Al-Ishlah: Jurnal Pendidikan
Vol.17, 4 (December, 2025), pp. 6192-6206
ISSN: 2087-9490 EISSN: 2597-940X, DOI: 10.35445/alishlah.v17i4.6070

The Influence of External Locus of Control, Emotion Dysregulation, and Social Support on Academic Procrastination in Overseas Students

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ARTICLE INFO

Keywords:

external locus of control;
emotion dysregulation;
social support;
academic procrastination;
academic self- efficacy

Article history:

Received 2024-09-27
Revised 2025-04-10
Accepted 2025-12-02

ABSTRACT

Academic procrastination is a prevalent issue among international students, influenced by multiple psychological and social factors. This study investigates the relationships between academic self-efficacy, social support, emotion dysregulation, and academic procrastination, with academic self-efficacy also examined as a mediating and moderating variable. Data were collected from international students enrolled in universities. Structural Equation Modelling (SEM) was employed to analyze the interrelationships among the variables, focusing on both direct and indirect effects. Findings revealed that social support significantly and positively predicted academic self-efficacy, which in turn negatively influenced academic procrastination. Moreover, social support also directly reduced procrastination levels. External locus of control indirectly increased academic procrastination through lowered academic self-efficacy. However, emotion dysregulation showed no significant direct or indirect effect on academic procrastination. Academic self-efficacy served as a significant mediator between both social support and external locus of control in relation to procrastination. The results underscore the importance of perceived social support and academic self-efficacy in mitigating academic procrastination among international students. While emotional dysregulation was hypothesized to influence procrastination, its non-significant effect suggests that other factors may moderate this relationship in international student populations. These findings highlight the potential effectiveness of interventions aimed at strengthening academic self-efficacy and social support systems to reduce procrastination behaviors in this group.

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1. INTRODUCTION

Academic procrastination is a significant issue faced by students, particularly those pursuing education away from home, commonly referred to as overseas students. This phenomenon entails the postponement of academic tasks or responsibilities, often leading to diminished academic performance and heightened levels of stress and anxiety. Academic procrastination is not solely driven by individual characteristics but is also shaped by an interplay of psychological, emotional, and social factors.

Therefore, understanding how these various factors contribute to procrastination behaviors among overseas students is crucial (McHugh et al., 2018).

The term "External Locus of Control" describes how much people believe that factors outside their control, such as chance or fate, impact the outcomes of their actions. People who have a strong belief in external forces are less likely to take ownership of their actions and more likely to put things off till later, according to previous studies, most notably Rotter (1966). Students studying abroad may be more likely to procrastinate on their schoolwork since they have an external locus of control and find the unfamiliar environment to be unpredictable and uncontrollable (Sihotang, 2023).

Emotion Dysregulation is characterized by the inability to effectively manage and respond to emotional experiences in an adaptive manner. This impairment frequently contributes to procrastination, particularly when individuals experience overwhelming anxiety or fear of failure related to academic tasks. Research by Siregar (2022) has indicated that emotional dysregulation is associated with maladaptive coping strategies, such as avoidance of demanding tasks. For overseas students, the additional stressors of adjusting to a new environment and the absence of a familiar support system may exacerbate emotion dysregulation, thereby heightening their tendency to procrastinate.

Social Support plays a crucial role in mitigating stress and anxiety while also fostering students' motivation and psychological well-being. According to Salsabhilla and Panjaitan (2019), social support serves as a protective buffer against the adverse effects of stress. For overseas students, limited access to familial and peer support networks can pose a risk factor for academic procrastination. Conversely, strong social support can facilitate academic motivation and encourage timely completion of assignments.

Academic Self-Efficacy, as conceptualized by Bandura (2010), denotes a person's confidence in their capacity to effectively perform academic assignments. Elevated self-efficacy is generally linked to proficient goal-setting, time management, and the timely execution of tasks without superfluous delays. As a mediating variable, academic self-efficacy explains the mechanisms through which external locus of control, emotion dysregulation, and social support influence academic procrastination. For instance, students with a strong external locus of control often exhibit lower self-efficacy, contributing to procrastination. Similarly, emotion dysregulation can diminish self-efficacy, while robust social support can enhance it, ultimately reducing the propensity to procrastinate.

