Factors Affecting Students’ Intention to Study at Higher Learning Institution of Technical and Vocational Education and Training

Rahmat Roslan Buang¹, Muhammad Khairi Majid², MohamadIkbar Abdul Wahab³, MohdZul-Waqar Mohd Tohid⁴, Allina Abdullah⁵, Khairul Firdaus Adrutdin⁶, Suhaila Yacob⁷, and Mazlan Md. Zahid⁸

¹,³,⁴,⁵,⁶,⁷,⁸Universiti Kuala Lumpur, Malaysia
²Universiti Teknologi Malaysia (UTM)

Abstract

Malaysia Higher Education Sector Blueprint 2015-2025 among others was launched in April 2015 to increase the technical and vocational education and training (TVET) enrolment from 250,000 to 650,000 by 2025. It is, therefore, important to understand the factors that influence students to consider TVET for their higher education. Extensive research has been conducted in this area involving public and private universities. However, past research has overlooked the TVET sector. This study was carried out at Universiti Kuala Lumpur (UniKL), one of the technical universities in Malaysia, in two stages. Stage one involved conducting focus group interviews; while the second stage included developing the questionnaire and sending it out to 131 first year undergraduate students using purposive sampling. The study essays to explore- (i) the factors that influence students’ decision to study at UniKL; (ii) if the influencing factors were affected by parents’ household income; (iii) whether students’ residential locations have an impact on the factors; and (iv) the fundamental sources of information to students to evaluate tertiary education. It was found that the most significant factors that affected students’ decisions were- the value of education, a degree’s content and structure, physical aspects, facilities and resources, and information. Moreover, it was seen that students coming from different income-classes incurred various amounts of education and information cost, but the residential location, apparently, did not play any role in the decision of whether to study at UniKL. Finally, the study also showed that the university website, counsellor and parents acted as the major sources of information provider for the students. Administrators of TVET Higher
Learning Institutions are urged to focus on developing a prestigious reputation. Even though, higher TVET institutions already have specialized programs but more work is required to raise the promotion and the publicity of TVET programs to the public.

**Keywords:** Higher learning institutions, influencing factors, student recruitment, TVET, Universiti Kuala Lumpur, education blueprint.

1. Introduction

Compared to other developing nations, democratizing higher education has enabled Malaysia to meet its human resource capital demands, necessary for economic development of the country, for the last three decades (DOHE, 2015). Higher Learning Institutions (HLIs) have played a significant role in the development of the national socio-economy and human resource capital. A rapid increase in the number of students and expansion of various study programs, has led both public and private HLIs to grow quickly. In tandem with increasing globalization, HLIs must become more competitive and sustainable, in order to ensure their position amongst the best universities in the world. Establishment of HLIs began in Malaysia with the inception of University of Malaya (UM) in 1961, which was then followed by the University of Science Malaysia (USM) in 1969 and Tunku Abdul Rahman College was also inaugurated the same year. Since then, Malaysian HLIs have constantly been trying to upgrade their status as a centre of educational excellence, not only in Malaysia but also internationally. Increase in the number of HLIs has opened a gate way for more students to pursue their tertiary education.

Public universities in Malaysia are presently categorized into three groups, namely research universities, focused universities and comprehensive universities. To date, 20 public HLIs have been established, of which, four are research universities, four comprehensive and twelve focused universities. Research universities mainly focus on research activities and teaching based on Research and Development (R&D). They are- University of Malaya (UM), National University of Malaysia (UKM), Putra University of Malaysia (UPM) and University of Science Malaysia (USM). Focused universities- like Northern University of Malaysia (UUM), Sultan Idris University of Education (UPSI), University of Malaysia Pahang (UMP) and Tun Hussein Onn University of Malaysia (UTHM) - concentrate on specific fields such as technical education, management and defence.

But Comprehensive Universities, on the other hand, offer courses in various fields of studies
for all levels of education including pre-undergraduate, undergraduate and postgraduate degrees. The universities are MARA University of Technology (UiTM), International Islamic University Malaysia (UIAM), University of Malaysia Sabah (UMS), and University of Malaysia Sarawak (UNIMAS).

