Antecedents to Academic Performance and Future Continuous Learning of Under Qualified Students at Higher Education

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Abstract: Previous studies have proven that there are several factors that influence students' academic performance that is said to be able to help improve their academic performance over time. This study aims to identify the factors contributing to the academic success of students with less academic qualifications. Moreover, this study also aims to identify students' ability to further their studies to the next level when they are able to improve their academic performance. A total of 149 respondents answered the questionnaires distributed. The study focuses on the students of Pre Higher Education (PPT) at UiTM Perak Branch. Hypotheses testing results that using PLS-SEM reveal two important findings: first, there is a positive relationship between students' attitudes, lecturers, peers, and family that influence academic performance. Second, academic achievement is positively related to students' future continuous learning. Overall, the study findings prove that students' attitudes is the main factor that drives academic achievement, followed by the role of lecturers, peers, and family.

INTRODUCTION

Academic excellence is the basis to measure students' success at all levels, from schools to higher learning institutions (HLIs). Academically excellent students at the university level are categorised as those achieving CGPA performance exceeding 3.5. Ongoing support and monitoring are one of the identified contributing and motivating factors to students' excellence improvement. However, not all students with an excellent academic background enter higher learning institutions.

Based on a minimum of three (3) credits, Universiti Teknologi MARA (UiTM) has established a unique programme called Changing the Destiny of Our People (*Mengubah Destini Anak Bangsa* (MDAB). The programme serves as UiTM's social responsibility in which Bumiputera students, who fail to obtain a place in universities due to insufficient merit, high increase of learning costs, and failure in the competition to get a place in HLIs,

are offered the MDAB programme. Beginning May 2019, MDAB programme is known as Pre-Higher Education (*Pra Pendidikan Tinggi* (PPT). Two courses are offered under the PPT programme namely, pre-diploma in commerce and pre-diploma in science. From April 2010 to January 2018, the total number of MDAB students who pass and eligible to further their studies at diploma level is 84.42% (32,114 students) [1]. This percentage increased over time and fulfilled the university's KPI set. However, to date, the management of PPT programme is yet to identify the factors that motivate the students' achievement. Therefore, this study aims to discuss motivating factors that influence the high passing rate of pre-diploma students compared to their weak academic background at SPM level. The performance improvement motivates students to further their studies at higher levels.

Based on previous studies there are several measures to determine the students' academic performance, among others, are cumulative grade

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point average (CGPA), grade point average (GPA), test, and others. In Malaysia, researchers evaluate students' academic performance based on CGPA [2][3] For PPT students, their academic performance is measured based on the CGPA with Pass Upgrade (*Lulus Naik Taraf* (LNT)) status. Based on previous studies, there are various factors that influence students' academic performance in HLIs such as peer influence, lecturers, interests, students' attitudes, background, and family support. Thus, this study has two main objectives: first, to examine the relationship between academic performance and students' attitudes, lecturers, peer mentoring and family. Second, to examine the relationship between academic performance improvements due to these four factors that influence students' decision to further studies at the diploma level.

Therefore, this study will relatively contribute to the management of HLIs to understand better the factors that influence students' academic performance and to design suitable programmes to improve students' performance, particularly those who are categorised as underperformance.

LITERATURE REVIEW

Various studies have been conducted and showed that learning effectiveness depends on environmental factors such as attitudes, interest, lecturers, and peers. Studies conducted by [4][5] on 100 students of UiTM Kedah Branch also showed that there is a positive relationship between students' attitudes, peer influence, lecturers, and interest with academic (mathematics) performance improvement. The studies results also proved that identifying these factors can help to further improve students' learning performance provided that proper monitoring has been put in place.

Peers is also one of the factors that influence the students' academic performance at HLIs. This finding is supported by [6][7][8] who showed that peer influence has a greater impact than family in improving students' cumulative grades. In addition, the studies findings also found that peers can also influence students' behaviours and subsequently influence their learning performance. [9] concluded that combining students with heterogeneous learning abilities will show an improvement in the

learning process and outcomes. Studies found that mixing abilities will positively affect weak students, however, the impact on good students is negative. This is contrary to [7] who found that students in the homogeneous group (regardless of high ability or low ability) perform better than students in the heterogeneous group of [10], which includes students' interaction with peers, and improve their ability in solving qualitative problem-solving questions. Peer instruction will also encourage students' participation and improve students' performance [11][12]. [4] in his study also found that peers have a positive relationship with students' achievement in mathematics. This implies that students' peer group contributes to the improvement of mathematics achievement. If students are not guided in choosing the right peer group, their performance may be affected.

Recent studies such as the study conducted by [13] also proved that students' attitudes and behaviours are a catalyst for their learning achievement. The study findings showed that a keen interest in a learning method is able to motivate the students to continuously maintain good tasks performance and show improvement over time. The researcher also pointed out that attitudes is the main key to an individual's success.

