Malaysian Polytechnics Students Demographic Profile and Educational Option

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Abstract

This study presents findings on Malaysian polytechnic students' educational options in terms of enrolling programme and student demographic profiles for Technical and Vocational Education and Training (TVET). A self-report questionnaire was used to examine student demographic profiles such as socioeconomic level (SES), educational aspirations, and secondary school performance. This study enlisted the participation of 643 students from Malaysian polytechnics. The data was analysed using Statistical Package for the Social Sciences (SPSS). The data was analysed using descriptive and chi-square tests. The findings reveal that there is no relationship between Malaysian polytechnic students' educational option on TVET and socioeconomic level, educational option on TVET and educational aspirations. Meanwhile, there is a relationship between Malaysian polytechnic students educational option in TVET and secondary school performance. The data also revealed that regardless of the programme in which Malaysian polytechnic students enrolled, majority of them came from low-income families, performed moderately well in secondary school, and have high educational aspirations to further their studies after finishing study at Malaysian polytechnics. As a consequence of the findings, students' socioeconomic status had no impact on their TVET educational option as in the particular programme wherein they enlisted.

Keywords: technical and vocational education and training (TVET), educational option, students' demographic profile

1.0 Introduction

TVET is the last choice for Malaysian students, due to the community's opinion of TVET's poor career prospects. (Twelfth Malaysia Plan 2021-2025, 2021). This confusion could and should be corrected. TVET does provide students with opportunities to find out their true skill. Malaysian government aims to boost TVET to make it a more attractive choice for students by widening work opportunities (Malaysian Education Blueprint, 2015).

The Office of Vocational Education Commission in Thailand, on the other hand, has reported that social perspectives toward vocational education is not empowering. Negative attitudes against blue-collar employees prevent people from pursuing vocational training. Furthermore, TVET is used as a method of schooling for those who do not apply for entry to higher education in Philippines (Budhrani, D'Amico, & Espiritu, 2018). This is seen as a cause that perpetuates inequity in the framework. The uninspiring reputation of

vocational education, as well as its deep-seated inequalities, are a fairly frequent occurrence in Thailand. Vocational schooling is a prerequisite in most Asian countries, not at the junior secondary level, but at the senior secondary level (Dobbo, 2018). Inadequate knowledge continues to lead to a shortage of manpower in many sectors, resulting in an overabundance of graduates from certain academic disciplines (Dobbo, 2018).

Malaysian students can pursue a variety of postsecondary educational opportunities. Postsecondary education research informs postsecondary educational institution managers about students' preferences and placement requirements, as well as prospective students about concerns relating to postsecondary education institution selection. The findings may be used by government and regulatory bodies to develop potential policies for management institutes, especially in Malaysia. Malaysian TVET institutions must advertise their institutions and create distinct distinctions to feature their qualities and offer students a justification to pursue a TVET education.

As a result, this research contributes to the evidence base required to encourage more students to pursue TVET. These results should give guidance to Malaysian TVET providers in terms of programme offerings and focus activities on the future.

2.0 Literature review

Chapman's (1981) model concludes that a students' post-secondary education institution choice is affected by a set of student characteristics in relation with a series of external influences. Over the years, SES has been explored as a variable influencing postsecondary educational institution selection (Brown, Wohn & Ellison, 2016 ; Olmos-Gómez, Luque-Suárez, Becerril-Ruiz & Cuevas-Rincón, 2021; Boylan, 2020). The majority of study in Malaysia has concentrated on features that are not special to individuals (students), such as the availability of potential graduates' job opportunities (Sim, Tan, Sia & Hii, 2020), financial aid (Haron, Abdul Hamid, Jamaludin & Ku Azan 2017), the location and atmosphere of the institutions and programmes and courses (Ahmad Zamri & Nordin, 2013). In Malaysia, there has been no study on factors linked to SES and educational option.

2.1 Demographic profile

A collection of student demographic profile together with a set of external factors influence the student's choice of postsecondary educational institution (Chapman, 1981; Eidimtas & Juceviciene, 2014). Students' socioeconomic status (SES), educational aspirations, and secondary school performance were all included in this research.

