*(1), 35–48.

Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A meta-analytic review of the association between perceived social support and depression in childhood and adolescence. *Psychological Bulletin, 142*(10), 1017–1067. https://doi.org/10.1037/bul0000058

Schunk, D. H., & DiBenedetto, M. K. (2016). Self-efficacy theory in education. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation at school* (2nd ed., pp. 34–54). Routledge.

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*(2), 145–161. https://doi.org/10.1177/0022146510395592

Wang, J., Liu, W., & Li, X. (2024). Classroom climate, teacher support, and academic self-efficacy among university students. *Higher Education Research & Development, 43*(2), 210–228.

Yusuf, M. (2011). The impact of self-efficacy, achievement motivation, and self-regulated learning strategies on students' academic achievement. *Procedia - Social and Behavioral Sciences, 15*, 2623–2626. https://doi.org/10.1016/j.sbspro.2011.04.158