There is a lack of research on the ways in which these variables interact with one another, particularly when it comes to international students, despite extensive work on the relationships between them. We hope that Structural Equation Modeling (SEM) can help fill this knowledge vacuum by investigating the role of academic self-efficacy as a mediator between academic procrastination and factors including social support, emotional dysregulation, and an external locus of control. This research aims to enhance intervention options to reduce academic procrastination among international students by acquiring a greater understanding of these dynamics.

Empirical research has substantiated the correlations between external locus of control, emotional dysregulation, social support, academic self-efficacy, and academic procrastination. Bahl et al. (2024) discovered that pupils who place a high value on external factors rather than their own efforts to succeed academically are more prone to procrastination. Similar findings were corroborated by Shahrbabaki et al. (2024), who demonstrated that emotion dysregulation significantly contributes to academic procrastination, as students with difficulty regulating emotions often delay academic tasks to avoid anxiety or the fear of failure. Moreover, a study by Sari and Fakhruddiana (2019) shown that there is a negative correlation between having social support and putting off schoolwork, indicating that students who receive support from family, classmates, or academic mentors are more inclined to complete their tasks punctually.

Additionally, Handayani et al. (2021) highlighted the significance of academic self-efficacy in mediating the relationship between these elements and classroom procrastination. Students with higher levels of academic self-efficacy are less prone to procrastinate when faced with difficult tasks,

suggesting that this personality trait buffers the effects of emotional dysregulation and external locus of control. Furthermore, robust social support has been shown to enhance academic self-efficacy, hence diminishing procrastinating tendencies.

The rationale for selecting academic self-efficacy as a mediating variable is grounded in its well-established influence on students' academic behaviors and outcomes. By incorporating self-efficacy into the model, this study elucidates the mechanisms through which external psychological and social factors shape procrastination behaviors. This approach enhances the understanding of how emotional and social interactions influence students' self-perceptions, ultimately affecting their academic performance and behavior. Consequently, this study provides valuable insights into potential intervention strategies for addressing academic procrastination among overseas students.

This research contributes novelty by integrating psychological and social variables into a comprehensive analytical model, an approach that has not been widely explored in the context of overseas students. Furthermore, the use of the SEM method enables a more robust analysis of the causal relationships between these variables. The emphasis on academic self-efficacy as a mediator introduces a novel dimension in understanding how these factors interact in influencing procrastination behaviors, thereby providing both theoretical and practical support to the area.

2. METHODS

This study employed a descriptive quantitative research design, which systematically collects and analyzes numerical data to describe phenomena and examine relationships among variables (Sugiyono, 2017). As noted by Sarstedt et al. (2020), descriptive research typically utilizes instruments such as questionnaires to capture the current status of a phenomenon. In this context, the approach aimed to provide a comprehensive depiction of the factors influencing academic procrastination among international students.

The research was conducted at the State University of Malang, targeting international students as the population of interest. A random sampling technique was used to ensure that every individual had an equal chance of selection, thereby enhancing the generalizability of the findings and minimizing selection bias. A total of 100 respondents were randomly selected to participate in the study.

Data were collected using standardized questionnaires, distributed both online and offline. The instrument measured key constructs, including academic procrastination, emotional dysregulation, social support, academic self-efficacy, and external locus of control, using closed-ended and Likert-scale questions. A pilot study was conducted to ensure the clarity and reliability of the instrument. Clear instructions were provided, and participant confidentiality and anonymity were guaranteed to encourage honest responses.

To account for potential confounding variables such as academic workload, cultural background, and language proficiency, these factors were considered during the analysis phase. Regression analysis was used as a statistical control to isolate the effects of independent variables on academic procrastination.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), a variance-based method suitable for predictive modeling, particularly with smaller sample sizes and non-normal data distributions (Sarstedt et al., 2020; Hair et al., 2019). PLS-SEM was selected for its ability to model complex relationships and reveal latent constructs.

2.1 Validity and Reliability Testing

To ensure the accuracy and consistency of the measurement instruments, both validity and reliability tests were conducted.

1. Convergent validity was assessed using standardized factor loadings, where values above 0.70 indicated strong item-to-construct correlation.

2. Discriminant validity was evaluated through cross-loadings and the Average Variance Extracted (AVE), with AVE values above 0.50 signifying adequate discriminant validity.
3. Composite reliability and Cronbach's alpha were used to assess internal consistency. Constructs were considered reliable if both indicators exceeded 0.70.

Structural Model (Inner Model) Evaluation

The R-square (R^2) test was employed to determine the explanatory power of independent variables on the dependent latent variable, academic procrastination.

