Factors Influencing Student Choice: A Study of a Malaysian Public University

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ABSTRACT

This paper discusses a study of the information sources employed by students to get information regarding University Malaysia Sarawak (UNIMAS) and also the factors influencing students' choice of UNIMAS. In addition, differences in sources of information and factors of influence based on types of faculty and selected student demographics were also examined. This cross-sectional survey research was carried out with a sample consisting of 1,396 first-year students in UNIMAS. The findings of the study showed that "Word of mouth through friends and relatives" and "UNIMAS website" were the two main sources of information. Furthermore, "Academic Program Choice", "Quality of Teaching and Academics", "Employment Prospect" and "University Choice" were factors contributing towards students selecting UNIMAS to pursue their studies. Inferential statistical analyses consisting of independent t-tests and One-way ANOVA yielded mixed results that could have implications for UNIMAS and other public higher education institutions in employing appropriate strategies to target different segments of prospective students.

Keywords*: information, universities, survey, quality, choice*

Introduction

A rapid increase in the number of public and private universities in Malaysia in recent years has resulted in an increasingly competitive tertiary learning environment (Ministry of Higher Education, n.d.). Mohd Anuar Marzuki, Ravindran and Syed Musa Alhabshi (2008) suggest that higher education in Malaysia is exposed to a multitude of issues such as performance and funding, graduate employability, research, consultancy, student recruitment, innovation and internationalization. In terms of student recruitment, higher education institutions in Malaysia increasingly have to compete for students in recruitment markets. Therefore students have a wide choice of universities to select from while public universities have to compete to attract the best students.

Universiti Malaysia Sarawak (UNIMAS) was established in 1982 and is a relatively new public university in Malaysia. In addition, UNIMAS is located in East Malaysia and its distance from Peninsular Malaysia serves as a deterrent for potential students. Therefore, UNIMAS faces challenges in positioning itself as a university of choice among students and a strategic move towards achieving this aim is through the understanding of the important information sources and factors that could contribute to students' preference for UNIMAS.

Purposes of the Study

The main purpose of this study was to investigate the sources of information students used and factors that affected their choice of UNIMAS, in addition to differences in sources of information and influential factors based on selected demographic characteristics of the students and the various faculties in UNIMAS.

Review of Related Literature

Studies in countries such as the United States, Europe, Australia and Turkey have looked into factors that could impact on students' selection of higher educational institutions. A few relevant past studies are reviewed and discussed below.

Krampf and Heinlein (1981) in a study at a university in the United States reported that students tended to focus on factors such as the attractiveness of a campus, informative campus visits, recommendation

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from family members, good programs in their major, informative university catalogues, proximity to home and a friendly campus atmosphere in selecting a university. Hooley and Lynch (1981) investigating the choice patterns of potential students from universities in the United Kingdom found six factors students used in deciding on their choice of university. These were suitability of courses, location of a university, academic reputation of a university, distance of home to the university, type of university (modern/ old), and parents' and teachers' advice.

Mazzarol, Soutar, and Tien (1996) completed a study using a sample of international students studying in Australia and reported that future employers' recognition of a university's degree was the most important determining factor. Other factors reported by Mazzarol et al. (1996) in descending order of importance were the institution's academic reputation, its willingness to take into consideration prior qualifications and the academic staffs' reputation and expertise. Turner (1998) in his study among business undergraduates enrolled at a university in Australia listed future job prospects, employers' perceptions of degrees obtained, modern facilities at the university, teaching standards and international recognition of the university programs as crucial factors. Soutar and Turner (2002) reported that the four most important factors influencing Australian school leavers were course suitability, academic reputation, job prospects and teaching quality.

Lin (1997) investigated the reasons for student choice of an educational institution in the Netherlands. This study reported that the significant factor impacting on student choice of an institution were the quality of education offered, career opportunities, institutional reputation, opportunity for traineeships, faculty qualifications, academic standards, availability of modern facilities, curriculum emphasis, quality of student life and an international student body.

Keskinen, Tiuraniemi, and Liimola (2008) conducted a study involving psychology departments of six universities in Finland. Keskinen et al. (2008) listed the location of university, familiarity with programmes offered by university, familiarity with university, and availability of programmes as some of the major factors influencing students' choice of a university. A university's proximity to the students' hometown, having acquaintances in towns near to the university and a pleasant living environment surrounding the university had a positive impact on students' decision to select a university. Availability and familiarity with programmes offered also enhanced the chances that a student would select the university.