Alongside the growth of public HLIs, the private ones have also played a big role in offering tertiary education opportunities to the people. With the setting up of several institutes such as Goon Institute, Stamford College and Maktab Kadir Adabi in the 1950s, the private HLIs began its contribution (DOHE, 2015). In the 1990s, however, private HLIs went through further developments as more courses in various fields like business, engineering, communication, computer, and information technology were offered through collaborative programs with foreign countries. These programs were mostly conducted through twinning programs. In the twinning programs (1+2, 2+2 or 3+1), students were required to continue the second stages of the final or last two years of their study at a university abroad. The world economic recession in 1997 had a significant impact on the development of local private HLIs. With a massive reduction in the number of government sponsored students for overseas study, non-university level private HLIs were allowed to manage their programs in collaboration with universities abroad through the 3+0 programs where students complete their study at local private HLIs. Until the end of 2000, 32 private HLIs were permitted to manage the 3+0 program.

Private HLIs in Malaysia are currently grouped in two categories, private HLIs with University status and private HLIs with Non-University status (college). For the private HLIs with University status, there are three sub-categories which are University status, University College and Foreign University Branch campus. In 2009, there were 20 private HLIs with University and University College status, five Foreign University Branch campuses and 393 colleges.

Malaysia Higher Education Sector Blueprint 2015-2025, launched in April 2015 by the Prime Minister of Malaysia, aspires to increase technical and vocational education and training (TVET) enrolment from 250,000 to 650,000 by 2025. The United Nations Organisation for Education, Science and Culture (UNESCO) defined TVET as “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences as well as the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life”. In Malaysia, there are
seven ministries and agencies involved in TVET education, namely- Ministry of Education, Ministry of Human Resources, Ministry of Youth and Sports, Ministry of Rural Development, Ministry of Agriculture, Ministry of Defence and Ministry of Works. One of the universities that offers TVET at tertiary level is the Universiti Kuala Lumpur (UniKL), a leading university in engineering technology established in 2002. It is completely owned by Majlis Amanah Rakyat (MARA), an agency under the Ministry of Rural Development. UniKL is given the mandate by the government to upgrade the status of technical education in Malaysia (UniKL, 2013). Despite quality programs and graduates, some prospective students and parents still view TVET as a less attractive pathway compared to traditional university education, thus limiting the number of applicants for TVET courses. TVET programs do not necessarily attract students with stronger academic qualifications; it could be due to the perception that TVET qualifications offer less lucrative career and academic progression (DOHE, 2015). As a result, it becomes very important to understand the factors that influence students to consider TVET for their tertiary education. Taking the above into consideration, this research focuses on the identification of the important factors students consider important while choosing an HLI of TVET to carry on with their tertiary level studies. This research has the following objectives:

i. To identify factors that influence students to study at a TVET HLI.

ii. To investigate if the influencing factors are affected by students’ household income;

iii. To inspect if the influencing factors are affected by students’ residential locations

iv. To ascertain fundamental sources of information to the prospective students in exploring tertiary education.

2. Literature review

2.1. Important factors in the choice of a tertiary education

Baird (1967) was one of the firsts to study the factors influencing the choice of tertiary education. The study surveyed 18,378 students and divided the respondents into eight groups related to educational goals. The important attributes for choosing a college used in the survey were- the atmosphere and reputation, facilities, personal influence and other considerations. Using descriptive statistics, the result derived was it was the educational goals that mainly influenced the reasons for choosing a college. For example, 51% of the student respondents with “secure professional training” stated educational goals as an important attribute for choosing a
college. This group was relatively frequently influenced by the advice of the high-school teacher.

Tierney (1983) sampled 599 students from several communities in suburban Philadelphia, USA. Using cluster analytic procedure, the study grouped the samples into eight clusters (according to the selected institution) and examined four attributes of student choice criteria, namely- selectivity, size, tuition cost and distance of the selected institution from home. The results found was that preferred choice criteria were dominated primarily by larger institutions with moderate quality, cost and located approximately 150 miles from the students’ home.

