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Academic Performance and Academic Self-Efficacy among Pre-University Students in Malaysia

Talal Alzabidi [1]*, Mohamad Sahari Nordin[1] & Reben Ramadhan Saleh[2]

[1]Department of Educational Psychology and Counseling
Kulliyyah of Education, International Islamic University
Malaysia, Kuala Lumpur, Malaysia
[2]Department of Educational & Psychological Counseling
College of Education, Salahaddin University, Iraq

**Corresponding Author: tsoz1989@gmail.com*

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Abstract

This research investigated the relationship between academic performance and self-efficacy among pre-university students in Malaysia using cross-sectional survey data. The sample comprised 171 pre-university undergraduates, aged between 18 and 20, studying at a public university in Kuala Lumpur. They were derived from the population to form the sample using stratified random sampling. Two separate scales measuring academic self-efficacy and academic performance (i.e., the CEVEAPEU) were used to collect the survey data. The study used descriptive statistics, independent sample t-test, Pearson correlation, and multiple regression to analyze the data. The results indicate that a majority of the students reported a high level of academic self-efficacy and established a strong positive relationship between self-efficacy and academic performance. No statistically significant gender differences were found in the respondents' academic self-efficacy, but academic performance was significantly influenced by academic self-efficacy. The findings suggest the potential involvement of additional variables, such as CGPA, in shaping students' academic performance, highlighting the need for further exploration of these variables in future studies.

Keywords: *Academic self-efficacy, academic performance, academic achievement, pre-university students, gender differences*

INTRODUCTION

Academic performance is a significant concern in university learning and has become one of the most crucial objectives for students, their families, and other stakeholders. It represents an individual student's ability to efficiently and effectively utilise knowledge to meet their learning needs and academic goals (Mehmood, 2013). According to Maraichelvi and Rajan (2013), students' performance refers to the quality of their effort or work in fulfilling academic requirements at school or college. Traditionally, academic performance measures the extent to which students have acquired the targeted knowledge, skills, and aptitudes (Preeti, 2013). Kolo et al. (2017) further expanded this concept to include behavioural components, arguing that intellectual academic performance should encompass students' behaviours such as independently gaining knowledge, learning, and retaining general ideologies. Therefore, it can be concluded that academic performance denotes the ability to apply acquired knowledge and skills effectively to achieve desired learning outcomes.

For many reasons, it is essential to address students' academic performance in pre-university learning since it lays the foundation for their future success in higher education and other fields. For example, in higher education, gaining entrance to colleges and universities requires a high level of academic achievement in pre-university programmes. During the admission process, higher education institutions frequently take high school grades and standardised test scores into account. Additionally, students are expected to be adequately prepared academically because college-level courses most likely will be more difficult and more challenging than what they were used to in high school. When students can ensure they can handle pre-university learning, i.e., by securing a good academic performance, they are better positioned to succeed in college-level coursework.

Ghosh (2014) argued that within the educational system and learning process, academic performance plays a crucial role in evaluating students' potential and capacities, it being a significant predictor of their future success. According to Andres (2020), academic performance reflects the learning outcomes influenced by multiple factors, including family, school, society, and students' own motivation. Mishra (2012) also emphasised the pivotal role of students' academic performance within the field of education. The school environment, as part of students' social setting, significantly shapes their development, consequently impacting their academic performance.

Self-efficacy stands as a crucial motivational factor among pre-university students, driving their commitment to tertiary learning. Educational psychologists have devoted nearly 40 years to studying students' self-efficacy beliefs and self-perceptions due to their profound impact on sustaining learning across academic levels (Folk, 2016). Extensive research worldwide indicates that these two factors significantly influence individual students' motivation and behaviour. Psychological concepts, like academic self-efficacy, have been instrumental in measuring academic success, with studies demonstrating their effectiveness in predicting both academic achievement and persistence (Stubbs & Maynard, 2017).

Researchers and scholars concur that academic success holds substantial weight as a societal and familial standard in Asian nations (Xu et al., 2017). Studies indicate that when faced with academic test conditions, Asian students tend to exhibit higher levels of nervousness and anxiety compared to their European counterparts (Xu et al., 2017). Elevated anxiety levels have been found to hinder one's cognitive functioning, consequently impeding one's optimal performance and potentially resulting in academic outcomes that are below expectations.