To support the above study, the study by [14] also explained that students' attitudes such as high self-esteem, fun in learning, and self-motivation is able to influence the students' focus on the learning delivered, particularly in learning difficult subjects such as mathematics. Overall, many previous empirical studies have proven that students' attitudes is the main factor that contributes to their learning effectiveness and academic achievement compared to other factors. What about the results of this study? What are the main factors contributing to students' performance effectiveness? The questions will be answered in the next section.

METHODOLOGY

The cross-sectional method was used in this study to allow the researchers to use literature review on factors influencing the success of MDAB students, pilot study, and questionnaire as key procedures in data collection [15]. Random sampling method was

used to enable the distribution of 149 questionnaires to students undergoing the PPT programme at UiTM Perak Branch. Out of the total questionnaire distributed, only 67.11 per cent (100) were fully answered by the respondents. The random sampling method was chosen because the management of PPT programme has a complete list of students undergoing the programme. The sample size fulfilled the requirement of data analysis using statistical inference [16][15].

The questionnaire comprised two main sections: first, the factors that influence students' performance using 26 question items and cover four main dimensions (lecturers, peers, attitudes, and family), students' performance in learning that includes eight (8) question items, and the desire to further studies at higher levels that includes five (5) question items. The second section of the questionnaire lists out demographic question items, of which seven (7) question items are listed. Apart from using a categorical scale of measurement, all items were measured using a five-option answer scale ranging from "Strongly disagree (1)" to "Strongly agree (5)". Furthermore, the SmartPLS method was used to evaluate the validity and reliability of the study questionnaire, subsequently, testing the study hypotheses [17][18].
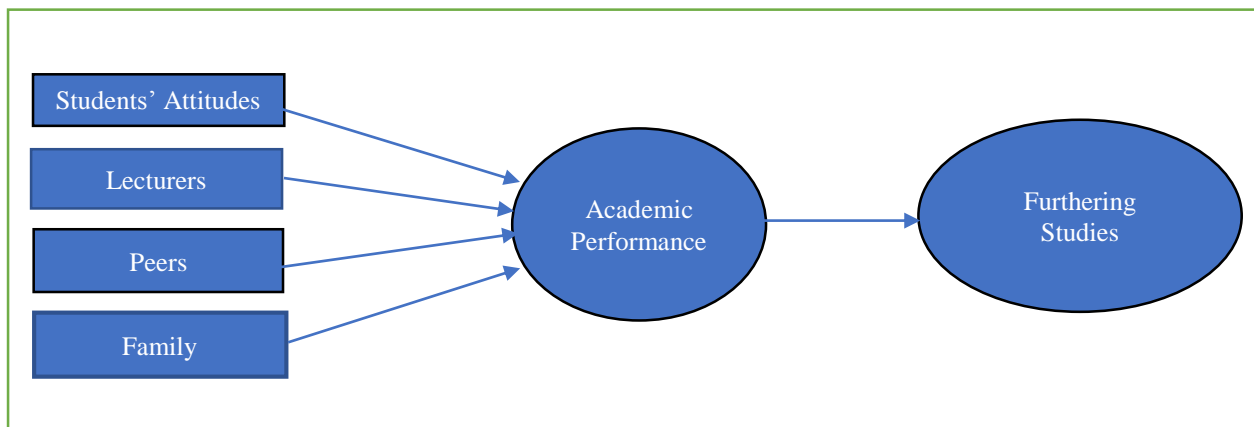
CONCEPTUAL FRAMEWORK

Figure 1: Conceptual Framework

RESULTS OF STUDY ANALYSIS

The majority of respondents were female (68%) and between 18 and 20 years old (99%). All MDAB students (100%) were initially interested to undergo the programme and they were able to change their behaviours (100%) as well as to improve their learning performance through the programme. Accordingly, Table 1 shows the item loading value for each construct is greater than 0.7, in which the value confirms that the items for each construct achieve high reliability [19]. Subsequently, each construct has a composite reliability value greater than 0.80, which means that the measurement scale has a high internal consistency [18].

TABLE 1: Item loading value and construct item reliability

No.	Variables	No. of Items	Item Loading (≥ 0.70)	Composite Reliability (≥ 0.80)

1	Lecturers	8	0.700-0.7900	0.848
2	Peers	7	0.700-0.8140	0.837
3	Attitudes	6	0.700-0.7490	0.813
4	Family	5	0.770-0.8150	0.895
5	Students' Performance	6	0.700-0.8150	0.876
6	A desire to further study	5	0.776-0.8310	0.898

Table 2 shows that the Average Variance Extracted (AVE) for each construct is between 0.522 and 0.631, in which exceeds the required critical value of 0.5 [17]. This indicates that the study constructs fulfil the criteria of convergent validity [19][18]. On the other hand, the Heterotrait-monotrait (HTMT) value for each construct is less than the required critical value of 0.85 [18][17]. This means that the study constructs have fulfilled the criteria of discriminant validity set that is each construct in the study framework differs from one another [18][17].

