

## TVET Educational Choice of Malaysian Polytechnic Students (Pilihan Pendidikan TVET Pelajar Politeknik di Malaysia)

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### ABSTRACT

*Students face the burden of collecting and analysing information, clarifying their own preferences, and categorizing their prioritization before making their educational choice as it is a complex and multistage process in which an individual develops aspirations to continue formal tertiary education. This paper discussed the TVET educational choice among Malaysian Polytechnics students. This study employed the QUAN-QUAL explanatory sequential design under the mixed methods model. 40 participants were purposively-selected based on their decision-making behaviour through a questionnaire (QUAN). The selected participants were divided into 10 focus groups and they were interviewed to get insights on how their educational choice was made based on their characteristics, academic credentials and decision-making behaviour (QUAL). Their responds were analysed using thematic method. Findings revealed that the main factors in the Malaysian polytechnics students' educational choice are: 1) students' characteristics – Academic performance in secondary school, elective subjects taken in secondary school, and field of interest 2) institutional characteristics – Courses offered by the institution, employment opportunities, financial matters, location of institution, and learning environment, 3) decision-making behaviour – Making comparison and satisficing, and 4) other related factors – Influence of others and lack of information. Understanding the students' factors of educational choice would assist institutions in their recruitment and enrolment of students, as well as develop and implement an effective institution development plan, particularly in student recruitment management.*

*Keywords: Educational choice, Malaysian Polytechnics, decision-making behaviour, Technical and Vocational Education and Training (TVET)*

### ABSTRAK

*Pelajar menghadapi beban mengumpul dan menganalisis maklumat, menjelaskan pilihan mereka sendiri, dan mengkategorikan keutamaan mereka sebelum membuat pilihan pendidikan mereka kerana ia adalah proses yang kompleks dan pelbagai di mana seorang individu mengembangkan aspirasi untuk meneruskan pendidikan formal di peringkat pengajian tinggi. Artikel ini membincangkan pilihan pendidikan TVET dalam kalangan pelajar Politeknik Malaysia. Kajian ini menggunakan reka bentuk eksplanatori berurutan QUAN-QUAL di bawah model kaedah campuran. 40 orang peserta dipilih secara bertujuan berdasarkan tingkah laku mereka melalui soal selidik (QUAN). Peserta yang dipilih dibahagikan kepada 10 kumpulan fokus dan mereka ditemuramah untuk mendapatkan gambaran tentang bagaimana pilihan pendidikan mereka dibuat berdasarkan ciri peribadi mereka, kelayakan akademik dan kelakuan membuat keputusan (QUAL). Respons mereka dianalisis menggunakan kaedah tematik. Penemuan mendedahkan bahawa faktor utama dalam pilihan pendidikan pelajar Politeknik Malaysia adalah: 1) ciri pelajar – prestasi akademik di sekolah menengah, mata pelajaran elektif diambil di sekolah menengah, dan bidang diminati 2) ciri institusi – kursus yang ditawarkan oleh institusi, peluang pekerjaan, perihal kewangan, lokasi institusi dan persekitaran pembelajaran, 3) Tingkah laku membuat keputusan – Membuat perbandingan dan pemuasan, dan 4) faktor lain yang berkaitan – Pengaruh orang lain dan kekurangan maklumat. Memahami faktor pilihan pendidikan pelajar akan membantu institusi dalam pengambilan dan pendaftaran pelajar mereka, serta untuk membangunkan dan melaksanakan pelan pembangunan institusi yang berkesan, terutamanya dalam pengurusan pengambilan pelajar.*

*Kata kunci: Pilihan pendidikan, Politeknik Malaysia, Tingkah laku dalam membuat keputusan, Pendidikan dan Latihan Teknikal dan Vokasional (TVET)*

### INTRODUCTION

Local industry market does affect the trends in education, as in students' choices. Students more and more often choose fields of studies that are required by the industries rather

than just obtaining a higher education diploma (Mazovian Centre for Regional Survey 2013). However, the lack of information regarding the demand for certain educational profiles are underrepresented in the labour market, there are still too many unemployment among graduates in

particular disciplines of studies. The overproduction of graduates in these disciplines of studies was worsened by the lack of fit between the structures of supply and demand of the particular disciplines of studies (Mazovian Centre for Regional Survey 2013), which then can lead to education inflation as proposed by Dore (1976).

It is crucial to introduce changes in the fields and programmes of studies offered by post-secondary education institutions to address this matter. There should be a reduction in the enrolment of students in fields of studies which there are overproduction, and increasing the number of student recruitment in the fields in which there are shortage in the industry market would tackle the risk of education inflation (Mazovian Centre for Regional Survey 2013). In 2008, the Ministry of Human Resources announced a deficiency in labour of more than 700,000 skilled workers in the industries of construction, agriculture and manufacturing. It is estimated that requests for vocational skills will continue to increase. This is caused by the 46% of 3.3 million occupations that would be generated under the National Key Economic Areas (NKEA) by 2020 would demand vocational certificates or diplomas (Companies Commission of Malaysia 2013).

One of the most obvious use for the post-secondary education decision-making model is to help the administrators in post-secondary education institutions advertise themselves more successfully to their future students (Vrontis, Thrassou & Melanthiou 2007). Besides that, programmes of studies should consider the emergence of new professions and needs of the industry market. The Boston Consulting Group Report reported in June 2011, that the findings by Performance Management Delivery Unit (PEMANDU) indicated that by 2020, tourism, retail, health care and education lines in Malaysia will still be in demand while there will be an oversupply of TVET graduates in the electrical and electronics sector. An oversupply of TVET graduates is also expected in communications content and infrastructure sector.