Enhancing academic self-efficacy, however, can mitigate anxiety by instilling students with greater confidence in overcoming learning challenges within the classroom setting. Confidence in one's abilities fosters improved classroom performance, reducing worry and fostering a more positive outlook, ultimately leading to enhanced academic achievements. Human behaviour in any given situation is influenced by a reciprocal interaction among behavioural, environmental, and cognitive factors, particularly those associated with cognitive components (Bandura, 1997). Recent research strongly supports the pivotal role of self-efficacy in shaping academic performance (Al-Abyadh & Abdel Azeem, 2022; Alhadabi & Karpinski, 2020; Matovu, 2020).

Bandura (2001) defined self-efficacy as "people's beliefs in their capability to exercise some measure of control over their functioning and environmental events" (p. 10). In other words, individuals who believe in their ability to perform an act—having sufficient self-efficacy—are more likely to proceed with and succeed in that act compared to those with low self-efficacy. In an academic context, self-efficacy supports academic efforts by encouraging the more efficient application of cognitive and metacognitive techniques (Byrne et al., 2014). According to Bandura (1977), the four core bases of self-efficacy are verbal persuasion, vicarious experiences, performance outcomes, and emotional arousal. All these factors collectively influence the self-efficacy component of human actions and activities.

In terms of instructional design, these factors can be integrated into school and university learning environments to help students reinforce their confidence in themselves and their ability to achieve results. For instance, assigning tasks of moderate difficulty and facilitating students' completion of these assignments are two methods of cultivating students' self-efficacy beliefs. Furthermore, Cleary and Zimmerman (2006) described students' self-efficacy, similarly characterising it as individuals' assurance in their task performance abilities. Despite obstacles, students should be capable of attaining their learning objectives and academic goals. This belief in their abilities develops students' perception of favourable academic self-efficacy in themselves.

In an academic context, academic self-efficacy refers to students' confidence in in their full ability to complete academic tasks and achieving desired outcomes (Choi, 2005). These concepts suggest that self-efficacy encompasses multiple dimensions crucial for teaching and learning. Consequently, the authors posit that a student's academic self-efficacy is a multidimensional construct encompassing certain underlying facets that include, among others, self-efficacy for academic performance, self-efficacy for self-regulated learning, and self-efficacy for professional decision-making. Previous studies conducted in Malaysia revealed that research focus on the precise role of academic self-efficacy in impacting academic performance has been limited (Abu Bakar et al., 2016; Muhammad et al., 2015; Choo et al., 2012; Fam et al., 2015; Alias et al., 2016; Zahir et al., 2018). Thus, this study addressed this current research gap in the context of Malaysian students' academic performance by including academic self-efficacy as its predictor.

There are many advantages of conducting this study. Indisputably, addressing the role of students' academic self-efficacy and their performance in the classroom is important for several reasons. The results will provide pre-university teachers with valuable information and knowledge pertaining to the role of academic self-efficacy in shaping students' academic success. To illustrate, the results will assist educational leaders, policymakers, bodies providing student services (e.g., offices of deans, directors, academic advisors, etc.), and admissions committees in understanding factors that contribute to the academic success or failure of

students. Furthermore, it can help those responsible for upgrading the curriculum and creating courses to develop students' self-efficacy. It is anticipated that administrators and counsellors will be able to use the information gained from this study to determine the best strategies to support students in raising their levels of academic self-efficacy.

RESEARCH OBJECTIVES

This study measures the extent of academic self-efficacy among pre-university students and seeks to ascertain if it differs significantly by gender and level of study. Next, it examines the influences of academic self-efficacy, gender, and level of study on the academic performance of the respondents and tests the relationship between academic self-efficacy and academic performance.