2.1.1 Socioeconomic status (SES)

Family income, parental education levels and parental employment category are all common markers of a student's socioeconomic status (James, 2002). Students from various social backgrounds enrol in postsecondary education at various rates and in various forms of postsecondary educational institutions and universities. Students from higher-income households are bound to attend four-year postsecondary educational colleges and universities than students from lower-income families (Chapman, 1981).

An important feature of SES, which is family income, influences postsecondary educational institution choice in terms of institutional costs and financial aid, which may limit students' educational options. According to Mean Monthly Gross Household Income of Top 20%, Middle 40% and Bottom 40% of Households by Ethnicity and Strata, Malaysia, 1970-2012 as released by Jabatan Perangkaan Malaysia (2012), the average monthly gross household income of a lower SES family is RM4500.

Parental educational attainment is another useful indicator of a student's socioeconomic status (Olmos-Gómez et al., 2021). Parents with a low SES finished secondary school and or a vocational qualification, a diploma, or associate diploma, whereas those with high SES finished a university degree (James, 2002). Various of studies contemplates that SES impact a student's decision of a postsecondary educational institution (James, 2002; Niu, 2017).

2.1.2 Educational aspirations

Aspirations are hopes or dreams that express a person's aspirations for the future. Although there have been several study studies on the relationship between educational aspirations level and expectations to students' decisions to enlist in postsecondary educational institutions, there has been no study on the impact of educational aspirations on postsecondary educational institution option (Chapman, 1981). Nevertheless, some study has found a relationship between educational aspirations and the choice of a postsecondary educational institution (Brown, Ingram, & Burke, 2019; Hu, 2003). Furthermore, most scholars agree that educational aspirations and expectations are important elements of students' programme selection. (Nurlida, et al., 2007). As a result, it can be argued that educational aspirations are one of the most important factors in students' decision-making process when it comes to educational institution choices. The highest level of education that the students expect to complete will be used to measure their educational aspirations in this research.

2.1.3 Secondary school performance

One of the key factors used by postsecondary educational institutions to admit or deny applicants is their performance in secondary school. Future candidates can use this knowledge to decide whether or not to attend a certain postsecondary educational institution.

Enrolling in an Italy private university is linked to higher family income and or better secondary school performance (Checchi, Franzoni, Ichino & Rustichini, 1999). The study also shows that prior academic performance has an effect on students' postsecondary educational decisions, with "above average marks" students enrolling in Economics and Mathematics faculties and "below average marks" students enrolling in the Faculty of Political Science. This clearly demonstrates that secondary school performances could provide some insight into potential educational options. On the other hand, poor performance in secondary school is not a major obstacle to enrolling in postsecondary educational institutions, but it does significantly limit students' number of college choices (Nagaoka, Roderick & Coca, 2009). They further suggest that in order to improve students' chances of enrolling in and

succeeding in education, politicians and practitioners should first concentrate on enhancing secondary school teaching and academic readiness.

Based on the foregoing discussion, the aim of this research is to gain a better understanding of the demographic profile of Malaysian polytechnic students and their educational options in terms of TVET. Understanding their demographic profiles would allow a customised promotion scheme to be established to encourage more SPM leavers to select Malaysian polytechnics as their first choice of postsecondary institution to continue their studies. It is also hoped that community members would no longer consider TVET, in general, and Malaysian polytechnics, in particular, as a secondary choice for education.

3.0 Objectives of study

The aim of this research is to provide knowledge and insight into Malaysian polytechnic students' educational options in terms of programme enrolment and student demographic profiles. As a result, the following objective have been established:

To investigate the relationship between TVET educational option and Malaysian polytechnics students selected demographic background which are:

1. Socioeconomic status.
2. Educational aspirations
3. Secondary school performance

4.0 Methodology

Quantitative approaches are used in this research. To answer the research's goals, quantitative data is obtained through the use of a questionnaire The questionnaire was circulated, and descriptive and chi-square tests were used to analyse the results. The sampling procedure, the data collection system, the instrument, and the sampling approach used in this research are all outlined as below.