As indicated by the Malaysia Education Blueprint 2015-2025 (Higher Education) by the Ministry of Education Malaysia (2015), the ministry intends to build up a framework that is less centred around customary, scholarly pathways however accentuates on technical and vocational training. It is a requirement for Malaysia to move the primary concentrate on university education as the main pathway to progress, to one where scholastic and TVET pathways are both similarly valued and made strides. In this manner, Malaysian government is putting immense effort in building up the TVET segment. Other than that, it is likewise the point of the ministry to increase enrolment in TVET in the following decade. These announcements established the basis for an enquiry into decision-making process of Malaysian students in choosing TVET courses. By understanding the decision-making process in the selection of TVET courses, a specific tailored promotion scheme could be drafted to attract more SPM graduates to consider Malaysian polytechnics as their priority in

choosing post-secondary education institution to pursue their studies. It is hoped that by attracting more students into TVET, this would solve the problem of over producing graduates in the academic field.

Hence, this study was done to explore the decision-making process of Malaysian Polytechnics students in their selection of TVET courses. Three research questions were formulated for the purpose of the study:

1. How do Malaysian Polytechnics students make their educational choice based on their personal characteristics?
2. How do Malaysian Polytechnics students make their educational choice based on the institutional characteristics?
3. How do the Malaysian Polytechnics students make their educational choice based on their decision-making behaviour?

It is also hoped that through this research, the academic credentials, students' characteristics and decision-making behaviour among Malaysian polytechnics students that enrolled in different TVET programmes will be identified accordingly. These findings should provide the TVET providers in Malaysia with an indication for future planning; in terms of programme offerings and the concentration of efforts.

#### FACTORS OF EDUCATIONAL CHOICES

Post-secondary education decision research has been conducted on the many components that impact the post-secondary educational choices made by students (Kurlaender 2006). Research has additionally been conducted to decide if companions, family, and secondary school personnel impact people to go to post-secondary education (Foster 2014; Özoğlu et al. 2015; Tan 2015). Attributes irrelevant to the individual yet remarkable to the institution, for example, academic quality (Roga et al. 2015; Özoğlu et al. 2015) and cost (Lee 2014; Foster 2014; Özoğlu et al. 2015), have likewise been examined. There has been constrained research, in any case, on the decision-making process students utilize while picking a post-secondary education institution.

Secondary school performance is one of the transparent bases in which post-secondary education institutions accept or reject students. Prospective students use this information in deciding whether a specific post-secondary education institution would be of interest to them. Secondary school performance may also cause a whole set of other responses to the student that, in turn, help form post-secondary education institution choice (Chapman 1981). For example, students with good academic records will receive more encouragement to continue their education from teachers, family, and friends as compared to those with low academic results. They are more likely to receive post-secondary education institution advice from the guidance counsellor, and they are more likely to

receive post-secondary education institution scholarships. Secondary school performance is a key segment of college confirmations (Cho et al. 2008; Holland 2010; Hossler et al. 1999). As indicated by Cresswell-Yeager (2012), the students perceive their secondary school accomplishment, or absence of accomplishment, would impact their potential choices for post-secondary institution decision.

Students select post-secondary education institutions in which they believe they can get the courses they need to enter graduate school or to get jobs (Chapman 1981; James et al. 1999). Indeed, the courses that are available and the benefits they will derive from those courses are the most important criteria students seek in choosing a post-secondary education institution. This is especially true in professional and other somewhat specialized area of training and least true in content areas that are widely available. In addition, Sia (2011) also suggests that post secondary students in Sarawak do consider programme as one of the important criteria in selecting post secondary institution. This is also supported by James et al. (1999) where they found that students focused strongly on broadly perceived courses and institutional reputations when making their selections for post-secondary education institution.

The prospect of future employment is one of the reasons that motivates students in both developing and developed countries to pursue higher education. Joseph and Joseph (1998) noted that career opportunities greatly affected future students when choosing a university in New Zealand. Along with other factors, employment opportunities are perceived to be very important by high school students in the Philippines (Tan 2009). Job prospect was also rated as one of the top important factors influencing student choice of a university in Indonesia (Kusumawati 2013). Various empirical studies in the USA indicated that career opportunities are the most important factors that students consider when selecting a university (Sánchez 2014).

The literature reviews likewise showed that cost affected students' choices about college decision. What's more, Cresswell-Yeager (2012) expressed that students were constrained in their decisions on account of cost. During the choice phase, the institutional factors of size, location and fitting in become an influence, while limited knowledge about applications, and financial aid and the high cost of attending college are potential barriers to the student's college choice process (Cresswell-Yeager 2012).

First generation college students also often choose a campus that is closer to home rather than look for the right fit, which can lead to dissatisfaction or withdrawal (Choy 2001; McCarron & Inkelas 2006; Reid & Moore 2009). Student institution fit is defined as how well the student fits in with the campus environment and culture (Cresswell-Yeager 2012). Student institution fit is an extremely intuitive process, often not based completely in rational choice or fact (Hossler et al. 1999; McDonough

1997). College choice knowledge is low among low income and minority students (Engle 2007; Holland 2010; Saez et al. 2007). The students seem to have a limited knowledge about the processes, deadlines and the terminology of the college environment that will affect their choice of education (Cresswell-Yeager 2012).