LITERATURE REVIEW

Self-Efficacy

Several studies have demonstrated the positive impact of self-efficacy on various factors, particularly students' academic abilities and performance. Mohamed and Yunus (2017) reported that individuals with high perceived self-efficacy are inclined to attempt more tasks and persevere with them longer than individuals with low perceived self-efficacy. This inclination is rooted in the belief that those with higher self-efficacy feel greater control over their surroundings and the events that occur, whereas individuals with lower self-efficacy often experience event-related anxiety and a lack of environmental control. Additionally, Heidari et al. (2012) discovered a significant and positive link between high self-efficacy and vocabulary learning. Likewise, a study conducted by Khan (2023) found a relationship in the college academic setting among academic self-efficacy, stress-coping skills, and academic performance. These findings emphasize the crucial nature of nurturing students' self-confidence to maximize their learning potential and academic success.

Students occasionally adapt their learning approaches, often favouring more concentrated study sessions over extended periods. However, research by Prat-Sala and Redford (2010) reveals that students with low self-efficacy tend not to alter their learning approach. Moreover, documented findings indicate that students with low self-efficacy struggle to attain proficiency in reading, writing, and mathematics. Conversely, those with high self-efficacy, particularly in reading and writing, tend to employ strategic and comprehensive learning methods, unlike their counterparts with low self-efficacy, who rely solely on basic strategies. It is important to note that self-efficacy levels are not universally fixed. Furthermore, active teaching and academic self-efficacy emerged as positive predictors of course grades, whereas task avoidance displayed a negative correlation with course grades. Furthermore, course persistence was positively influenced by academic self-efficacy but decreased in cases involving task-avoidance behaviours. Additionally, academic self-efficacy was found to have a positive influence on expectancy for success (Andres, 2020). While existing research has extensively focused on the various types of self-efficacy and students' academic achievement

(CGPA), less attention has been given to academic self-efficacy (Saleem et al., 2018). Hence, addressing this identified gap in the relevant literature becomes imperative.

Academic Performance

A study by Bembenutty (2011) highlighted a positive correlation between homework assignments provided by teachers and students' self-confidence and sense of responsibility. According to Bembenutty (2011), assignments serve as opportunities for self-learning and self-regulated learning, facilitating the enhanced academic performance, improved time management, and a conducive learning environment while maintaining students' focus. Recently, the global impact of COVID-19 has significantly affected the well-being of individuals worldwide. Students, in particular, grappled with additional challenges due to the sudden shift to online learning. Through this research, Blanco et al. (2020) found a moderately high positive correlation ($r = 0.50$) between students' self-confidence and self-efficacy in online learning. This suggests that a greater degree of belief in their abilities correlates with increased confidence.

In a Malaysian study (Muhamed & Yunus, 2017), interviews with parents, teachers, and school administrators revealed challenges faced by some male students in traditional academic settings, leading them to favour vocational studies. Furthermore, the Malaysian Education Blueprint 2013-2025 and 2050, as reported by Muhamed and Yunus (2017), highlighted that female students consistently outperformed their male counterparts in secondary schools. Essentially, it can be deduced that academic performance is the outcome of active, meaningful, and relevant student learning. Students can effectively enhance their learning capabilities and competencies through self-motivation in the learning process.

Most studies in Malaysia have primarily used students' Cumulative Grade Point Average (CGPA) as the predominant indicator of academic performance (Khan, 2023; Yusof et al., 2021; Zheng et al., 2021). However, these studies have focused less on self-efficacy measures. Recognising this research gap in the current empirical evidence on academic performance and its indicators, the present study aims to explore students' performance in three dimensions: creativity and critical thinking, efficient resource management, and information utilisation within the academic setting.

METHODOLOGY

Research Design

The design of this study is non-experimental with cross-sectional survey being the method of data collection. The two constructs of interest, i.e., academic self-efficacy and academic performance, were assessed utilising self-reported cross-sectional data that were gathered using two subscales, namely the Academic Self-Efficacy Scale (Landry, 2003) and the CEVEAPEU (Gargallo, 2009). The study is *ex-post facto* in nature, meaning that no intervention was meted out to shape the respondents' perceptions of the two constructs.

Population and Sample

The study's population comprised 575 pre-university students studying languages at a Malaysian public university in Kuala Lumpur at Level 5 (n = 283) and Level 6 (n = 292) of their respective language programmes. They were students who could understand the subscales that were rendered in English and volunteered to participate in the survey. The population pool represented different faculties of the public university, namely education, economics, human sciences, law, and information technology. Most of them were Muslim students from various countries and diverse races and cultures. The sample was 171 students who constituted close to 30% of the population pool. They were 33% male (n = 56) and 77% female (n = 115). The sample by gender and level of study is shown in Table 1.