Yamamoto (2006) examined the criteria that affected students' choice of a university in Turkey. This study reported personal preferences, parents' inclinations, university ranking, and friends as some of the major influences. Most students made their university selection based on their own decisions without outside influences. For those affected by external and situational factors, parental influence had a high impact on students' choice. High school advisors did not play a key role. In terms of university's promotional efforts, more students were affected by the university's web page, followed by families, friends and printed advertisements. Promotions in high schools, fairs and newspapers advertisements were not as influential.

A summary of the past research would indicate that factors such as course suitability, university location, academic reputation, distance from home, type of university, family opinion, job prospects, quality of teaching and campus atmosphere have considerable influence on students' choice of a university to pursue their study. Furthermore, some of the key information sources to consider are university web page, advertisements, printed materials and family sources. Although these findings are from a Western context, these factors have been suggested as possible factors to be investigated in the present study.

Research Methodology

This cross-sectional survey research used a questionnaire for data collection. The 2,040 first year students enrolled in programs offered by the eight faculties in UNIMAS for the 2007/08 academic year constituted the population of the study. Using a stratified random sampling method based on the criteria of faculty and academic programs, a sample of 1,396 students (approximately 68 percent of the population) was selected as respondents of this study.

The questionnaire used in this study was adapted from instruments used in studies by Hooley and Lynch (1981), Lin (1997), Turner (1998) and Soutar, and Turner (2002). The questionnaire had three sections. Section A was made up of questions for gathering information on selected demographic characteristics of the respondents. Section B consisted of 12 closed-ended items. These items gathered information on respondents' sources of information about the university and also asked them to state the extent of the impact of each of these sources on their choice.

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Section C comprised 46 closed-ended items which measured factors influencing students' selection of a university. The 46 items were further sub-divided into six sub-sections of "University choice" (12 items), "Institutional reputation" (7 items), "Personal fit" (11 items), "Academic program choice" (6 items), "Employment prospect" (5 items) and "Quality of teaching and learning" (5 items).

The close-ended items in Section B and Section C had six choices of response ranging from "Very little influence", "Little influence", "No influence", "Strong influence", "Very strong influence", to "Not applicable". Data collection was carried out during the second semester of the 2007/08 academic year in February 2008.

Findings and Discussions

Reliability of the Questionnaire

Based on the findings from an initial pilot study carried out with 72 third year Education students from the Faculty of Cognitive Science and Human Development (FCSHD), UNIMAS, the Cronbach Alpha (á) values for Section B and the six sub-sections in Section C of the questionnaire for the pilot study were more than 0.7 (Nunnally, 1978) indicating that the questions were reliable for use in the actual study (refer Table 1). Reliability analyses based on the actual research sample likewise showed the questionnaires to be reliable (refer Table 1).

Table 1: Reliability of the Questionnaire Based on Pilot and Actual Studies

Questionnaire	Pilot Study (N = 71)	Actual Study (N = 1396)
Section B:		
Source of information on UNIMAS (12 items)	0.914	0.879
Section C:		
University choice (7 items)	0.753	0.735
Institutional reputation (7 items)	0.883	0.913
Personal fit (11 items)	0.860	0.850
Academic program choice (6 items)	0.787	0.847
Employment prospect (5 items)	0.770	0.894
Quality of teaching and learning (5 items)	0.896	0.910

Demographic Data

As shown in Table 2, the breakdown of the respondents by faculty generally reflected the distribution of students amongst the faculties in UNIMAS.

Table 2: Distribution of Respondents by Faculties

Faculty	Frequency	Percent
Faculty of Engineering (FE)	141	10.1
Faculty of Medical and Health Sciences (FMHS)	100	7.2
Faculty of Resource Science and Technology (FRST)	296	21.2
Faculty of Computer Science and Information Technology (FCSIT)	28	2.0
Faculty of Economics and Business (FEB)	237	17.0
Faculty of Applied and Creative Arts (FACA)	242	17.3
Faculty of Cognitive Sciences and Human Development (FCSHD)	150	10.7
Faculty of Social Sciences (FSS)	202	14.5
Total	1396	100.0

Likewise, as shown in Table 3, the breakdown of the respondents in terms of gender reflects the ratio of female to male students in UNIMAS which was approximately 2:1. The distribution of gender by ethnicity (refer Table 3) also matches the composition of the major races found in Malaysia.