## METHODOLOGY

This study employs the QUAN-QUAL explanatory sequential design under the mixed methods model. The participants are selected through a questionnaire in the initial stage (quantitative stage) of the research based on their decision-making behaviour (either they are a satisfier or a maximiser). Subsequently, insights on their decision-making process is gathered through a semi-structured focus group interview (qualitative stage). The participants were grouped into ten focus groups comprising of four participants in each group.

For this study, questionnaire is used to collect the quantitative data. There are four sections in this questionnaire. Section A provides information on the background of the students and also measuring the characteristics of the students, whilst section B is on the academic credentials and finally section C which is on the decision making behaviour of the students. Section A and B use researcher revised questionnaire, while Section C is measured by the Maximization Inventory developed by Turner, Rim, Betz and Nygren in 2012. Maximization Inventory (MI) consists of three separate scales that are decision difficulty, alternative search and satisficing. The satisficing scale is a new addition to the study of maximization behaviour. The satisficing scale offers a dimension totally different from maximization. These scales should not be added for a total score because they are measuring different things as decision difficulty and alternative search diminish well-being and decision making whereas the satisficing scale is positively related to well-being and adaptive decision making (Turner, Rim, Betz & Nygren 2012).

A pilot study had been designed to test the validity and the reliability of the research instruments before the main data collection. By using SPSS, Cronbach Alpha test was conducted for the reliability test. Students with identical characteristics of the main participants who will respond in the final data collection were selected for the pilot test. The pilot test also tests the appropriateness of the question wordings as well as identifying ambiguous questions. In this study, the questionnaire is administered to a pilot sample of first semester Malaysian polytechnics students to examine their reliability. Thus, pilot test is conducted on 47 first semester Malaysian polytechnics' students. All the students involved in this pilot test would not be included in the actual test. The data obtained from this pilot test was analysed by using Statistical Package for Social Science (SPSS) version 22.0.

TABLE 1. Summary of reliability for satisficing, decision difficulty and alternative search

No.	Construct	Reliability	Conclusion
1.	Satisficing	$\alpha = 0.771$	Average reliability value
2.	Decision difficulty	$\alpha = 0.796$	Average reliability value
3.	Alternative search	$\alpha = 0.845$	High reliability value

Table 1 shows the summary of reliability for the constructs studied in this study. It clearly indicates that the alpha value of all the constructs studied is satisfactory that is from 0.65 to 0.95. According to Chua (2013), in determining the reliability of an instrument based on Cronbach's Alpha reliability method, the alpha value of 0.65 to 0.95 is satisfactory because a low alpha coefficient ( $\alpha < 0.65$ ) shows that the ability of the items in the research instrument to measure the variable is low. On the other hand, the reliability values of 0.96 and above are unacceptable because the items in the instrument are almost the same and may overlap one another.

Interview is a purposeful interaction in which interviewer obtains information from the interviewee (Bryman 2012; Gay et al. 2014). Interview can explore and probe participants' responses to gather in depth data about their experiences. In this study, semi structured focus group interviews were conducted to provide the qualitative data.

Table 2 shows the examples of the interview protocol in this study. Unlike quantitative research, where reliability and validity are treated separately, these terms are not viewed separately in qualitative research. Instead, terminology that encompasses both, such as credibility, transferability and trustworthiness is used. Lincoln and Guba (1985) employed four criteria under trustworthiness that is credibility instead of internal validity, transferability instead of external validity, dependability instead of reliability and finally confirmability instead of objectivity. Shenton (2004) suggested few provisions that may be employed to meet those criteria.

TABLE 2. Examples of interview protocol

No.	Construct	Example
1.	Students' Characteristics	<i>Kenapa institusi/kolej tersebut merupakan pilihan utama anda?</i> (Why were these your top choices?)  <i>Kenapa anda memohon untuk belajar di politeknik?</i> (Why did you only apply to polytechnic?)
2.	Academic Credentials	<i>Apakah aspek peluang pekerjaan masa depan politeknik yang menarik perhatian anda untuk memohonnya?</i> (What aspects of future employment opportunity really impress you?)  <i>Adakah anda percaya bahawa politeknik dapat membantu anda dalam mendapatkan pekerjaan yang baik selepas tamat pengajian? Kenapa?</i> (Do you believe that polytechnic can help you to get higher employment's expectation, and wishes after graduation? Why?)
3.	Decision Making Behaviour	<i>Bagaimanakah anda menghadkan kepada pilihan-pilihan utama tersebut?</i> (How did you narrow it down to these choices?)  <i>Bagaimanakah anda membuat keputusan institusi/ kolej mana untuk dipohon?</i> (How did you decide where to apply?)

For credibility, this includes the adoption of research methods that is well established, the development of an early familiarity with the culture of participating organisations, triangulation via the use of different methods or data sources. Tactics to help ensure honesty in participants where each individual who is approached should be given opportunities to refuse to participate in the research so as to ensure that the data collection sessions involve only those who are genuinely willing to take part and prepared to offer data freely. Triangulation is employed to reduce the effect of researcher bias to ensure the confirmability of the research that is the findings are the result of the experiences and ideas of the participants rather than the characteristics and preferences of the researcher. The reasons for favouring one approach and weaknesses in the techniques actually employed are admitted.