Table 1

Sample Characteristics by Gender and Level of Study (N = 171)

Level of Study	Gender	Total
Level 5	Male	16% (28)
	Female	33% (56)
Level 6	Male	16% (28)
	Female	35% (59)

In selecting the sample, the study used stratified random sampling to enable statistical inferences (i.e., generalisations) to be made from the sample to the population in regard to academic self-efficacy (SE), academic performance (AP), and its predictors. The stratification also enabled the study to generate proper data for comparing the differences in self-efficacy between strata (i.e., levels of study). The sampling process involved the following steps: (1) distributing the questionnaire to all students in Levels 5 and 6; (2) collecting all the questionnaires back on the same day; (3) creating a sampling frame of all respondents; (4) dividing the population by stratum (i.e., Levels 5 and 6 and gender) and deriving a subsample from each group in the stratum (Creswell, 2012); and (5) randomly selecting a minimum sample of 171 students to meet the minimum sample size requirement. Males and females were grouped in each stratum so that the selected individuals were proportional in number to their representation in the total population.

Instruments

This study utilised two instruments. The first adopted instrument was the Academic Self-Efficacy Scale (ASES) created by Landary (2003). The second instrument was the Questionnaire for the Assessment of Learning Strategies of University Students (CEVEAPEU) developed by Gargallo (2009).

The Academic Self-Efficacy Scale (Landary, 2003)

The ASES contained 31 items that assessed college students' self-efficacy in a multifaceted approach. It examined the construct in the following facets: self-efficacy for self-regulated learning, self-efficacy for academic achievement, and career decision-making. A high total score indicates high self-efficacy while a low total score indicates low self-efficacy. Each item was measured based on the Likert-type scale of 1 (very weak) to 4 (very strong). Of the 31 items, items 1 to 9 measured the respondents' self-efficacy for self-regulated learning (e.g., *finishing assignments by the deadline* and *choosing a place to study without distractions*). Items 10 to 21 assessed the respondents' self-efficacy for academic achievement, which included statements on the strength of their belief in their ability to *do an excellent job on the problems and tasks assigned for the courses they were taking and gaining mastery of their course contents.* The third subconstruct (i.e., self-efficacy for career decisions) was measured by items 22 to 31 which included statements pertaining to the respondents' ability to *decide what they valued most in education and choose a major or career that suited their abilities.* The reliability of the ASES measured in Cronbach's alpha was $\alpha = .84$.

The CEVEAPEU

The CEVEAPEU consisted of 10 items (Gargallo, 2009) that measured the passive performance of students in the aspects of creativity and critical thinking (5 items), use and transfer of information (3 items), and managing resources to use information efficiently (2 items). Each item was rated on a 5-point Likert-type scale, with a range of 1 (Totally Disagree) to 5. (Totally Agree). The items measured the respondents' ability to "*critically analyse the concepts and theories learned in class,"* (for critical thinking), *"use their knowledge in new situations"* (for transfer of information), and "*mentally prepare what they are going to say or write before speaking*," (for managing of resources to use information), among others. The Cronbach's alpha recorded the CEVEAPEU was $\alpha = .89$.

Data Collection

An official request to conduct the survey was first obtained from the administration office of the public university's language centre. Formal letters were sent by hand to the officers in charge. After getting the approval, the study distributed copies of the questionnaire to the intended respondents in their respective classes. It was done manually with a brief explanation of the survey's purpose and expected outcomes. The respondents were given roughly 15 minutes to complete the questionnaire. The completed copies of the questionnaire were collected on the same day.

Data Analysis

SPSS version 25 was employed to analyse the survey data. First, the study utilised descriptive statistics (i.e., percentages, means, and standard deviations) to measure the level of academic self-efficacy among the respondents to address the first research objective. An independent-sample t-test was then run twice to assess significant differences, if any, in the respondents' academic self-efficacy based on gender and level of study. This addressed the second research objective. The third analysis employed Pearson correlation to test the relationship between academic self-efficacy and academic performance, thereby addressing the study's third objective. The fourth objective was to test whether academic self-efficacy, gender, and level of study would predict academic performance. This was addressed using the standard multiple regression analysis. The study used summated factor scores to represent the constructs of self-efficacy and academic performance.