To assess hypotheses, inner model analysis was conducted using SmartPLS software. Hypothesis testing was based on t-statistics and p-values, using the following criteria:

1. H_a (Accepted): *t-statistic* > *1.96* and *p-value* < *0.05*
2. H_0 (Rejected): *t-statistic* < *1.96* and *p-value* > *0.05*

Additionally, **beta coefficients** were used to determine the direction and strength of relationships between variables.

3. FINDINGS AND DISCUSSION

3.1 Research Results

3.1.1 Evaluation of the Measurement Model (Outer Model)

Using Cronbach's Alpha, Composite Reliability, Convergent Validity, and Discriminant Validity, four external assessment criteria were used to investigate the research outer model. In this graphic, we can see the research model.

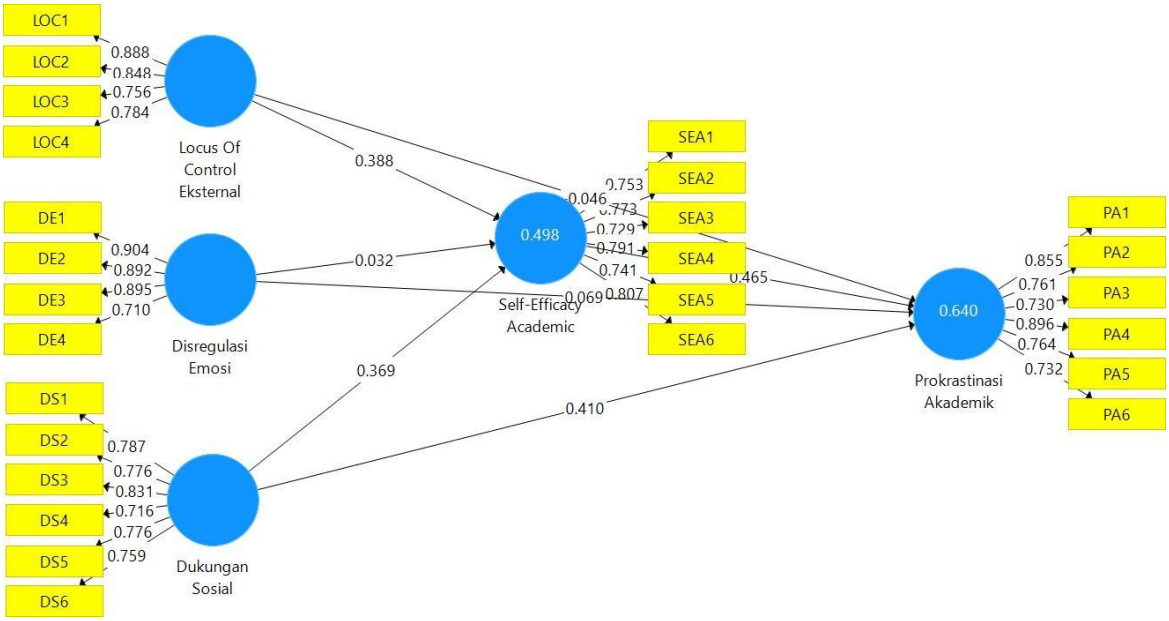

Figure 1. Outer Model

Figure 1 illustrates the outer loading values attributed to the variables in the study. In this image, all external loading values satisfy the validity criterion as they surpass 0.7.

3.1.2 Validity Test

The credibility of a survey can be ascertained by conducting a validity test. The study's validity was assessed using convergent validity and Average Variance Extracted (AVE). To check if the indicator reflection measurement model is valid, we use convergent validity, which involves determining how well the items' scores correlate with each other using PLS. A strong degree of agreement is indicated by an individual reflection measure and the concept under examination having a correlation coefficient (r) higher than 0.7. A loading value between 0.5 and 0.6 is considered appropriate for basic research involving the construction of a measurement scale, according to Dahri (2017).