The interviews were conducted face-to-face and were led in Bahasa Malaysia since it is the native language of the participants and to give a non-distressing condition to the interviewees to convey and give optimal information and a calm manner. To guarantee valid and credible reactions, ethical aspects were set up amid the interview procedure. The participants were informed of the objectives of the interview and they were ensured that their reactions would be treated with classification. For this reason, the real names of the participants were not utilized and were coded by the request in which the interviews were led.

The participants were purposively-selected from the population of first semester students of a three-year diploma program at Malaysian Polytechnics situated in the state of Terengganu (one of the states on the east coast of peninsular Malaysia). They had finished the survey

questionnaire based on their decision-making behaviour. Table 3 demonstrates the selected participants and their decision-making behaviour results.

The participants were selected based on the mean score of the participants' decision-making behaviour. Those with the highest mean score in the respective decision-

TABLE 3. The Focus Group Interview Participants

Focus Group	No.	Students Code	Satisficing Mean Score	Maximizing Mean Score	Educational Choice	Department
1	1	Int1/EMG1	4.90	5.13	Engineering	Electrical
	2	Int2/EMG1	4.70	5.04	Engineering	Electrical
	3	Int3/EMG1	5.00	5.00	Engineering	Electrical
	4	Int4/EMG1	5.00	5.00	Engineering	Electrical
2	5	Int1/ESG1	6.00	4.91	Engineering	Electrical
	6	Int2/ESG1	5.70	4.70	Engineering	Electrical
	7	Int3/ESG1	5.40	4.26	Engineering	Electrical
	8	Int4/ESG1	5.40	4.17	Engineering	Electrical
3	9	Int1/nEMG1	4.26	5.80	Non-engineering	Information Technology
	10	Int2/nEMG1	5.60	5.60	Non-engineering	Information Technology
	11	Int3/nEMG1	4.30	5.40	Non-engineering	Information Technology
	12	Int4/nEMG1	4.52	5.20	Non-engineering	Information Technology
4	13	Int1/nESG1	5.00	4.40	Non-engineering	Information Technology
	14	Int2/nESG1	5.10	4.91	Non-engineering	Information Technology
	15	Int3/nESG1	5.00	4.83	Non-engineering	Information Technology
	16	Int4/nESG1	4.70	4.65	Non-engineering	Information Technology
5	17	Int1/EMG2	5.40	5.48	Engineering	Electrical
	18	Int2/EMG2	5.30	5.40	Engineering	Mechanical
	19	Int3/EMG2	5.00	5.26	Engineering	Mechanical
	20	Int4/EMG2	4.80	5.22	Engineering	Mechanical
6	21	Int1/ESG2	4.80	4.78	Engineering	Mechanical
	22	Int2/ESG2	6.00	3.65	Engineering	Civil
	23	Int3/ESG2	5.90	4.43	Engineering	Electrical
	24	Int4/ESG2	5.70	4.13	Engineering	Mechanical
7	25	Int1/nEMG2	5.20	5.43	Non-engineering	Information Technology
	26	Int2/nEMG2	4.40	4.74	Non-engineering	Information Technology
	27	Int3/nEMG2	4.50	4.52	Non-engineering	Information Technology
	28	Int4/nEMG2	5.70	4.48	Non-engineering	Information Technology
8	29	Int1/nESG2	5.20	4.35	Non-engineering	Information Technology
	30	Int2/nESG2	4.80	3.48	Non-engineering	Information Technology
	31	Int3/nESG2	4.10	4.09	Non-engineering	Information Technology
	32	Int4/nESG2	3.80	3.83	Non-engineering	Information Technology
9	33	Int1/nEMG3	5.20	5.48	Non-engineering	Accountancy
	34	Int2/nEMG3	4.80	5.04	Non-engineering	Accountancy
	35	Int3/nEMG3	3.90	4.78	Non-engineering	Accountancy
	36	Int4/nEMG3	4.50	4.70	Non-engineering	Tourism Management
10	37	Int1/nESG3	5.90	4.26	Non-engineering	Tourism Management
	38	Int2/nESG3	5.70	4.13	Non-engineering	Tourism Management
	39	Int3/nESG3	5.60	3.70	Non-engineering	Accountancy
	40	Int4/nESG3	5.50	4.91	Non-engineering	Tourism Management

making behaviour (satisficing and maximizing) under the respective educational choice (engineering and non-engineering) from each of the polytechnics were chosen as participants. In this manner, 10 focus groups comprising of four participants in each group were chosen.

## FINDINGS AND DISCUSSION

The research questions were answered purely qualitatively via conducting face to face semi structured interviews with 10 focus groups comprising of 4 polytechnic students

from Malaysian Polytechnics. They were asked on how their educational choice was made based on students' characteristics, academic credentials and decision making behaviour. Their answers were analysed using the thematic method as illustrated in Table 4.

Therefore, the questions were demonstrated in details based on four main themes (students' characteristics, institution characteristics, decision making behaviour and other related factors). Indeed, each main theme includes the main aspects with regards to how the Malaysian polytechnics students make their educational choice.

TABLE 4. Themes and sub-themes from data analysis

Research Questions	Themes	Sub-themes
How do the Malaysian Polytechnics students make their educational choice based on their characteristics?	Students' characteristics	Academic performance in secondary school Elective subjects taken in secondary school Field of interest
How do the Malaysian Polytechnics students make their educational choice based on the institutional characteristics?	Institutional characteristics	Courses offered by the institution Employment opportunities Financial matters Location of institution Learning environment
How do the Malaysian Polytechnics students make their educational choice based on their decision-making behaviour?	Participants' decision-making behaviour	Making comparison Satisficing
	Other related factors	Influence of others Lack of information

### STUDENTS' CHARACTERISTICS

The first theme revealed that the participants made their educational choice based on their characteristics, which comprise of secondary school performance, elective subjects in secondary school and field of interest.