TABLE 2: Construct item value and discriminant validity test

No.	Variables	AVE (≥ 0.5)	1	2	3	4	5
1.	Lecturers	0.530					
2.	Peers	0.564	0.617				
3.	Attitudes	0.522	0.336	0.362			
4.	Family	0.631	0.560	0.362	0.454		
5.	Students' Performance	0.543	0.620	0.553	0.642	0.539	
6.	A desire to further study	0.637	0.675	0.385	0.501	0.762	0.703

Study Hypotheses Test Results

Result from Figure 1 also explain the inclusion of independent variables (factors influencing students' success) of the path model in SmartPLS contributes 45.8 per cent to changes in the dependent variable (students' performance) and contributes 35.8 per cent to students' desire to further studies to the next level. These values can be considered satisfactory [19]. Meanwhile, the results of hypotheses testing using path model analysis in SmartPLS yielded several key findings: first, all factors studied such as the lecturers ($\beta = 0.254$; $t = 2.831$), study peers ($\beta = 0.200$; $t = 2.170$), attitudes ($\beta = 0.324$; $t = 4.191$), and family ($\beta = 0.164$; $t = 2.095$) have a significant relationship with students' performance. The second finding shows that students' learning performance has a relationship with students' desire to further studies to the next level ($\beta = 0.598$; $t = 11.605$). Therefore, all hypotheses have been supported in this study. This study used a significant level of 1.64 (one-tailed) to determine the direction among variables as described in the study hypotheses.

CONCLUSION

Overall, the study findings confirm that students' attitudes and the roles of lecturers, study peers, and family contribute to the learning effectiveness of PPT students at UiTM Perak Branch, as well as their desire to further their studies at higher levels. In addition, the study findings also provide three (3) important implications to theories, research methodologies, and practitioners or HLIs. In the context of contribution to theories, this study highlights several important findings: first, the identification of students' attitudes and other roles that may influence academic performance and students' motivation to further studies at higher levels. This finding supports the findings of studies

conducted by [5][20]. in which these studies have proven that the students' self-motivation and attitudes are able to improve their academic performance. In addition, other environmental roles such as the roles of lecturers, peers, and family are also able to help to enhance the academic performance of PPT students in improving their performance in future. Overall, the study findings confirm the importance of previous studies findings, which also discuss the attitudes and students' environmental roles that able to improve students' academic performance.

From the aspect of contribution to research methodologies, the questionnaire used in this study has fulfilled the validity and reliability standards set, as well as the use of a more robust PLS-SEM method that is able to test multi-dimensional models simultaneously. This can result in having accurate study findings with high reliability. While from the perspective of practitioners, the study findings can be used as a guide to the university, particularly lecturers and academic management, who are an important group in ensuring the learning effectiveness of PPT students throughout the academic session.

Nevertheless, the study is limited to respondents at UiTM Perak Branch only. In order to produce better quality and impactful results, the study findings will be compared to students' performance at other campuses such as Shah Alam, Kedah, Kelantan, and Pahang. In addition, based on the study findings, several other enhancements that can be made are the researchers should take into account the study conceptual framework and research methodology limitations. First, the cross-sectional method used in the study was unable to detect dynamic changes and more specific relationship patterns among variables in the study sample. Second, the study did not highlight the relationship between specific indicators of independent variables and dependent variables that may have more specific implications for future research discussions. Finally, the study sample only focused on one (1) campus and the importance of its relevance to the study variables cannot be fully and widely discussed. Therefore, the study is only able to make estimations concerning the relationship patterns among study variables in general and it cannot be generalised to students' environmental background at different campuses.

For future studies, it is hoped that the above study limitations can serve as a guide to improve the study. Among the steps that can be taken are first, other robust research designs such as longitudinal studies should be used to collect data, describe relationship patterns, directions and degrees of relationship strength between independent variables and dependent variables. Second, several personal and learning environment characteristics should be explored in-depth as they can show a clearer impact on the improvement of students' academic performance and students' development in future.

Third, future studies should employ more respondents, particularly those at different campuses in order to ensure the accuracy and validity of the study findings. If the study limitations can be improved, it will help to produce more effective and comprehensive study findings as well as to serve as a guide for higher impact studies. Therefore, this study will relatively contribute to the management of HLIs to better understand the factors that influence students' academic performance and to design suitable programmes to improve students' performance, particularly those who are categorised as underperformance.

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