Table 1. Validity Test Results

Variables		Outer Loading	AVE	Description
Emotion Dysregulation	DE1	0.904	0.730	Valid
	DE2	0.892		Valid
	DE3	0.895		Valid
	DE4	0.710		Valid
Social Support	DS1	0.787	0.601	Valid
	DS2	0.776		Valid
	DS3	0.831		Valid
	DS4	0.716		Valid
	DS5	0.776		Valid
	DS6	0.759		Valid
External Locus Of Control	LOC1	0.888	0.673	Valid
	LOC2	0.848		Valid
	LOC3	0.756		Valid
	LOC4	0.784		Valid
Academic Procrastination	PA1	0.855	0.627	Valid
	PA2	0.761		Valid
	PA3	0.730		Valid
	PA4	0.896		Valid
	PA5	0.764		Valid
	PA6	0.732		Valid
Academic Self-Efficacy	SEA1	0.753	0.587	Valid
	SEA2	0.773		Valid
	SEA3	0.729		Valid
	SEA4	0.791		Valid
	SEA5	0.741		Valid
	SEA6	0.807		Valid

3.1.3 Reliability Test

Both the Cronbach Alpha and the Composite dependability tests were utilised to evaluate dependability in this investigation. The minimal conceivable reliability level is calculated using Cronbach's Alpha. Reliability is defined as data with a Cronbach alpha value greater than 0.7. Using composite reliability, one can assess a variable's reliability value. Good dependability is defined as a composite reliability score above 0.7 for the data.

Table 2. Reliability Test Results

	Cronbach's Alpha	rho_A	Composite Reliability
Emotion Dysregulation	0.873	0.884	0.915
Social Support	0.868	0.877	0.900
External Locus Of Control	0.837	0.844	0.891
Academic Procrastination	0.880	0.892	0.909
Academic Self-Efficacy	0.860	0.864	0.895

The results demonstrate that all instruments are regarded as reliable, with Cronbach Alpha and Composite reliability values over 0.7.

3.1.4 Structural Model Evaluation Inner Model

Crucial to evaluating the inner model is the assessment of the hypothesized link between latent constructs. Here is an expression of how the inner model was evaluated:

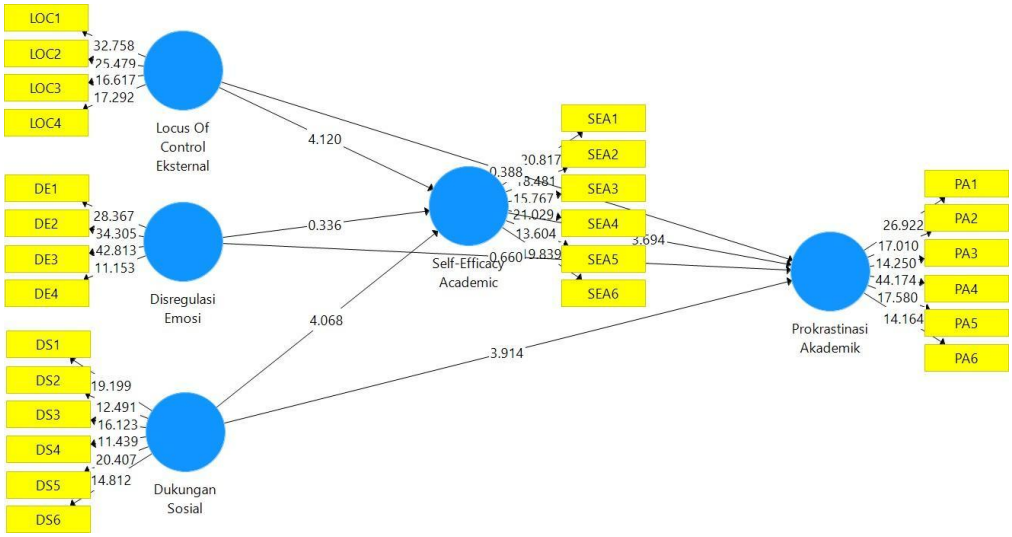

Figure 2. Structural Model (Inner Model) Assessment of Hypothesized Relationships Between Latent Constructs

3.1.5 R-Square Test

The following table displays the R-Squared value, which is obtained via data analysis using the smartPLS application; it quantifies the amount to which other variables affect endogenous variables.

Table 3. R-Square Test

	R Square	R Square Adjusted
Academic Procrastination	0.640	0.625
Academic Self-Efficacy	0.498	0.482

R-Square value of 0.640 for academic procrastination suggests that factors including academic self-efficacy, social support, external locus of control, and emotion dysregulation each account for 64% of the variance, with the remaining 36% attributable to the study's unexplained variables.

With an R-Square score of 0.640, we can see that Emotion Dysregulation, Social Support, and External Locus of Control contribute 49.8% to Self-Efficacy Academic, while the remaining 50.2% is due to variables that were not explained by the analysis.