Joseph and Joseph (1998) looked at demand-side as opposed to supplier-side when identifying the needs of potential students in tertiary education for strategy development. The researchers first collected data from a series of focus group interviews and then developed questionnaire based on the focus group findings. The study sampled 300 final year high-school students in the North Island of New Zealand. The study found that the potential tertiary student perceived the value of education as the most important dimension prior to choosing an HLI followed by degree’s content and structure, cost of education, physical aspects and facilities, and general factors (information and peer/family influence). Joseph and Joseph (2000) repeated the same study pattern but applied the model to Indonesian setting. Potential tertiary students from Indonesia ranked course and career information as the most important factor followed by physical aspects and facilities, cost of education, degree’s content and structure, and finally the value of education.

In Malaysia, Fernandez (2010) investigated factors that influence students’ choices of public universities. Using questionnaire-based approach, the survey was administered to the first-year University Science of Malaysia’s (USM) undergraduates and obtained 167 valid responses. Using descriptive analysis, the study found that students considered high quality of education as the main factor followed by lower cost, access to financial assistance, good facilities, parental advice, language, course availability and lastly the peer recommendation. Ahmad Zamri and Nordin (2013) also studied the factors influencing students’ choice of Malaysian public university. The participants for the study were 1,584 prospective students from pre-university institutions. The study employed a 32-items self-developed questionnaire measuring the aforementioned factors. Results showed that the respondents endorsed
university’s image as the most influential factor followed by university’s environment, facility provided and courses offered by the university.

In Singapore, Alan (2011) studied the factors influencing students’ selection of a private educational institution. A self-administered questionnaire was given to a randomly selected cohort of respondents at selected institutions. A total of 245 students took part in the study that classified the respondents into three groups. The first group placed greater importance on accessibility and location, campus environment and academic reputation. The second group placed greater importance on program relevancy and academic reputation while the last group placed greater importance on the program relevancy and academic reputation.

2.2. The effect of family household income to the factors influencing the choice of a tertiary education

A research done in Australia involving 7,000 students in three states, revealed large differences between attitudes of school students towards their education, particularly on the possibility of going to university. Differences in socioeconomic background were, apparently, the dominant factor in students’ perspective on higher education.

On average, students from lower socioeconomic backgrounds compared to students from higher socioeconomic background, usually tend to believe that their families cannot afford the university fees and that may prevent them from attending university (James et. al., 1999). In the Malaysian setting, socio-economic status (SES) also plays an important role and creates a substantial impact on students in making their decision to enrol at HLI. SES can be indicated by a number of sub-concepts, for instance- employment status, occupational status, educational achievement and household income.

Parents with high or low income reacted differently to their children’s education. It was observed that matriculated students from high-levelled income households exhibited differences when compared to students from low-income level households. For example, students from high-income level households were more concerned with the cost of study, while on the contrary, students from low-income base paid more attention to information. However, the difference was quite subtle (Norbahiah et. al., 2013).

2.3. The effect of residential location on the factors in the choice of a tertiary education

Richard (2001) examined the relatively low higher education participation rate of
people living in rural or isolated areas in Australia. The research involved a quantitative comparison through a survey on school students, yielding 7,023 useable responses. In the study it was found that the distance from the university barely created any impact on the higher education participation rate. Although the urban students, compared to the rural ones, usually believed that their parents wanted them to go to universities, but the rural students had more encouragements, due to factors associated with looking for independence; with the belief that life at university will be exciting. John et al (2013) examined the impact of travel distance on the decision of school-leavers to pursue to higher education in Ireland. His study also revealed that when factors such as students’ ability were taken into account, the travel distance did not make much of a difference in the higher education participation decision. However, further analysis showed that travel distance has a notably negative impact on participation for those from lower social classes, and that this impact intensifies as the distance increases.