#### 1. Academic Performance in Secondary School

It was discovered that one of the primary reasons that students enlist into Malaysian polytechnics is because of their performance in their secondary school which is measured by the SPM results. This was specified by Interviewee 2 from focus group (FG) 1. Attributable to her poor execution in SPM particularly in Accounting and English, she failed to enlist into any accounting course which her coveted choice. In this manner, she picked Malaysian polytechnic engineering course:

My SPM results isn't very good, that's why I entered polytechnic. (Int.2/FG1/line151)

(I choose) Accounting, but due to my Accounting and English (in SPM results) are poor, maybe that's why (I didn't get the course I want) (Int.2/FG1/line155)

Secondary school performance which is represented by the students' SPM results is one of the components

impacting the decision procedure of educational choice on TVET. It was featured during the interviews that the SPM results assume a part in choosing the students' institution and course choice. Along these lines, in light of their SPM results the students change their course decision in order to enlist themselves in the post-secondary education institution. Hence, a recommendation is made here to feature the entry requirement of Malaysian polytechnics to the SPM graduates. This finding is supported by Cho et al. (2008), Holland (2010) and Hossler et al. (1999) whereby they found that secondary school performance is a key segment of college confirmations. Besides that, as indicated by Cresswell-Yeager (2012), the students perceive their secondary school accomplishment, or absence of accomplishment, would impact their potential choices for post-secondary institution decision. This factor in settling on educational decision was uncovered by the interviewees.

#### 2. Elective Subjects Taken in Secondary School

Some of the interviewees demonstrated that elective subjects studied in their secondary school influence their educational choices. Interviewee 2 (FG 4) studied an electrical course in his secondary school, but he was also interested in an Information Technology (IT) programme.

However, he selected an electrical engineering programme because of his basic electrical foundation.

Because before this I studied electrical, right? But (I am) interested in IT (Information Technology). So, when (I) get it (offer from polytechnic), (I) get IT. So, during study time, (I) know about electrical, don't know about IT. Better take electrical. (Int.2/FG4/line65-66).

For Interviewee 4 (FG 8) who studied accounting during her secondary education, she decided to further her studies in accounting field, because to pursue a different field would be a waste of time and effort in her opinion. Furthermore, she felt the accounting field offered a bright future for her.

I took the subject back in secondary school, so it's like a waste if I don't pursue this in diploma, because accounting field has a bright future. (Int.4/FG8/line130-131).

The findings revealed that a large portion of the interviewees showed that the elective subjects that they considered in secondary school likewise impacted their educational decision on TVET. In this way, a recommendation is proposed in this study to profile the students as indicated by the elective subjects that the students studied in secondary school in order to recognize their inclination for TVET as their educational choice.

### 3. Field of Interest

Next, the interest of the interviewees was stated as another reason that would influence the students' choice of education. The interviewees were clear of their interests and thus made their educational choice based on their interest. Field of interest was one of the main elements to consider when the interviewees made their educational choice. According to Interviewee 2 (FG 10), the choice of institution was made mainly based on her interest in the course.

For me, it's (choice of institution) because it's the field I'm in, the one I'm interested in. (Int.2/FG10/line127).

Meanwhile, for Interviewee 4 (FG 1), his choice was based on skills sets, which constituted the reason for him in choosing a TVET institution:

(I choose Institution A) Because I'm interested in skill sets. (Int.4/FG1/line61).

He also claimed that he would prefer active participation during the learning process rather than just theory. Courses involving practical skills such as wiring attracted his interest in learning:

I'm more of a hands-on person, so wiring is also alright. (Int.4/FG1/line80).

Findings also revealed that the field of interest was expressed as another factor since a portion of the interviewees were clear of their interest and choose on their

educational choice in light of their interest. In this way, a recommendation is proposed in this study to profile the students as indicated by their fields of interest in order to recognize their inclination for TVET as their educational choice. This is in line with Glasser's Choice Theory (1998) that states human beings are internally motivated, not externally motivated by rewards and punishment. It emphasizes that virtually all behaviours are chosen. Rather than seeing people as "shaped" by rewards and punishment, Choice Theory suggests that human beings always have some capacity to make choices and exercise control in their lives. Choice Theory also teaches that human beings are always motivated by what they want at that moment (interest).

### INSTITUTIONAL CHARACTERISTICS

This sub-section exhibited the institution characteristics that influenced the educational choice of students in a selected Malaysian Polytechnic. Institutional characteristics consist of courses offered by the institution, employment opportunities, financial matters, location and learning environment.

#### 1. Courses Offered by the Institution

Institution B became Interviewee 4's (FG 3) choice of institution because of the tourism course offered by Institution B.

(Institution B becomes my choice) Because I applied for tourism, but I didn't get it (Institution B). (Int.4/FG3/line16-17).

Interviewee 3 (FG 3) chose polytechnic because polytechnic offers the course that she is interested in. She chose the polytechnic that offers the course that is related to her field of interest instead of other institutions.

(I choose polytechnic) Because ... that's the field that I wanted. (Int.3/FG3/line40).

Interviewee 4 (FG 8) was offered an IT course in Institution C, but she was not interested in an IT course. She was more interested in accounting course in a polytechnic, which was offer to her. She decided to choose the institution to further her studies based on the course offered rather than the institution itself.