Table 3: Distribution of Respondents by Gender, Ethnicity and Residence

Selected Demographic Variables	Frequency	Percentage
Gender		
Male	431	30.9
Female	959	69.7
Omitted	6	0.4
Ethnicity		
Malay	623	44.5
Chinese	399	28.6
Indian	61	4.4
Sarawak Bumiputera	223	26.0
Sabah Bumiputera	61	4.4
Other Bumiputera	13	0.9
Others	8	0.6
Omitted	8	0.6
Residence		
Urban	876	62.3
Rural	426	30.5
Omitted	94	6.7
Total	1396	100.0

Sources of Information

This section provides a summary of the findings on the sources of information the respondents used in obtaining information regarding UNIMAS. A more detailed description of the findings is provided in Songan, Hong, Tonga, Abdul Rahman, and Tan (2000). Based on the mean values reported in Table 4, "word of mouth through friends and relatives" and "UNIMAS' website" were the most influential source of information on UNIMAS. Other important information sources were "*Unit Pusat Universiti* Guides" (UPU Guides), "school teacher career talks" and "UNIMAS published materials" with almost equal means. "Newspaper articles", "UNIMAS road show", "school visit to UNIMAS", "newspaper advertisement", "UNIMAS open day", "UNIMAS telephone hotline" and "documentary on UNIMAS in television and radio" were less important sources of information based on the respondents' responses.

Table 4: Sources of Information and the Extent of Their Influence

	Sources of Information	Mean	Std Dev
1	Friends and relatives	2.47	1.26
2	UNIMAS website	2.46	1.21
3	*Unit Pusat Universiti* (UPU) Guides	2.08	1.30
4	School teacher career talk	2.06	1.30
5	UNIMAS published materials	2.01	1.26
6	Newspaper articles and supplements	1.99	1.26
7	UNIMAS roadshow event and career fairs	1.94	1.29
8	School visit to UNIMAS	1.84	1.37
9	UNIMAS newspaper advertisements	1.83	1.28
10	UNIMAS open day	1.82	1.31
11	UNIMAS telephone hotline	1.73	1.33
12	UNIMAS documentary on television and radio	1.68	1.33

Notes: The 5-point Likert scale used in the questionnaire (0 = No Influence, 1 = Very Little Influence, 2 = Little Influence, 3 = Strong Influence, 4 = Very Strong Influence).

Differences in Influences of Information Sources

Gender and Residence

The respondents were asked to rate the extent of the influence of the 12 major sources of information students used to decide on choosing UNIMAS as the place of study. Independent t-tests analyses found no significant gender differences in seven of the sources of information.

The five sources of information indicating gender differences were "UPU Guides"(t(1263) = -2.483, p = 0.013), "UNIMAS published materials" (t(1253) = -2.226, p = 0.026), "UNIMAS telephone hotline" (t(1242) = -2.893, p = 0.004), "School visit to UNIMAS" (t(1164) = -2.013, p = 0.044) and "Newspaper articles and supplements" (t(1247) = -3.088, p = 0.002). The females generally placed greater importance on these five sources of information than did males.

For rural-urban comparisons significant differences were found in seven of the twelve sources of information, namely "UPU Guides" (t(1184) = -2.757, p = 0.006), "UNIMAS published materials" (t(1169) = -2.557, p = 0.011), "UNIMAS telephone hotline" (t(1163) = -3.028, p = 0.003), "School teacher career talk" (t(1170) = -2.737, p = 0.006), "School visit to UNIMAS" (t(1088) = -2.013, p = 0.001), "Newspaper advertisements by UNIMAS" (t(1183) = -2.713, p = 0.007), and "Documentary on UNIMAS in television and radio" (t(1137) = -2.668, p = 0.008). Rural respondents generally gave higher scores than urban respondents. Hence, efforts should be made to ensure that the right channel of information is exploited to reach potential students in urban and rural areas and students of both genders.

Ethnicity

Ethnic differences in the importance placed on the information sources were investigated using One-Way ANOVA analyses. There were significant differences amongst the ethnic groups for all sources of information except for "UNIMAS open day" (F(6,1180) = 1.034, p = 0.401) and "School teacher career talk" (F(6,1243) = 0.337, p = 0.918). Statistically significant differences were found between Chinese and Malays and Sarawak *Bumiputera*. Generally, the Chinese respondents rated the ten sources of information as of lower importance than their Malay and Sarawak *Bumiputera* counterparts. It would hence appear that Chinese students may need sources of information not investigated in this study.