2.4. **Important source of information in exploring tertiary education**

Prospective students use a combination of different sources of information to make their final decision. The most widely-used source of information is the Internet, as 90% of the information is gathered from university websites. It is evident that the Internet is an important tool for both urban and rural students alike. Other common sources of information are friends, parents, student counsellors and education fairs. Printed materials such as prospectus, brochures, pamphlets, and newspaper to a lesser extent are also used as a source of information (Fernandez, 2010). Looking at the literatures, it is apparent that various studies on factors influencing students’ selection of an institution have been carried out for both public and private HLIIs, but so far there have not been any studies done on TVET HLI. This research aims to explore the factors that influence students in the selection of a TVET HLI, thus contribute to the body of knowledge as well as enriched the literature in this area.

3. **Conceptual Framework**

The relationship between independent variables (IVs) and dependent variable (DV) used in this study is illustrated in the conceptual framework as shown in Figure 1.
4. Research method

This study was carried out at Universiti Kuala Lumpur (UniKL), one of the technical universities in Malaysia, in two stages. The first stage involved conducting focus group interviews where a total of 30 UniKL students from various programs and years were randomly chosen to participate. Using brainstorming technique, the students were asked to recall the reasons or factors why they chose UniKL for their further tertiary education. The exercise generated 72 statements. Using Affinity Diagram technique, the researchers grouped and classified the statements according to logical themes (category). Table 1 shows the categories (factors) and sample statements from the brainstorming and Affinity Diagram exercises.

Table 1: Category of Factors and Sample Statements

<table>
<thead>
<tr>
<th>Category</th>
<th>Sample Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of education</td>
<td>Scholarship is available for eligible students</td>
</tr>
<tr>
<td>Degree’s content and structure</td>
<td>Programs matched with student’s interest</td>
</tr>
<tr>
<td>Physical aspects and facilities</td>
<td>Location near to hometown</td>
</tr>
<tr>
<td>Value of education</td>
<td>Programs matched with industry’s needs</td>
</tr>
<tr>
<td>Information</td>
<td>Institution provides information on industry demand</td>
</tr>
<tr>
<td>Influence of significant people</td>
<td>Family told student about the program</td>
</tr>
</tbody>
</table>
The second stage involved developing a questionnaire based on the focus group findings. The questionnaire had three sections. Section A asked the respondents to what extent they agree that the listed factors have influenced their decision to further their study to a technical university. This section comprised of 29 items (25 items for independent variables and four items for dependent variable), with scalar of 1- Strongly disagree- and 5- Strongly agree. Section B dealt with the ranking of the most important sources of information. This section asked respondents to rank seven different sources of information on a scale of 1- being most important- and 7- being least important. The score of importance for each source of the information was computed by multiplying the rank, \( r \) and the frequency, \( f \). Then, all the scores for each rank were summed up to get the total score. The lowest total score indicated the highest rank while the highest total score indicated the lowest rank. Section C collected demographic information of the respondents. The categories and sample items of Section A are as follow:

(1) **Cost of Education**
- The university provides education at a reasonable cost.
- The university makes financial aid (loan) available to the students or facilitates the loan application.

(2) **Degree’s Content and Structure**
- The university provides a wide range of courses for students to select.
- The university provides students with a number of specialized programs to suit students’ career aspirations.

(3) **Physical Aspects, Facilities and Resources**
- The university is situated in a suitable location.
- The university provides students with the necessary resources and facilities required for their learning.

(4) **Value of Education**
- The university has a good reputation.
- The degrees offered by the university are recognized by the industry and job market.

(5) **Information**
- The university provides students with information about the field of study they wish to
pursue (e.g. course information, subjects, syllabus, etc.).

- The university provides its students with information regarding career opportunities after graduation.

(6) Influence of Significant People
- Students rely on family influence when it comes to choosing a university (parents, siblings, relatives, etc.).
- Students rely on school teachers / counsellor influence when it comes to choosing a university.

(7) Intention to Study at a HLI of TVET (Dependant Variable)
- I am willing to pay or searching for scholarship or loan in order to pursue higher education.
- I will recommend this university to other people to pursue their higher education.