For me, family, like my brothers and sisters all entered university, I think I'm the first to enter a polytechnic. At first, my family didn't really agree with polytechnic, and thought I could enter a university. But after coming here for four days, get used to everything, getting to know everything, and it's accounting course, Institution C I get IT, and I'm not interested in IT. I really wanted accounting, I applied for that in Institution C, but I got IT. So, when I get accounting here, and with friends, everything is fine. It's alright, like a support for me (Int.4/FG8/line150-157).

This is in parallel with Chapman (1981) and James et al. (1999), that mentioned that students select post-secondary education institutions in which they believe they can get the courses they need to enter graduate school or to get jobs. Indeed, the courses that are available and the benefits they will derive from those courses are the most important criteria students seek in choosing a post-secondary education institution. This is especially true in professional and other somewhat specialized area of training and least true in content areas that are widely available.

## 2. Employment Opportunities

It appeared that the students trusted that they would discover better employments and at last profit on the off chance that they had a professional education than if they just had a secondary school certificate (Cresswell-Yeager 2012). The observation that work chances of the alumni from polytechnics are higher likewise urges the interviewees to pick polytechnics. They know about the high business chances of the polytechnics' graduates through the experience of others, for example, their companions and relatives.

Easy (to get a job)...because I have friends from my home town studying here (polytechnic), after graduating he worked in Company A (Int.1/FG2/line162-163).

I've heard of a lot. Many graduates from this polytechnic find jobs compared to those graduates from universities (Int.2/FG2/line167-168).

If a diploma from polytechnics, depending... I have a cousin who got a job immediately upon graduating from polytechnic (Int.4/FG1/line396-397).

Employment opportunities is another factor in students' choice due to the perception that employment opportunities of the graduates from polytechnics are higher likewise urges the interviewees to choose polytechnics. They know about the high employment chances of the polytechnics' graduates through the experience of others, for example, their companions and relatives as mentioned by Cresswell-Yeager (2012), it seemed that the students believed that they would find better jobs and ultimately make more money if they had a college degree than if they only had a high school diploma.

## 3. Financial Matters

Interviewee 2 (FG 2), Interviewee 1 (FG 2) and Interviewee 4 (FG 3) concurred that financial plays a part in choosing the decision of institution particularly the educational cost expenses and scholarships offered by the institution.

The fees (institution of choice) are cheaper (Int.1/FG2/line42).

Because the cost (Institution D's tuition fees) is low (Int.2/FG2/line108).

Yes there is, I think (financial does play role in choosing institution of choice) (Int.1/FG2/line116).

Yes, it (financial) plays a role (in my decision-making) because the course that we pick depends on the tuition fees also, like Institution D maybe the fees are higher? If tourism offered in Institution A, it's a little more expensive compared to other courses but I think if I get that course, I would still be able to afford it. Because I could take a loan (Int.4/FG3/line80-83).

Interviewee 2 (FG 2) also mentioned that her institution of choice (*Institution D*) offers scholarships and it becomes one of the reasons attracting her to choose it.

Scholarships (one of the reasons choosing Institution D) (Int.2/FG2/line127).

Interviewee 2 (FG 5) chose polytechnic instead of private universities due to higher tuition fees at the private universities.

There are financial factors, because I also got offer from Institution E, near my home in Selangor, but when I think the fees are expensive, it's private higher education institution, so I chose polytechnic. Even though it's farther (from home), but the fees are lesser than in Institution E, so better that I go further, but I will learn more (Int.2/FG5/line117-120).

Nevertheless, some interviewees found that financial does not influence their educational choice.

No, we didn't check the (tuition) fees, we know like government universities and colleges provide PTPTN (National Higher Education Fund Corporation), even private ones have PTPTN, so we are not worried. Fees in not in the question. (Int.1/FG9/line379-381)

(Financial) Doesn't really matter anyway (Int.4/FG9/line382).

The findings revealed that financial matters are also reported to be principally related to tuition fees. At the end of the day, financial matters play a part in choosing the institution decision particularly on the tuition fees and scholarships offered by the institution. Still, a few interviewees expressed that financial does not impact their educational choice. The literature reviews likewise showed that cost affected students' choices about college decision as expressed by Cresswell-Yeager (2012) that students were constrained in their decisions on account of cost.

## 4. Location of Institution

The location of the college or university can influence college choice. It is also found that some interviewees in the study tended to choose institution that is nearer to their home.

Institution of choice) Nearer to home (Int.1/FG2/line 40).



Because it's (institution of choice) nearer (to home) (Int.1/FG2/line100).

Same... it's (institution of choice) nearer to my home (Int.1/FG2/line48).

Because I really want to get into Institution D because it's in Kelantan (Int.1/FG3/line50).

Near my home, anyway, I'm not used to being far from my family (Int.3/FG3/line62).

Nevertheless, there are interviewees who wanted to get away from their home.

Because tourism is offered in Institution F, but to me Kuala Berang is too near my house. So, I want (places) out of Terengganu (Int.4/FG3/line55-56).

If possible, I want to be further away from home (Int.3/FG9/line300).

No. I wanted to get out of my own state, Perak. It was my target to go up north but ended up here (Int.2/FG10/line185-186).

On top of that, Interviewee 1 (FG 10) also believed that the location of the institution will indirectly influence the cost of living.