RESULTS

Academic Self-Efficacy Among Pre-University Students

To ascertain the extent of academic self-efficacy among pre-university students, our analysis focused on the sample's responses to the items measuring their self-regulation, academic accomplishment, and career decision-making. The results are summarised in Table 2.

Table 2

Pre-University Students' Academic Self-Efficacy (N = 171)

Academic Self-Efficacy Dimensions	Items	Weak %	Strong %	Mean	SD
Self-efficacy for Self-Regulation	1. Finishing assignments by the deadline	15.8	84.2	1.84	.36
	2. Taking notes in class	15.2	84.8	1.54	.49
	3.Concentrating on school subjects	20.4	79.6	1.79	.40
	4.Organizing schoolwork	25.7	74.3	1.84	.36
	5. Choosing a place to study without distraction	30.4	69.6	1.52	.50
	6. Planning schoolwork	34.5	65.5	1.66	.48
	7. Remembering information presented in class and textbooks	35.0	65.0	1.74	.43
	8. Using the library to get information for class assignments	47.4	52.6	1.65	.48
	9. Choosing to study when there are other more interesting things to do	45.6	54.4	1.69	.46
	Overall			**1.7**	**.44**

Table 2

(continued)

Academic Self-Efficacy Dimensions	Items	Weak %	Strong %	Mean	SD
Self-efficacy for academic achievement	10. Learning English grammar	13.5	86.5	1.83	.38
	11. Learning reading and writing language skills	15.2	84.8	1.62	.49
	12. Participating in class discussions	17.0	83.0	1.81	.39
	13. Doing an excellent job on the problems and tasks assigned for the courses taken during the semester.	18.8	81.2	1.67	.47
	14. Learning social studies	26.9	73.1	1.48	.50
	15. Learning foreign languages	28.0	72.0	1.57	.49
	16. Learning to use the computer	30.4	69.6	1.41	.49
	17. Learning general mathematics	32.8	67.2	1.84	.36
	18. Mastering the courses taken in the semester	37.5	62.5	1.69	.46
	19. Learning biology	57.2	57.9	1.71	.45
	20. Learning science	43.3	56.7	1.73	.44
	21. Learning algebra	52.1	47.9	1.87	.34
	Overall			**1.7**	**.44**
Self-efficacy for career decision-making	22. Choosing a major or career that suits own abilities.	14.6	85.4	1.69	.46
	23. Choosing the best major for oneself even if it would take longer to finish the college degree.	18.17	81.3	1.73	.44
	24. Planning the goals to be achieved for the next five years	25.8	74.2	1.74	.44
	25. Accurately assessing own abilities.	23.4	76.6	1.77	.42
	26. Determining the steps that need to be taken to successfully complete the chosen major.	22.2	77.8	1.77	.41
	27. Deciding what you value most in an occupation.	23.4	76.6	1.77	.42
	28. Selecting one specific major from a list of potential majors being considered.	26.9	73.1	1.68	.47
	29. Listing several majors that you are interested in.	30.4	69.6	1.85	.35
	30. Resisting parents' or friends' attempts to push you into a career or major you believe is beyond your abilities.	32.2	67.8	1.81	.39
	31.Coming up with a strategy to deal with flunking out of college.	33.3	66.7	1.66	.47
	Overall			**1.7**	**.43**

Note: 'Weak' and "Very Weak" were integrated into a single category of "Weak"; "Strongly agree" and "very strongly agree" were combined as "Strongly agree."

The distribution of the answers to the 31 items in this construct is shown in Table 2. The respondents' self-efficacy for self-regulated learning was assessed by the first nine questions. It is evident from the data that more than 80% of the respondents have strong beliefs about "completing their homework according to the deadlines" and "taking notes in the classroom," while less than 47% doubted that they can focus on their studies when they have other interesting tasks and use the library for their assignments. However, 65% to 70.5% of respondents have strong beliefs in their ability to plan and organise their schoolwork. Thus, the average of the first nine items is 70% (M=1.7, SD= 0.44), which indicates that three-quarters of the respondents have high levels of self-efficacy for self-regulated learning.