4.1 Sampling technique

In this research, the data was collected using proportional stratified random sampling. This research focuses on the first semester demographic profiles of students enrolled in a three-year engineering and non-engineering diploma programme at three Malaysian polytechnics in the Terengganu state. The engineering and non-engineering programmes offered in Malaysian polytechnics are used to determine educational options. Politeknik Kuala Terengganu (PKT) is located in the district of Kuala Terengganu, Politeknik Sultan Mizan Zainal Abidin (PSMZA) is located in the district of Dungun, and Politeknik Hulu Terengganu (PHT) is located in the district of Hulu Terengganu.

Proportional stratified random sampling is a method of selecting a sample in which designated subgroups in the population are represented in the sample in the same proportion as they occur in the population. (Mills & Gay, 2019). The population is divided into subgroups depending on certain demographic profiles (students' programmes of study), and then a sample is drawn at random from each subgroup (engineering and non-engineering) in

proportional stratified random sampling (Creswell & Guetterman, 2018). The researcher chose first semester students enrolled in engineering (electrical engineering, mechanical engineering, and civil engineering) and non-engineering (information technology, tourism management and accountancy) programmes at three Malaysia polytechnics in the state of Terengganu using proportional stratified random sampling. For this research, a total of 20% of first semester students enrolled in engineering and non-engineering programmes at each polytechnic were chosen as respondents. First-semester engineering and non-engineering students from PSMZA and PKT each represented 20%, while non-engineering first-semester students from PHT represented another 20%. This was achieved to ensure that the participants were representative of all first-semester students studying in Malaysian polytechnics in Terengganu, enabling the results to be applied to the whole population. The population of first semester students who enrolled in three Malaysian conventional polytechnics in Terengganu; PSMZA, PKT and PHT consisted of 1605 students.

4.2 Participants in the study

The respondents for this survey were roughly 643 Malaysian polytechnic students (with 465 enrolling in engineering (72.3%) and 178 (27.7%) in non-engineering programmes). They were comprised of 347 (54%) males and 295 (46%) females. Engineering and non-engineering TVET programmes are available at Malaysian polytechnics, with the aim of producing highly qualified and trained staff.

4.3 Instrument

The instrument is a self-report questionnaire that was circulated as sample for the respondents and later compiled for use as the primary data source. A self-report questionnaire is one that has been designed to be completed by respondents without the researcher interfering (Wolf, 2008). The questions must be succinct, closed-ended, and self-contained; skips are not allowed in a self-report questionnaire's (Bourque, 2004). The questionnaire included three variables for this study: socioeconomic status, educational aspirations, and secondary school performance by using researcher revised questionnaire.

5.0 Data analysis and findings

SES (fathers' and mothers' educational level, fathers' and mothers' employment status, and overall household monthly income), students' educational aspirations, and secondary school performance were used as variables in this research. These demographic profiles would then be linked to the students' educational programme of choice (enrolment), which may be either engineering or non-engineering. The education levels of the fathers and mothers in this sample is divided into two categories: low and high education levels. A low education level was defined as a diploma or less, while a high education level was defined as a degree or more. Aside from that, there were two forms of working status for fathers and mothers: working and not working. There were two types of total household monthly income: low and high total household monthly income. Total household monthly earnings less

than RM4500 represented low total household monthly income, while total household monthly earnings more than RM4500 represented high total household monthly income. Meanwhile, there were two forms of educational aspirations: low and high educational aspirations. Students with low educational aspirations expected to complete their education until diploma level, while those with high educational aspirations planned to complete their education until bachelor's degree or higher. Furthermore, secondary school performance was split into three groups: grade A, grade B, and grade C. Students with a grade of A performed exceptionally well in their SPM, while those with a grade of B performed mediocrely, and those with a grade of C performed poorly.

The collected data was evaluated using SPSS version 22.0. The existence of the variables and their relationships were investigated using descriptive and inferential statistics. Table 1 reveals that most of the students who took part in the study came from households where their father's (89.3%) and mother's (91.9%) education rate were low, as well as low family income (87.7%). However, the majority of these respondents (79.2%) have high aspirations for academic achievement. The majority of them received a grade B (59.4%) rather than a grade A (32.8%) or a grade C (7.8%) in their secondary school performance.

Table 1: Cross tabulation among fathers' education level, mothers' education level, total household monthly income, educational aspirations, and secondary school performance on educational option.