KPTM is alright, but the costs are high, and it's in Bangi, Bangi is in KL. Cost of living in KL is high, so we have to think it's the certificate offered is MQA certified or not, because if polytechnics are confirmed to be under the education ministry, right? So that sounds better (Int.1/FG3/line290-293).

Besides tuition fees, Interviewee 3 (FG 3) also concerned about the location of the institution because it also indirectly influenced the living cost and the daily expenses of the students. According to her, transportation cost and rental will be saved if she stays nearer to her home.

(Indirectly, location of the institution also influences) finances as well (Int.1/FG3/line194).

Yes. Take finances for example, the problem if I study out of Terengganu, I'm worried about money, to study, money for transportation, cost of living, I pity my parents (they are financing all this), so after some thoughts, I think it's better that I stay in Terengganu. At least it's not too much of a burden (Int.3/FG3/line88-91).

Besides that, the location of the institution also been linked to reduce the parents' commitments. Interviewee 3 (FG 10) stated that, "*preferably closer to home, save cost for my parents too. Because my parents have a lot of commitments.*"

This finding is in line with Choy (2001), McCarron and Inkelas (2006) also Reid and Moore (2009), whereby they stated that first generation college students often choose a campus that is closer to home rather than look for the right fit, which can lead to dissatisfaction or withdrawal.

## 5. Learning Environment

To make the decision to enrol at a college, a student must be satisfied with the student institution fit. Some of the interviewees also pointed out that the learning environment of the institution also became one of the things to consider while making their educational choice.

The lecture environment, and because all my sisters went to university, so I wanted to follow them, but I think I'm better off at polytechnics as I worry I may not get used to life in Institution D because it's a little different? They're using English and all, that's why (Int.3/FG9/line65-68).

Institution D is big, they are more exposed to Indians and Chinese, and we can mingle, get to know their way of life, so, we can improve in our language, English I mean, we can learn, we know they are expert in English (proficient in English), so from there we can learn from them (Int.4/FG9/line79-82).

I have never been here and when I see structured environmental development, I feel accustomed, because when I was in Selangor, I don't feel the environment near the sea (Int.2/FG9/line162-164).

Student institution fit is defined as how well the student fits in with the campus environment and culture (Cresswell-Yeager 2012). Student institution fit is an extremely intuitive process, often not based completely in rational choice or fact (Hossler et al. 1999; McDonough 1997). These statements supported the finding of the study, where learning environment is one of the elements to consider while making the educational choice.

### DECISION-MAKING BEHAVIOUR

Decision-making behaviour consists of maximizing and satisficing. The elements of maximizing comprise of making comparison and alternative search.

#### 1. Making Comparison

Some of the interviewees take their time and weigh a wide range of options, sometimes every possible one before choosing. The interviewees maximize their options by comparing all the available options they have in hands, and then choose the best among the options available according to their own perspectives. This process of comparing options can be done by just running through the minds and also by listing them down.

Yes (I did compare). But I didn't write them down, I just thought about it (Int.3/FG4/line191).

Yes (I did compare) (Int.4/FG3/line124).

Actually I made quite a lot of choices (Int.1/FG1/line129).

I seem to like all of it, from religious studies to accounting, and I'm also interested in wirings (Int.1/FG1/line131-132).

The interviewees also tend to collect all the information regarding the availability of the options. For example, Interviewee 2 (FG 8) admitted that he did some research regarding the course that he is interested in by asking people around him.

Yes. When I was applying through UPU, I chose something else, but I asked many people, what are the pros of taking mechanical course, they say it's good. I also did some research (Int.2/FG8/line175-177).

Meanwhile for interviewee 3 (FG 1), she did the information collection by searching through the internet regarding the institutions. Based on that information, she then matched the requirement of the institutions and her qualification, and then only she made her decision regarding the institution.

For me, if it's universities, we can check from the websites, even polytechnics as well, so from there, I sort of can (get some information) (Int.3/FG1/line375-376).

From the checks, we can know which university we can apply, then which polytechnics I can apply, and from there I make my decision (Int.3/FG1/line378-379).

The finding is in line with the definition of maximizing, whereby it is defined as evaluating those desires by judging the costs against the benefits, eventually selecting the preferences to maximize their self-interest. The students are completely rational by having all the information, knowing all the alternatives, determining every consequences and establishing a complete preference scale.

## 2. Satisficing

On the other hand, some interviewees would rather be fast than thorough, they prefer to quickly choose the option that fills the minimum criteria. Unlike the other interviewees, they do not make any comparisons, they have a specific institution in their mind and only aimed for that particular institutions. This is clearly stated by Interviewee 2 (FG 4), Interviewee 3 (FG 3) and Interviewee 2 (FG 3).

No (I didn't make any comparison), I just entered (Int.2/FG4/line201).

No. I didn't compare, because I wanted to come here, there were many choices, I picked this (PKT) as my top choice. Other institutions I chose IT, but I really wanted to get PKT (Int.3/FG3/line238-240).

I only aimed (PKT) here (Int.2/FG3/line242).

Besides that, the interviewees also satisfied and grateful with the opportunities given by the institutions to further their study.

I'm proud to be in polytechnic. It's alright if I didn't get into universities, maybe my luck is here. So I take this opportunity. Being here is great too, as long as we can study (Int.3/FG10/line93-94).

If for me, I don't think much that time, because I got PLKN, after PLKN, I went to work, then I filled in the UPU forms, I didn't have any targeted institutions, I just fill in anywhere, and I got polytechnic (Int.2/FG9/line28-30).