The study used 13 items to measure the level of self-efficacy for academic achievement and found that more than 80% of the students have strong confidence in learning English grammar and language skills and participating in the classroom to solve problems. In contrast, less than 58% of respondents have low confidence in learning science. For instance, 57.2% of students have problems learning biology while the remaining 52.2% have difficulties learning algebra. Furthermore, between 69.6% and 70.3% of the participants strongly agreed with items 14, 15, and 16 which indicated the ability to learn social science, computer, and foreign language. In conclusion, the prevalence of self-efficacy for academic achievement among the sample is 60% (M = 1.7, SD =0.44).

The last ten items indicate the level of self-efficacy in making a decision. The most highly rated items are items 22 and 23, which saw more than 80% of respondents reporting a strong belief in. This indicated the ability of students to choose their major even though it may take a long time. The remaining four items have an average of 70% of students having a strong belief in their ability to make future plans. For example, 72% of the students have goals for the next five years. To sum up, the prevalence of self-efficacy for career decision-making among the sample is 75.1% (M =1.7, SD = 0.43).

In summary, a majority of the pre-university students surveyed in this study reported a high degree of academic self-efficacy, based on the levels reported for each dimension of academic self-efficacy that included self-efficacy beliefs for self-regulation, academic accomplishment, and career decision-making.

Pre-University Students' Self-Efficacy by Gender and Level of Study

The study's second objective focused on gender differences in the respondents' academic self-efficacy. The academic self-efficacy scores of males and females were compared using an independent-sample t-test. Table 3 shows that there is no statistically significant difference in the scores for males (M = 2.93, SD = 0.35), females (M = 2.85, SD = 0.40), or both (t = 1.35, p = 0.180 two-tailed). The size of the mean difference is extremely modest (mean difference = 0.08, 95% 95% CI: -1.80 to 1.87) (eta squared = 0.011= 1.1%). The t-test results in Table 4 show that there were no statistically significant gender differences in the scores for academic self-efficacy.

Table 3

Gender Differences in Academic Self-Efficacy (N = 171)

Gender	N	Mean	SD	T-Value	Sig
Female	113	2.93	0.35	1.35	0.180
Male	58	2.85	0.40		

The subsequent research question sought to find out the difference in students' academic self-efficacy by study level (i.e., Level 5 and Level 6). An independent-sample t-test was conducted to compare the academic self-efficacy scores for Level 5 and Level 6. There is no statistically significant difference between Level 5 (M = 2.94, SD = 0.33) and Level 6 (M = 2.87, SD = 0.39) students, t=1.36, p = 0.17 two-tailed. The size of the mean difference is extremely small (mean difference = 0.07, 95% 95% CI: -1.80 to 1.87) (eta squared = 0.01=1.1%). In conclusion, the t-test results Table 4 show that there was no statistically significant difference between Level 5 and Level 6 scores for academic self-efficacy.

Table 4

Level Differences in Academic Self-Efficacy (N = 171)

Level of study	N	Mean	SD	T-Value	Sig
Level 5	82	2.94	0.33	1.36	0.174
Level 6	89	2.87	0.39		

Note: P ≤ .05

Relationship Between Academic Self-Efficacy and Academic Performance

Pearson correlations were computed to examine the correlation between the two key constructs. The results show a substantial correlation between academic self-efficacy and performance. This means that students who had relatively high academic self-efficacy were very likely to have high academic performance. ($r = 0.51$, $n = 171$, $p < 0.01$). The correlation index of $r = 0.51$ indicates a moderate strength of association between self-efficacy and academic performance (Cohen, 1988).

Predictors of Academic Performance

The last research objective determined which of the three independent variables—gender, level of study, and academic self-efficacy—would predict academic performance among pre-university students. To determine the predictive power of independent factors toward the criterion measure, Standard Multiple Regression Analysis was utilised with the assumptions of

normality, linearity, multicollinearity, and homoscedasticity being first tested and found not to have been violated. Table 5 provides an overview of the MRA results.