3.1.6 Hypothesis Testing

After all the data processing is done, the results can answer the research question. In this inquiry, the hypotheses were tested using T-Statistics and P-Values. For a study to be considered valid, the P-values must be less than 0.05. Research hypothesis testing based on the inner model led to the following conclusions:

Table 4. Research Hypothesis Test

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
"Emotion Dysregulation -> Academic Procrastination"	0.069	0.660	0.510
"Emotion Dysregulation -> Academic Self-Efficacy"	0.032	0.336	0.737
"Social Support -> Academic Procrastination"	0.410	3.914	0.000
"Social Support -> Academic Self-Efficacy"	0.369	4.068	0.000
"External Locus Of Control -> Academic Procrastination"	-0.046	0.388	0.698
"External Locus Of Control -> Academic Self-Efficacy"	0.388	4.120	0.000
"Academic Self-Efficacy -> Academic Procrastination"	0.465	3.694	0.000
"Emotion Dysregulation -> Academic Self-Efficacy -> Academic Procrastination"	0.015	0.336	0.737
"Social Support -> Academic Self-Efficacy -> Academic Procrastination"	0.172	2.654	0.008
"External Locus Of Control -> Academic Self-Efficacy -> Academic Procrastination"	0.181	2.704	0.007

3.2 Discussion

3.2.1 Emotion Dysregulation → Academic Procrastination

The correlation between emotion dysregulation and academic procrastination exhibited a minor coefficient (0.069) and lacked statistical significance ($p = 0.510 > 0.05$). This indicates that, in this study, emotion dysregulation does not substantially affect the degree of academic procrastination among overseas students. This finding contradicts previous research, which has consistently demonstrated a strong link between emotion dysregulation and procrastination.

For instance, Mohammadi Bytamar et al. (2020) found that difficulties in emotion regulation contribute to academic procrastination, as individuals struggling to manage their emotions tend to delay tasks as a way of avoiding negative feelings. Similarly, Dardara and Al-Makhalid (2022) demonstrated that negative emotions, including tension and irritation, are significantly correlated with

procrastination, indicating that emotional dysregulation may serve as a primary catalyst for procrastinatory behavior.

However, in the context of international students, several factors may explain the lack of a significant relationship in this study. One possible explanation is that international students may have developed stronger coping mechanisms to manage their emotions due to the challenges of adapting to a new academic and cultural environment. Research by Ma et al. (2022) indicates that students with effective self-regulation skills are better at managing emotions and, as a result, are less likely to procrastinate. This suggests that the international students in this study may have better emotional self-regulation strategies, enabling them to deal with emotional distress without resorting to procrastination.

Additionally, it is also possible that external academic and cultural pressures encourage international students to stay on track with their academic responsibilities, regardless of their emotional state. Future research should explore the role of cultural adaptation, resilience, and Self-regulation tactics in reducing the association between emotional dysregulation and academic procrastination, especially among diverse student populations.

3.2.2 Emotion Dysregulation → Academic Self-Efficacy

The relationship between emotion dysregulation and academic self-efficacy was found to be statistically non-significant ($p = 0.737 > 0.05$) with a very small path coefficient ($\beta = 0.032$), indicating that emotion dysregulation does not meaningfully influence students' confidence in their academic abilities. This finding aligns with prior research suggesting that while emotions are related to self-efficacy, not all emotional components exert a significant effect on academic confidence. For example, Morales-Rodríguez and Pérez-Mármol (2019) emphasized that emotional intelligence can be developed and that academic self-efficacy plays a critical role in academic success. However, it is emotional regulation—rather than dysregulation—that has been more consistently linked to positive academic outcomes.

Supporting this, Uygur et al. (2023) found a stronger association between students' emotional self-efficacy and classroom performance, mediated by effective emotional regulation. This suggests that students who are confident in managing their emotions are generally more resilient to academic challenges, whereas emotional dysregulation alone may not directly reduce academic self-efficacy. Similarly, Alhadabi and Karpinski (2020) reported that traits such as grit and self-efficacy shape learning approaches, but are not significantly related to emotional dysregulation.

While emotional dysregulation may affect other aspects of student life, such as mental health and well-being, its direct impact on academic self-efficacy appears minimal. Onuigbo et al. (2019) further support this view, emphasizing that positive emotional regulation contributes more significantly to academic achievement than emotional dysregulation. Thus, although emotional regulation correlates with self-efficacy, this study confirms that emotional dysregulation is not a significant predictor of students' academic confidence.