We can't deny, polytechnic is as good as any university, there's diploma courses, but, it's always been my ideal institution, preferably, because my brother also went to Institution D so I was thinking of following his footsteps. Because my brother now is furthering his bachelor's degree in XYZ Shah Alam. So, I was thinking to start in Institution D also, but then I got polytechnic, so I accepted it. Because in polytechnic also offers a diploma, and since it's the course I wanted, so I accepted it. I chose polytechnic (Int.4/FG9/line55-60).

The finding is parallel with the term satisficing, where it is defined as decision outcomes that are good enough to meet student's yearning aim. This means, when a favourable decision is found, student chooses that decision and stop looking for other alternatives. Thus ending the decision making process.

## OTHER RELATED FACTORS

Under the theme of other related factors, influence of others and lack of information are identified through inductive thematic analysis. Inductive thematic analysis is a process of coding the data without trying to fit it into a pre-existing coding frame. This form of thematic analysis is data driven.

### 1. Influence of Others

When the interviewees were being asked about what encouraged them to choose that particular institutions, most of them claimed that role model such as friends, school teacher and counsellor and relatives, especially those had studied before in the institutions influence the decision of choice of institution. Most of the interviewees sought advises and opinions regarding their post-secondary educational institution choices from their family members especially their siblings as listed as below.

I know about this place because my brother, he studied here before. I also asked opinions from my aunt, she said she knew a little about this polytechnic, but even before I got this course, I had wanted to study here (Int.3/FG3/line229-232).

For me, when my parents know I get offered in Terengganu, I told my mom. She told me to reject this offer, she rather I go to a private institution. Then when I referred to my dad, he asked my relatives about polytechnics, they say it's alright because it's a government polytechnic. So, there's quite a lot of

advantages. Then my mom also understands, so here I am (Int.2/FG9/line286-290).

Some of the interviewees' choices of post-secondary educational institution were influenced by their friends. According to Interviewee 2 (FG 2), she enrolls into polytechnic "*Because of the encouragements from teachers in school.*" Besides school counsellor, Interviewee 4 (FG 3) also sought opinion from her cousin as stated below:

Hm (yes). I asked the school counsellor, asked my cousin sister for her opinion, she's doing her Master's degree now (Int.4/FG3/line211-212).

It was reported that the greater part of the interviewees looked for advices and opinions in regard to their post-secondary educational institution decisions from their relatives particularly their kin. A portion of the interviewees' decisions of post-secondary educational institution were affected by their companions. This is in line with Cresswell-Yeager (2012) whereby she stated that a student's socioeconomic status, parents and family influence his or her potential college choice.

## 2. Lack of Information

In the interview, it was found that the lack of information regarding the availability of the institutions also influenced the interviewees' choice of education.

Because that time I didn't know about polytechnics (Int.2/FG2/line 69).

Hmm... I'm not sure, but I hear that PQRs are usually more focused towards skills training, such as the PQR industrial training (Int.4/FG1/line64-65).

No (idea about polytechnics) (Int. 1/FG6/line76).

Due to lack of information regarding the availability of the institutions, interviewees were not able to compare in the process of decision-making.

Because I don't know the course is offered (at which institution) (Int.4/FG4/line54).

Because before we go in, we didn't know much in detail about each university, so we couldn't really make comparison, so I asked opinions from those who studied there (Int.4/FG8/line273-274).

Interviewees' reactions appeared to feature more experiences into the truth of educational choice on TVET. In the interview, it was discovered that the absence of data with respect to the accessibility of the institutions likewise impacted the interviewees' educational choice. Because of the absence of data with respect to the accessibility of the institutions, interviewees were not ready to analyse in their decision-making process. In the interview, it demonstrates that the students did not know about the entry requirement for specific courses prior before making their choices. Despite the fact that they were interested with specific courses, they did not take up the required subject in SPM. College choice knowledge is low among low income and

minority students (Engle 2007; Holland 2010; Saez et al. 2007). The students seem to have a limited knowledge about the processes, deadlines and the terminology of the college environment that will affect their choice of education (Cresswell-Yeager 2012). These statements supported the finding whereby, lack of information regarding the availability of the institutions also influenced the interviewees' choice of education.

## IMPLICATIONS AND CONCLUSION

This study attempted to explore how students make decisions when choosing a TVET post-secondary education institution. Findings revealed that the main factors in the Malaysian polytechnics students' educational choice are: 1) students' characteristics – Secondary school performance, elective subjects in secondary school, and field of interest; 2) institutional characteristics – Courses offered by the institution, employment opportunities, financial matters, location, and learning environment; and 3) decision-making behaviour – making comparison and satisficing, and 4) other related factors – influence of others and lack of information.

There are a few implications based on this study. Firstly, by understanding the decision-making involved by students in their choice of post-secondary education institutions would assist these institutions in their recruitment and enrolment of students. Secondly, the study has implications regarding what is important to students and these may be used to develop and implement an effective institution development plan, particularly in student recruitment management. Furthermore, the study also provides insights to polytechnic management with regards to students' priorities and choice criteria.

Therefore, a suggestion is made to profile the prospective SPM students' priorities and choice criteria in order to be able to identify the prospective Malaysian polytechnic students. It has implications to the prospective students too on issue related to selection of post-secondary education institutions by providing information on this educational choice on TVET. Final implication would be to the government and regulatory bodies in Malaysia to use the insights in framing future management policies.

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