Construct			Educational option		Total
			Engineering	Non-Engineering	
father_edu	Low	Count	420	154	574
		% within Educational option	90.3%	86.5%	89.3%
	High	Count	45	24	69
		% within Educational option	9.7%	13.5%	10.7%
	Total	Count	465	178	643
		% within Educational option	100.0%	100.0%	100.0%
mother_edu	Low	Count	427	164	591
		% within Educational option	91.8%	92.1%	91.9%
	High	Count	38	14	52
		% within Educational option	8.2%	7.9%	8.1%
	Total	Count	465	178	643

		% within Educational option	100.0%	100.0%	100.0%
Income	Low	Count	410	154	564
		% within Educational option	88.2%	86.5%	87.7%
	High	Count	55	24	79
		% within Educational option	11.8%	13.5%	12.3%
	Total	Count	465	178	643
		% within Educational option	100.0%	100.0%	100.0%
Aspirations	Low	Count	104	30	134
		% within Educational option	22.4%	16.9%	20.8%
	High	Count	361	148	509
		% within Educational option	77.6%	83.1%	79.2%
	Total	Count	465	178	643
		% within Educational option	100.0%	100.0%	100.0%
Performance	A	Count	169	42	211
		% within Educational option	36.3%	23.6%	32.8%
	B	Count	268	114	382
		% within Educational option	57.6%	64.0%	59.4%
	C	Count	28	22	50
		% within Educational option	6.0%	12.4%	7.8%
	Total	Count	465	178	643
		% within Educational option	100.0%	100.0%	100.0%

Figure 1 portrays the background profiles of polytechnics students who enrolled in engineering and non-engineering programmes. The majority of respondents that choose engineering (90.3%) and non-engineering (86.5%) programmes come from families with low educational levels of their fathers. This is also so for the majority of engineering (91.8%) and non-engineering

(92.1%) students' mothers, who have a low standard of schooling. Aside from that, the majority of engineering (88.2%) and non-engineering (86.5%) students come from families with a low monthly gross household income. Despite the fact that the majority of engineering (57.6%) and non-engineering (64.0%) students earned a B in secondary school, the majority of engineering (77.6%) and non-engineering (83.1%) students had high educational aspirations.

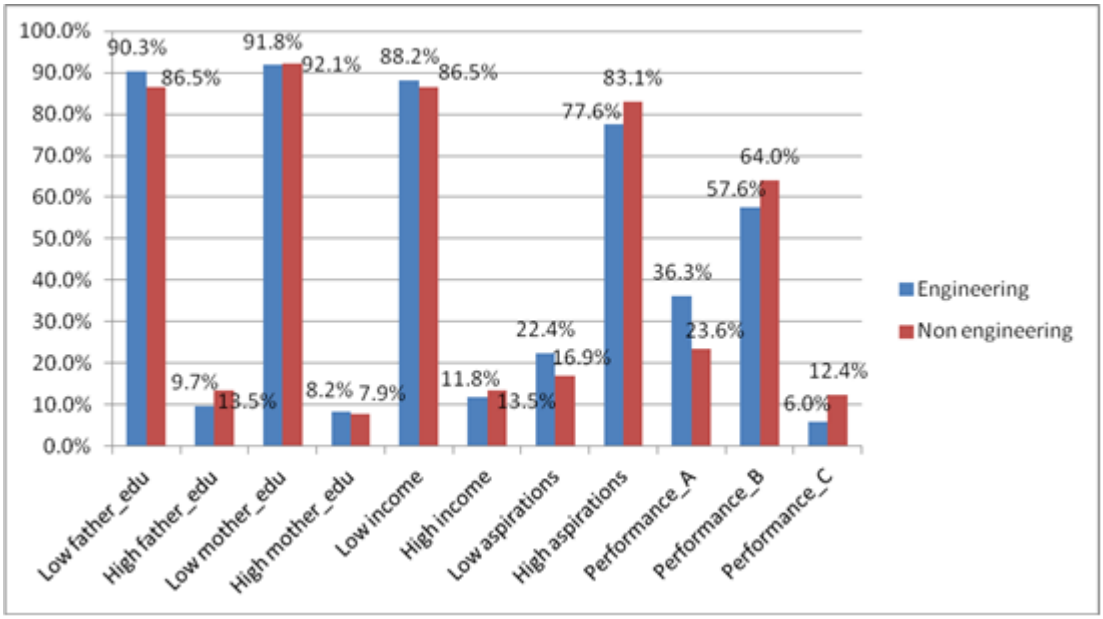

Figure 1: Bar chart on fathers' education level, mothers' education level, total household monthly income, educational aspirations, and secondary school performance on educational option.