The sample respondents for this study were first year undergraduate students at one of the UniKL’s campuses which were selected using purposive sampling. Choosing the first year students as the sample reduced bias because education is a long-term service and students’ expectations might change with the familiarity of the services. Thus, selecting students of second year or higher years may lead to biasness to the study (Joseph and Joseph, 1998). The survey was handed over to student representatives, who in turn distributed it to the students. Of the 257 distributed questionnaires, 131 of them were returned giving the 51% response rate. All the returned questionnaires were usable; meaning that the respondents had answered the questionnaires completely.

5. Results and Findings

Kaiser-Meyer-Olkin (KMO) and Bartlett’s test results showed the value of 0.841 for IVs and 0.756 for DV, both bigger than 0.5 indicting that the sample size used in this study was sufficient (Coakes and Steed, 2001). Face and content validity of the questionnaire were certified by two experienced lecturers and one Head of Section from UniKL. The test of consistency for overall items gave high values of Cronbach’s Alpha which is 0.895 for IVs and 0.823 for DV. The coefficient Cronbach’s Alpha with value from 0.6 to 0.95 shows the instrument is good and suitable to use (Chua, 2006). Cohen (1988) suggested the relationship between variables with the value of Pearson correlation coefficient between 0.5 and 1.0 as strong, 0.30 and 0.49 as medium,
and 0.10 and 0.29 as weak. The result of Pearson product-moment correlation analysis in Table 2 shows that there is a strong positive correlation between Value of Education and Intention to Study at a HLI of TVET ($r = 0.550$), while correlation coefficient for other variables (Information, Degree’s Content and Structure, Cost of Education, Physical Aspects, Facilities and Resources) were medium and positive. The coefficient for Influence of Significant People is weak and positive ($r = 0.109$) but not significant.

Table 2: Pearson Product-Moment Correlations Test Result

<table>
<thead>
<tr>
<th>Influencing Factors</th>
<th>Pearson Correlation Coefficients, $r$</th>
<th>Strength of Relationship between IVs and DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Education</td>
<td>0.550**</td>
<td>Strong</td>
</tr>
<tr>
<td>Degree’s Content and Structure</td>
<td>0.454**</td>
<td>Medium</td>
</tr>
<tr>
<td>Physical Aspects, Facilities &amp; Resources</td>
<td>0.400**</td>
<td>Medium</td>
</tr>
<tr>
<td>Cost of Education</td>
<td>0.354**</td>
<td>Medium</td>
</tr>
<tr>
<td>Information</td>
<td>0.350**</td>
<td>Medium</td>
</tr>
<tr>
<td>Influence of Significant People</td>
<td>0.109</td>
<td>Weak</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)**

The respondents of this study comprised of students coming from low income base families (RM 2,300 or less per month) and medium/high income base families (more than RM 2,300 per month). The breakdown between the two groups is 56.5% and 43.5% respectively. Table 3 shows independent sample t-test analysis to identify the differences in opinion of the respondents between the two groups. The result shows two factors with significant differences, namely- the Cost of Education and Information. Respondents coming from medium and high income families displayed higher mean score for both Cost of Education and Information factors compared to the other group.

Table 3: Independent Sample t-Test Result According to Household Income

<table>
<thead>
<tr>
<th>Influencing Factors</th>
<th>Low Income (mean)</th>
<th>Medium &amp; High Income (mean)</th>
<th>$P$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Education</td>
<td>3.83</td>
<td>4.04</td>
<td>0.018</td>
</tr>
<tr>
<td>Degree’s Content &amp; Structure</td>
<td>3.95</td>
<td>4.10</td>
<td>N.S</td>
</tr>
<tr>
<td>Physical Aspects, Facilities &amp; Resources</td>
<td>3.86</td>
<td>3.98</td>
<td>N.S</td>
</tr>
</tbody>
</table>
An independent sample t-test was also carried out to identify the differences between respondents’ residential locations, specifically those who were coming from the Southern states of Malaysia (Johor, Melaka and Negri Sembilan) and Non-Southern states (the rest of the states in Peninsular Malaysia as well as Sabah and Sarawak). The result showed that the two groups were not statistically different between each other for all factors. As described previously, this study identified seven sources of information that prospective students usually use to find out about tertiary education. The result shown in Table 4 indicated that the top three sources of information used by the students to learn about TVET HLIs were the university website, school counsellor and parents.