3.2.3 Social Support → Academic Procrastination

The findings indicated that social support significantly affects academic procrastination ($p < 0.05$), with a value of 0.410. This suggests that elevated social support among overseas students correlates with an increased propensity to postpone. While social support is generally seen as beneficial for academic success, its role in procrastination may be more complex.

One possible explanation is that social support can serve as a psychological buffer, reducing stress and academic pressure, which may unintentionally lower students' sense of urgency to complete tasks on time. Research by Handayani and Handayani (2023) suggests that students who receive strong support from teachers and peers may feel more relaxed about deadlines, leading to a reduced sense of accountability in managing their academic workload.

Furthermore, Karim and Yoenanto (2021) highlight that while social support can help students manage anxiety and stress, it can also foster dependency on external reassurance, which may delay task completion. When students rely too much on external encouragement rather than intrinsic motivation, they may struggle to develop independent self-regulation skills, increasing their tendency to procrastinate.

Another contributing factor could be the social environment's influence on time management behaviors. Research by Jannah (2021) suggests that social support can alleviate academic stress, but if students interpret this support as a safety net, they may be less motivated to develop effective time management strategies. This aligns with self-determination theory, which posits that autonomy and intrinsic motivation are crucial for academic persistence. If social support substitutes for self-discipline, students may feel comfortable delaying tasks, assuming they can rely on their support network when needed.

In summary, although social support is essential for student well-being, its influence on procrastination is contingent upon its interaction with students' self-regulation and motivation. Research in the future should look at how factors like self-control and accountability moderate the link between social support and putting off schoolwork.

3.2.5 Social Support → Academic Self-Efficacy

The findings indicated that social support exerts a significant and favorable effect on academic self-efficacy ($p < 0.05$), with a coefficient of 0.369. This suggests that more social support for pupils correlates with enhanced confidence in their academic capabilities. This finding aligns with prior research indicating that social support enhances individual self-confidence, thereby leading to an improvement in self-efficacy (Ramadanti & Herdi, 2022).. Social support serves as an important resource that can help students overcome academic challenges. Research by Ramadanti and Herdi shows that social support not only has an effect on reducing academic stress, but also contributes to increasing students' self-confidence (Ramadanti & Herdi, 2022). This indicates that when students perceive support from their social surroundings, they generally exhibit increased confidence in their capacity to do academic activities. Moreover, Veronika and Sugiarti discovered that social support influences self-efficacy, as students with robust social support are generally more adept at coping with academic stress and enhancing their confidence in learning environments (Veronika et al., 2021)). This suggests that social support can serve as a protective factor that increases self-efficacy, especially in demanding situations such as online learning or stressful academic situations.

3.2.6 External Locus Of Control → Academic Procrastination

The findings indicate that an external locus of control does not significantly affect academic procrastination ($p = 0.698 > 0.05$), exhibiting a negligible negative coefficient (-0.046). Based on the results, it seems that international students' perceptions of external control do not play a substantial role in determining their level of academic procrastination. A person's locus of control refers to how they think certain factors influence their life's outcomes. People who believe that fate, other people, or circumstances determine the outcomes of their actions are known as having an external locus of control. Those who think they can influence their own behaviour and the results it produces are said to have an internal locus of control. Folks' procrastination habits are impacted by their locus of control, according to previous research. Time management and punctuality are two areas in which people with an internal locus of control excel. This study found no evidence that an external locus of control significantly affects procrastination behaviour among international students. One potential explanation is that international students may have cultivated superior self-management skills, irrespective of their perceptions regarding external control. Research conducted by Sirois and Pychyl indicates that persons possessing strong self-regulation skills are more adept at surmounting procrastination, despite having an external locus of control. This indicates that while students may perceive extrinsic variables influencing their academic performance, they may still devise ways to mitigate procrastination.