Faculties

One-way ANOVA analyses were used to determine if there were differences in the ratings of the respondents' perceptions of the importance of the information sources amongst respondents from the eight faculties. Significant differences amongst the faculties were detected for all the sources of information except for "Friends and relatives" (F(7,1309) = 2.030, p = 0.06). Relative to respondents from

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other faculties, respondents from FMHS appeared to place least importance in all sources of information except for "Friends and relatives". As for "UPU Guides", respondents from FACA, FEB and FCSHD indicated that this was a significantly more influential source of information about UNIMAS and its academic programs compared to respondents from FRST, FE and FMHS. Moreover, respondents from FACA rated "UNIMAS open day" and "UNIMAS published materials" as significantly more important than those from FMHS, FE, FRST and FCSIT.

Thus, the findings above suggested that sources of information influenced the respondents from various faculties differently. This was especially true for respondents from FMHS, whereby they mostly rated all the sources of information as of little influence except for "Friends and relatives". Respondents from FE, FRST and FCSIT formed another group which also appeared to place relatively little importance to the 12 sources of information with the exception for "UNIMAS website" and "Friends and relatives." Thus, for these faculties, a strong alumnus is of utmost importance and the university website must be well-maintained to be able to attract potential students.

On the other hand, respondents from FACA appeared to be strongly influenced by "UNIMAS website", "Friends and relatives", "UPU Guides", School teacher career talk", "UNIMAS published materials" and "UNIMAS open day". Respondents from FEB, FSS and FCSHD formed another group that placed more importance on the following sources of information: "UNIMAS website", "Friends and relatives", "UPU Guides", "School teacher career talk", "UNIMAS published materials", "UNIMAS roadshow and career fair" and "Newspapers articles and supplements". For these groups of potential students, efforts must be made to further strengthen the selected sources of information to enable them to reach and influence potential students to select UNIMAS as their university of choice.

Factors Determining University Choice

This study investigated six factors (University Choice, Institutional Reputation, Personal Fit, Academic Program Choice, Employment Prospect and Quality of Teaching and Academics) to determine their impact on respondents' decision to choose UNIMAS as the university to pursue their tertiary studies. The overall mean scores, standard deviations and rankings for the six factors are shown in Table 5.

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Table 5: Rankings of the Six Factors Influencing Student Decision
to Select UNIMAS

Factors	Mean	Std Dev
Academic Program Choice	2.36	1.34
Quality of Teaching and Academics	2.33	1.29
Employment Prospect	2.32	1.30
University Choice	2.16	1.43
Institutional Reputation	2.01	1.36
Personal Fit	2.01	1.35

This section only provides a summary of the findings regarding factors that impacted on students' selection of UNIMAS and a more complete discussion of the findings are provided in Songan et al. (2000). Based on the mean values presented in Table 5, the most influential factors were Academic Program Choice followed by Quality of Teaching and Academics, Employment Prospect and University Choice.

In this study, Academic Program Choice refers to the respondents' perceptions of their ability to complete the requirements of a chosen program, previous graduates' satisfaction with the program and prospect of the program. Quality of Teaching and Academic denotes respondents' views on the quality of teaching and academics, teaching approaches and academic support system at the university. Employment Prospect reflects the respondents' perceptions of the prestige, employment rates and starting salaries associated with the chosen field of study. University Choice refers to respondents' views on whether the university offers an academic program of their choice, closeness of the university and ease of access of the campus to their hometown and availability of residence halls.

Factors such as Institutional Reputation which refers to perceived prestige associated with studying at the university and Personal Fit that covers perceived ability to fit into campus life at the university were of less importance.

Details of findings on how these factors influenced respondents' decision to select UNIMAS based on faculty and demographic factors are discussed in the following sub-sections.

Differences based on Gender and Residences

Independent t-test analyses were used to determine gender differences in terms of the six factors investigated. There were no gender

differences in terms of "University Choice", "Personal Fit", Academic Program Choice", and "Employment Prospect". However, gender differences were detected for "Institutional Reputation" ($t(1158) = -2.109$, $p = 0.035$) and "Quality of teaching and academics" ($t(1279) = -3.579$, $p < 0.0005$) with the females placing greater importance on them compared to the males.

Similar analyses were used to determine differences between urban and rural respondents in terms of factors influencing their decisions to select UNIMAS as the place of study. There were no significant differences in the influence of "Personal Fit", "University Choice", "Academic Program Choice", and "Employment Prospect" between the rural and urban respondents. However, "Institutional Reputation" ($t(1087) = -2.229$, $p = 0.026$) and the "Quality of Teaching and Academics" ($t(1202) = -3.299$, $p = 0.001$) appeared to be significantly different for the urban-rural respondents, with the rural respondents placing greater importance on these two factors.