The chi-square test for independence was used to see the relationship between socioeconomic status (parental levels of education, parental working status, and total household monthly income), educational aspirations, secondary school performance, and TVET educational option among Malaysian polytechnic students. The chi square test for independence is used to see whether two nominal or ordinal variables have a meaningful relationship (Chua, 2013). To investigate the relationship between socioeconomic status (parental levels of schooling, parental working status, and overall household monthly income), educational aspirations, secondary school performance, and educational option, a chi square test of independence was used, as seen in the table below.

There is no significant relationship between fathers' educational level and educational option, X^2 (1, N = 643) = 1.946, p =.163, according to the results. The finding further shows that there is no significant relationship between a mother's educational level and educational option, with X^2 (1, N = 643) =.016, p =.898. Furthermore, the relationship between fathers' working status and educational option X^2 (1, N = 643) = 2.832, p =.092, and mothers' working status and educational option X^2 (1, N = 643) = 3.850, p =.050) are both non-significant. Educational aspirations and educational option, X^2 (1,

N = 643) = 2.370, p =.124, and total household monthly income and educational option, X^2 (1, N = 643) =.327, p =.567, was also considered to be non-significant. Table 2 shows that students' educational options on TVET in terms of programme enrolment are unrelated to their SES (parental level of education, parental working status, and total household monthly income) and educational aspirations. Table 2, on the other hand, indicates that there was a significant relationship between secondary school performance and educational option, X^2 (2, N = 643) =13.916, p =.001.

Table 2: Chi square tests between socioeconomic status, educational aspirations, secondary school performance and educational option on TVET.

Relationship Examined	Pearson Chi Square		Asymp. Sig. (2 sided)	Conclusion
	df	Value		
Father's level of education and educational option	1	1.946	.163	Non-significant
Mother's level of education and educational option	1	.898	.016	Non-significant
Father's working status and educational option	1	2.832	.092	Non-significant
Mother's working status and educational option	1	3.850	.050	Non-significant
Total household monthly income and educational option	1	.327	.567	Non-significant
Educational aspirations and educational option	1	2.370	.124	Non-significant
Secondary school performance and educational option	2	13.916	.001	Significant

6.0 Discussion and conclusion

This study found no relationship between students' SES (parental level of education, parental working status, and total household monthly income) and their educational options in terms of TVET programme enrolment in Malaysian polytechnics. This can be linked to the cost of education (tuition fees) and living expenditures, where family income, another important aspect of SES, impacts postsecondary educational institution option as it pertains to costs of institutional and financial assistance to restrict students' educational alternatives. A prior study found that the cost of study and living expenditures had an impact on educational options (Shanka, Quintal, & Medman, 2006).

Simultaneously, secondary school performance shows relationships with Malaysian polytechnics students' educational options regarding TVET (programmes enrolment). Malaysian polytechnics students who procure a medium for their performance in their SPM result have undeniable degrees of educational aspirations by wanting to further their studies after finished their study at Malaysian polytechnics. This may be owing to the impression that greater academic qualifications, imply better salary and benefits, which lead to the credential inflation issue.

Polytechnic administrators should concentrate on students from lower and middle SES backgrounds in their attempts to support and sell Malaysian polytechnics to SPM leavers. Students with average secondary school performance and usually receive credit (B+, B, C, C-) in their test results should be included in the supporting and marketing strategy. Furthermore, Malaysian polytechnics seek to supply semi-professional staff for industry, nonetheless the results gathered in this study indicates that most students (72.9 percent) plan to pursue their education rather than work after graduating from Malaysian polytechnics. This is in direct opposition to the intent of the Malaysian polytechnics. Further research is required to decide why students are keener in pursuing education rather than working after graduating from Malaysian polytechnics.

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