3.2.7 External Locus Of Control → Academic Self-Efficacy

An external locus of control exerts a significant and favorable influence on academic self-efficacy ($p < 0.05$). The coefficient of 0.388 signifies that an elevated external locus of control correlates with increased academic self-efficacy among foreign students, suggesting that those who perceive control as external are more likely to intensify their efforts to surmount academic obstacles. An external locus of control, or the conviction that causes beyond an individual's control affect the results of their activities, can be a powerful motivator for pupils. Research by (Uzun & Karataş, 2020) showed that individuals with an external locus of control tend to be more motivated to try harder in achieving academic goals, even though they believe that the outcome is influenced by external factors. (Morales & Pérez-Mármol, 2019). In this context, students who feel that they do not fully have control over their academic outcomes may feel compelled to seek support and resources from their social environment, which may increase their self-efficacy. Furthermore, research by (Roddenberry & Renk, 2010) (Roddenberry & Renk, 2010) suggests that individuals with an external locus of control often feel compelled to seek social support, which may contribute to increased self-efficacy (Uygur et al., 2023). When students feel that they have support from others, they may be more confident in facing academic challenges, even though they believe that the outcome is influenced by external factors. This is in line with motivation theory which states that social support can serve as a protective factor that increases individual confidence in the face of challenges.

3.2.8 Academic Self-Efficacy → Academic Procrastination

The figure of 0.465 indicates a statistically significant link between academic procrastination and academic self-efficacy ($p < 0.05$). Those students who think highly of themselves academically tend to procrastinate until the last minute, the study found. This finding goes against the grain of the majority of the available evidence, which frequently associates lower rates of procrastination with higher levels of self-efficacy. One possible explanation for this result is the presence of overconfidence bias, particularly among international students. Overconfident students may underestimate the time and effort required to complete academic tasks, leading them to delay their work until the last minute.

Research by Bukhori and Darmuin (2019) supports this idea, indicating that while students with low self-efficacy are more likely to give up quickly and procrastinate due to self-doubt, those with high self-efficacy may develop an illusion of control that results in postponing assignments under the assumption that they can complete them efficiently later. Similarly, Bozgün and Baytemir (2022) Place an emphasis on how intrinsic drive mediates the relationship between academic procrastination and self-efficacy. Their findings suggest that when students lack intrinsic motivation, they may still procrastinate despite having strong confidence in their abilities.

This implies that academic self-efficacy does not solely determine procrastination behavior but interacts with other psychological and behavioral factors such as motivation, perceived task difficulty, and time management skills. High self-efficacy alone may not be sufficient to prevent procrastination if students fail to regulate their study habits effectively. Thus, it is crucial to consider a more nuanced perspective on self-efficacy, where both its positive and potentially counterproductive effects are acknowledged.

Further research is needed to investigate the mechanisms through which overconfidence affects procrastination and to explore strategies for helping students manage their self-efficacy in a way that enhances academic discipline and task completion rather than fostering delays.

3.2.9 Emotion Dysregulation → Academic Self-Efficacy → Academic Procrastination

Academic self-efficacy did not have a significant moderating role in the connection between academic procrastination and emotion dysregulation ($p = 0.737 > 0.05$). Accordingly, it appears that academic self-efficacy has little to no role in controlling the correlation between emotional dysregulation and tardiness in school. Research indicates that while self-efficacy positively impacts self-management, this is not universally applicable in all circumstances. Students with emotion

dysregulation may prioritize emotional management over confidence in their academic capabilities, rendering self-efficacy an insignificant mediator. Moreover, research indicates that self-efficacy can act as a mediator in specific circumstances, such as diabetic self-management, though not universally applicable. This indicates that the context and nature of stress encountered by individuals may affect the function of self-efficacy in mediating the link among other factors. Furthermore, research indicates that self-efficacy may act as a mediator in the relationship between social support and physical behavior, but this is not consistently applicable in academic situations. This implies that self-efficacy may be more pertinent in situations where social support and intrinsic motivation are significant, whereas in the realm of emotional dysregulation and academic procrastination, alternative factors may prevail.