Differences based on Ethnicity

There were significant differences in all the six factors influencing the respondents' decision to select UNIMAS based on ethnicity (p values < 0.001 for all comparisons). Probably due to immediacy to UNIMAS, Sarawak *Bumiputera* generally tended to rate the listed factors higher than other ethnic groups, and this was followed by the Malays. Meanwhile, the Chinese were inclined to place less importance on "Institutional Reputation" and "Personal Fit". Whilst the Indians as a group did not seem to place much importance on "Institutional Reputation", they gave high ratings to the rest of the other five factors. For Sabah *Bumiputera*, "University Choice", "Institutional Reputation" and "Personal Fit" received poor ratings amongst the respondents relative to the other four factors.

Differences based on Faculties

One-way ANOVA analyses yielded significant differences in the influences of the six factors on the respondents' choice of UNIMAS based on faculties in UNIMAS (p values < 0.001 for all comparisons). Compared to other faculties, respondents from FACA tended to rate relatively high on all the factors investigated, especially "University Choice", "Institutional Reputation", "Personal Fit", and "Program

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Choice". However, "University Choice", "Institutional Reputation", "Personal Fit" and "Quality of Teaching and Academics" appeared less important for respondents from FMHS. Respondents from FRST, FCSIT and FE gave lower ratings for "Institutional Reputation." Though statistical analyses showed differences amongst the faculties in ratings for "Employment Prospects", the respondents from all the faculties gave this factor relatively high rating.

Conclusions and Recommendations

The two major sources of information students used to gain information on UNIMAS and its academic programs are through "word of mouth from friends and relatives" and "UNIMAS website". No significant gender and rural-urban differences were apparent for these two sources of information. However, these sources of information appeared to be less effective for Chinese respondents than Sarawak *Bumiputera* and Malay respondents. Responses from respondents coming various faculties were varied. FMHS appeared to perceive "Friends and relatives" as an important source of information, while FE, FCSIT and FRST placed importance on "Friends and relatives" and "University website". Respondents from other faculties appeared also to obtain information from other sources.

"Academic Program Choice", "Quality of Teaching and Academics", "Employment Prospect" and "University Choice" were the important factors students considered in deciding on UNIMAS for their further studies. In terms of differences in factors influencing decision to select UNIMAS, female respondents generally perceived these factors to be more influential than did male respondents. Rural respondents on the other hand tended to view these factors as having more influence in making them chose UNIMAS compared to urban respondents. Likewise, Sarawak *Bumiputera* and Malay respondents perceived these factors as having more influence on them in selecting UNIMAS in comparison to their Chinese counterparts. On the other hand, though there were differences, respondents from all the faculties generally perceived "Employment prospects" as important. Except for FACA and FMHS, respondents from other faculties generally showed a pattern of responses that is relatively similar.

Therefore, the findings of this study appeared to support the literature from the West which reported that the ability of academic

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programs to prepare students for future careers and challenges (course suitability and academic reputations) (Krampf & Heinlein, 1981; Soutar & Turner, 2002), availability of study program, (Keskinen et al., 2009), employers recognition of academic degrees and institutional reputation (Mazzarol et al., 1996), quality of education and career opportunities (Lin 1977) and campus and surrounding environment (Keskinen et al., 2008) as important determining factors. Other findings of this study such as the importance of friends and relatives and the university's web page supported the results reported by Hooley and Lynch (1981) and Yamamoto (2006). However, information sources such as academic advisors in school, road shows and fairs played only marginal role as students' sources of information.

It is therefore proposed that UNIMAS management should continuously improve the quality and attractiveness of information provided at its websites. The university's website is the window where prospective students have their first look at the university and its faculties. UNIMAS must also provide favourable campus environments for students to study and socialize because as alumni after graduation, they are the ambassadors to relay what UNIMAS have to offer to future students of UNIMAS. Thus, an active and strong alumni body is another avenue for UNIMAS to promote itself to the society.

UNIMAS should also maintain and further enhance its existing academic programs as students perceived the university as contemporary and forward looking. To further improve its academic program, one area to focus on could be improving the approaches used in teaching and learning including harnessing the advantages provided by ICT. In this area, UNIMAS has taken several concrete steps including providing academics with continuous pedagogical development opportunities through the Postgraduate Diploma in Teaching and Learning (Norazila et al., 2010). This program provides the academic staff of UNIMAS with knowledge and skills on university teaching (Norazila et al., 2010). UNIMAS should also consider effectively targeting future students by taking into considerations differences in the use of information sources and factors influencing choice of university based on faculty and demographic factors as evident in the findings of the present study. The findings of this study, although conducted in UNIMAS, may be applicable to public higher learning institutions sharing similar characteristics in Malaysia.

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Acknowledgement

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