Table 5

The Summary of Relationship between Variables

Model	**R**	**R square**	**Adjusted R square**	**SD.Error of estimate**
	0.52	0.27	0.26	0.48

Note: a) Predictors: (constant), level, gender, academic self-efficacy.
b) Dependent variable: academic performance

The results indicate a moderate correlation (r=0.52) between academic self-efficacy, gender, and degree of study. Based on Cohen (1988), this is a low effect size, meaning that only 27% of the differences in academic performance was explained by the independent variables. The remaining 73%, however, is likely to be explained by a different variable that was not investigated in this study.

Table 6

ANOVA Results

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig**
1	Regression	14.17	3	4.8	20.57	.000
	Residual	38.88	167	0.23		
	Total	53.05	170			

Notes: a) Dependent Variable: academic performance
b) Predictors: (Constant), level, Gender, academic performance.

Table 6 shows the results of ANOVA which suggest that all variables have strong relationships between the predictors and academic performance, which is statistically significant (F= (3,167) 20.58, *P*= 0.01

Table 7

Regression Coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig
	B	Std. Error	Beta		
Constant	1.26	0.34		3.68	.00
Academic self-efficacy	0.79	0.10	0.52	7.70	.00
Gender	0.07	0.08	0.01	0.88	0.93
Level of study	0.10	0.07	0.09	1.40	0.16

Table 7 shows that only one of the three variables significantly influences or predicts academic performance which is academic self-efficacy (Beta= 0.52, t =7.70, and P = .01). Based on the results of the beta weight, it could be assumed that one unit of students' academic self-efficacy could increase students' academic performance by 0.52.

DISCUSSION

The results portray pre-university students as having high beliefs in their capabilities for self-regulated learning. This indicates their awareness of academic strengths and weaknesses, along with possessing a toolkit of coping mechanisms to navigate day-to-day academic obstacles. Moreover, they demonstrate the capacity to plan and execute actions to meet established educational performance standards, resolve issues, and exhibit the necessary confidence in decision-making. Consequently, students with high academic self-efficacy may find inspiration within themselves to perform better.

The level of academic self-efficacy among students at another public university in Malaysia was measured by multiple researchers, and the findings similarly revealed a moderate level of self-efficacy among them (Elias et al., 2010). This is consistent with another study conducted in Western Turkey that revealed that students' academic self-efficacy beliefs were at a moderate level (Styles, 2013).

Another study done in Sri Jayewardenepura found that many undergraduates had low levels of academic self-efficacy in regard to several academic tasks (Sachitra & Bandara, 2017). Creating a study plan, approaching professors for assistance, creating more notes, participating in academic conversations with friends, expressing an opinion, and speaking in front of their peers are a few examples of this efficacy.

In this study, pre-university students were found to have a high level of academic self-efficacy compared to other universities in other countries. The present finding is inconsistent with Sachitra and Bandara (2017), Styles (2013), and Habibah et al (2010). This may be attributed to the fact that many pre-university students are international students and are required to have high grades in secondary school or previous university studies to qualify to further their studies at the public university involved in this investigation. Additionally, they have a strong self-belief in their ability to succeed, and as international students, they are highly invested in achieving their academic goals

Pertaining to the second research objective, the evidence suggests that there is a strong positive relationship between academic performance and academic self-efficacy. This result is consistent with Honicke and Broadbent's (2016) meta-analytic results of 51 studies indicating a relationship between academic performance and academic self-efficacy. This result seems to be the result of students who believe more strongly in their capacity to perform academically being more inclined to compare themselves to the students who do not believe strongly in their ability to perform academically. According to additional research, students who have higher levels of academic self-efficacy are more likely to select difficult tasks, persevere through challenging tasks, and change their learning strategy to one that is more successful when dealing with failure (Mega et al., 2013). These actions are thought to contribute to academic success. The findings suggest that the outcome is likely to be successful when the level of self-efficacy is high and when there is a favourable environmental response, notions that are also supported by Bandura's (1997) theory.