3.2.10 Social Support → Academic Self-Efficacy → Academic Procrastination

Academic procrastination was found to be significantly influenced by social support, specifically academic self-efficacy ($p < 0.05$). A social support buffer increases self-efficacy, which in turn affects academic procrastination ($r=0.172$). Researchers found that academic procrastination was significantly predicted by self-efficacy, which is defined as an individual's faith in their potential to execute a task. People who have faith in their own skills are less likely to put things off until the last minute, according to studies. This includes their academic performance (N. A. Putra & Soo, 2009). (N. A. Putra & Soetjiningsih, 2023). In addition, a study by Ghosh and Roy also emphasized that individuals with low self-efficacy tend to feel a lack of control over their behavior, leading to increased procrastination (Ghosh & Roy, 2017; Ghosh & Roy, 2017). Social support can act as a protective factor that enhances self-efficacy. When students receive assistance from peers, family, or mentors, they have increased confidence in their capacity to do academic objectives. This aligns with research indicating that social support can mitigate stress and enhance motivation, hence augmenting self-efficacy (Ocal, 2016; (Parmaksız, 2023). Research by also shows that a good relationship between supervisors and students can strengthen academic self-efficacy, which reduces the tendency to procrastinate. (Wang et al., 2022). In addition to interacting with other traits like self-regulation and academic motivation, self-efficacy mediates the relationship between social support and procrastination. Academic motivation and procrastination are mediated by academic self-efficacy, according to research by Malkoç and Mutlu (Malkoç & Mutlu, 2018). Consequently, enhancing social support and self-efficacy may serve as an effective approach to mitigate academic procrastination among college students.

3.2.11 External Locus Of Control → Academic Self-Efficacy → Academic Procrastination

The relationship between academic procrastination and external locus of control was moderated by academic self-efficacy, which was statistically significant ($p < 0.05$). An external locus of control, namely academic self-efficacy, can impact academic procrastination. An external locus of control is associated with procrastination, and academic self-efficacy acts as a mediator between the two. Students are more likely to put off doing their homework until the last minute if they believe they have no control over the final product (Hall et al., 2019; Wang et al., 2022) Here, research has shown that students who believe in their own abilities are less likely to put things off until the last minute, which may be because they are more motivated to succeed on their own (Wang et al., 2022). In other words, students who have an external locus of control may feel less able to cope with academic challenges, which causes them to be more likely to procrastinate. Furthermore, research emphasizes that low self-confidence in dealing with external situations can cause students to get stuck in a cycle of procrastination (Kurtovic et al., 2022; Kurtovic et al., 2019). Students who put their agency in an outside force are more likely to be chronically tardy and unable to manage their time well because they feel powerless to change their life's circumstances. Students who place their sense of agency inside themselves are less likely to procrastinate and more likely to have high levels of self-efficacy (Sari & Fakhruddiana, 2019; Uzun & Karataş, 2020). Research has also shown that increasing self-efficacy can be an effective strategy to reduce academic procrastination among college students with an external

locus of control. By providing appropriate support and resources, college students can learn to develop confidence in their abilities, which in turn can reduce the tendency to procrastinate. Therefore, it is important for educators and educational institutions to understand this dynamic and create an environment that supports the development of self-efficacy among students, especially for those with external locus of control tendencies.

The discussion section of this research can be expanded by delving deeper into the practical implications of the findings. Educational institutions, for instance, can develop training programs focused on enhancing the academic self-efficacy of students. Workshops or seminars that provide time management strategies, effective study skills, and ways to overcome mental barriers could serve as concrete steps to reduce procrastination. Additionally, providing targeted social support through mentoring systems or study groups can encourage positive interactions among students, creating a more supportive learning environment and reducing feelings of isolation that often exacerbate procrastination. Integrating mental health programs by providing access to counseling services, coping skills training, and stress management techniques can also help students address the emotional dysregulation contributing to procrastination behaviors. Furthermore, training for faculty and staff to recognize signs of procrastination and offer appropriate support can enhance the institution's responsiveness to student needs. Lastly, further research is recommended to explore the interactions between other variables, such as intrinsic motivation and learning strategies, with locus of control and social support in the context of academic procrastination. By expanding on these points, the article will be able to offer education stakeholders more in-depth analysis, useful recommendations for improved practices, and practical advice.

4. CONCLUSION

In conclusion, this study found that academic procrastination among international students is significantly influenced by social support, both directly and indirectly through academic self-efficacy. Additionally, an external locus of control affects procrastination indirectly via its impact on self-efficacy, highlighting the critical mediating role of students' beliefs in their academic capabilities. However, emotion dysregulation did not show a significant direct or indirect effect on academic procrastination, suggesting that difficulties in emotional regulation may not directly undermine students' academic self-confidence or task initiation. These findings underscore the importance of fostering social support networks and strengthening academic self-efficacy to reduce procrastination behaviors in international student populations. A key limitation of this research is its relatively small and localized sample size, which may limit the generalizability of the results to broader populations. Future research should consider longitudinal or cross-cultural designs with larger, more diverse samples to explore further the complex interactions between emotional factors, personality traits, and academic behaviors in varied educational contexts.

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