Table 4: Rank Order of the Important Source of Information

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Total Score</th>
<th>Rank of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>University website</td>
<td>231</td>
<td>1</td>
</tr>
<tr>
<td>School Counsellor</td>
<td>248</td>
<td>2</td>
</tr>
<tr>
<td>Parents</td>
<td>265</td>
<td>3</td>
</tr>
<tr>
<td>Education Fair</td>
<td>272</td>
<td>4</td>
</tr>
<tr>
<td>Friends</td>
<td>335</td>
<td>5</td>
</tr>
<tr>
<td>Newspaper / Magazines</td>
<td>362</td>
<td>6</td>
</tr>
<tr>
<td>Prospectus / Brochures / Pamphlet</td>
<td>389</td>
<td>7</td>
</tr>
</tbody>
</table>

6. Discussions and Conclusions

Present study has identified that the strongest factor which influence students’ intention to study at an HLI of TVET to be the Value of Education followed by other factors such as Degree’s Content and Structure, Physical Aspects, Facilities and Resources, Cost Of Education and Information. Based on the findings, it is important for TVET HLIs to understand that students nowadays are keen to register with HLI that has good reputation as it increases their chance to get employed after completing their study. Administrators of TVET HLIs are urged to develop good reputation using various promotional tools such as testimonials from alumni who
are presently employed by big corporations from different industries. Close relationship with strategic international industrial partners is another way to build up institutional reputation. Academicians in TVET HLIs may acquire latest technology and know-how from the industry experts, thereby improving the content of teaching and learning. UniKL for example already has specialized programs such as Quality Engineering and Industrial Logistics. However, more work has to be done in order to intensify the promotion and circulate the information to the public about each program, the potential career after the completion of the programs and also success stories from the alumni.

Present study also found that respondents coming from medium and high income families showed higher concern especially on the Cost of Education factor. This result does not mean the cost factor is unimportant to the respondents from low income families. Rather, it can be deduced that students from low income families were aware that they were eligible for education loan or scholarship from various government or state agencies. This situation is unique to Malaysia, whereby the government provides various channels of financial assistance especially to low income citizens. As such, this group of people did not feel cost of education as a deterrent to obtain tertiary education. However, it may be harder for students from medium and high income families to get the education loan or scholarship and as a result, they are more sensitive to the cost factor. Therefore, administrators of TVET HLIs should not only focus on prospective students from low income family (by promoting scholarship and loan) but also address the needs of students from high income family. One approach that TVET HLIs may apply is the fee discounts to the children of alumni or siblings of existing students, where siblings register full-time on programs at a particular TVET HLI, each second and subsequent sibling is entitled to a discount of certain percentage of the tuition fee. This discount should be made automatic on evidence of the sibling relationship. This approach may lead to increasing demand from high income family. The most important sources of information that were sought after by the prospective students to learn about technical universities were the university website, school counsellor and parents.

Competition in education industry is becoming more aggressive with many new programs offered by both public and private universities. It is, therefore, important for TVET HLIs to provide sufficient information to the right channels. For example, UniKL currently has about 130 programs; it is not an easy task for prospective students and parents to understand
what each program offers and finally select the right program for their tertiary education. In addition to written information on the university website, information in the form of video clips related to academic programs, learning facilities, career opportunities and comments from alumni are also useful and interesting to prospective students and parents. It is also interesting to learn that school counsellor is one of the essential sources of information to prospective students, that’s why, TVET HLIs should develop specific programs with the school counsellors so that they are equipped with up-to-date information about the academic programs and changes in the higher education. In summary, it is crucial for administrators at TVET HLIs to understand the influencing factors that prospective students consider when choosing a technical university. To sustain and succeed in the increasingly competitive education industry, each TVET HLI needs to identify the critical factors, develop strategies to address the factors and finally deliver the right information to the selected target audience through the most effective communication channels.

References