In addition, many types of research showed that a significant relationship exists between self-efficacy and academic achievement (Goulão, 2014; Kolo et al., 2017; Adelodun, 2015; Shkullaku, 2013). The results of a study conducted in 2016 among students studying medical sciences by Arbabisarjou et al. (2016) were consistent with those of the earlier studies and demonstrated a substantial association between the two variables. An investigation among schoolchildren in India revealed a substantial correlation between students' self-efficacy and academic success (Mysore et al., 2015).

The present study found no significant differences in students' scores based on their gender and level of study. As highlighted in the literature review, students' academic self-efficacy is closely linked to their environment (Pajares, 2005). Therefore, the uniform levels of students' academic self-efficacy across gender and study levels could be influenced by various factors. The social and cultural environment within the university might have contributed to these similarities. Additionally, it could be an outcome of lecturers' successful efforts to nurture students' attributes such as emotions, habits, and critical thinking. This uniformity could potentially impact class administration and classroom management. While other factors may be at play, the results suggest that all students can develop their academic self-efficacy using the available resources within and through the university.

In Malaysia, a study found that there is a significant difference in academic self-efficacy levels across genders among Malaysian adolescents. Female respondents were reported to have a higher level of academic self-efficacy (Chokkaligam et al., 2016). The synthesis of existing literature on academic self-efficacy and its relationship to academic success yields a spectrum of findings, reflecting the intricate nature of this association. While certain studies, such as Kassaw and Astatke (2017), propose that relying solely on academic self-efficacy might not

sufficiently forecast academic achievement, others delve deeper into this complex interplay. For instance, Kassaw and Astatke (2017) indicate that a combined consideration of gender and orientation significantly contributes to the objective prediction of academic success. Conversely, Adelodun's (2015) study presents a contrasting perspective, revealing that high attainment in English discourse writing remains unaffected by individual academic self-efficacy or gender. Yet, a collective body of research underscores the positive correlation between academic self-efficacy and performance (Abd-Elmotaleb & Saha, 2013), with investigations involving school children and Mexican American undergraduate students emphasising self-efficacy as a pivotal predictor of scholastic achievements (Yazici et al., 2011; Spanierman & Flores, 2017).

CONCLUSION

The most significant psychological component that influences a student's academic performance is academic self-efficacy, which is taken into account together with gender and level of study among pre-university students at an international Islamic university in Malaysia. The results demonstrate that academic self-efficacy significantly influences students' academic performance. Regarding gender and level of study, the result shows that there are no statistically significant variations in academic self-efficacy. This study is intended to advance knowledge about the importance of academic self-efficacy and the enhancement of students' academic success. Thus, this study's findings might support current efforts to raise students' levels of academic achievement and self-efficacy to increase their success in higher education.

The findings underscore the importance of cultivating academic self-efficacy among pre-university students to enhance their overall academic success. Recognizing the influence of self-efficacy provides a basis for tailored interventions and strategies aimed at improving student outcomes. To capitalise on these insights, practical suggestions emerge. Pre-university students, in particular, are encouraged to actively focus on enhancing their academic self-efficacy. This emphasis can lead to a reduction in apprehensive attitudes towards learning, fostering improved examination performance.

For educational institutions, especially the Department of Pre-university Students, a comprehensive curriculum addressing self-efficacy is recommended. This curriculum should consistently develop students' understanding of the sources of self-efficacy. Teachers can play a pivotal role by incorporating elements of self-efficacy—mastery experience, social modelling, social persuasion, and physical-emotional status—into the learning process. This integration can enhance critical skills such as creativity, critical thinking, and resource management efficiency. Furthermore, the involvement of scholars specializing in self-efficacy and social cognitive theory is crucial. These experts can contribute to the development of new curricula that deeply examine the application of social cognitive theory, particularly the concept of self-efficacy, among students.

This study suggests the need for further research exploring the nuanced dynamics of self-efficacy and its intersection with various factors affecting academic performance. Future studies could delve into the long-term impact of self-efficacy interventions and assess the effectiveness of tailored educational programmes in different cultural and educational contexts.

In conclusion, by implementing these practical suggestions and recommendations for future studies, educators, students, and institutions can collectively contribute to the ongoing efforts to elevate academic achievement and self-efficacy levels among pre-university students.

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