A Profile of First-Generation and Non-First Generation First Year Students: A Case Study of Universiti Sains Malaysia, Malaysia

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Abstract: In Malaysia, the Ministry of Higher Education (MOHE) shares a similar vision with the International Association of Universities (IAU) in increasing equity and widening access to higher education for more people. However, unlike IAU, MOHE has yet to focus on first-generation students as its target group. Previous studies have shown that first generation students tend to come from low-income families and therefore are more likely to experience greater adversity and deprivation compared to other groups of students. In addition, there has been a paucity of research on first-generation students in Malaysian universities. This study, therefore, aimed to compare the first-generation (FG) and non-first generation (NFG) students in Universiti Sains Malaysia (USM), and to identify characteristics that distinguish the two groups in terms of ethnicity, gender, parental education and parental income. Because USM is the first Malaysia’s APEX university since 2008, this study is even more timely for USM to systematically track the first-generation students. 3512 first year students between the ages of 19 to 20 from three campuses of USM participated in this study. Of the 3360 participants who reported parental education background, 78.8% were FG students whereas 21.2% were NFG students. The findings revealed that the number of NFG male students was slightly higher than the number of FG female students. In terms of ethnicity, the number of FG Malay students was much lower than that of NFG Malay students. In contrast, there was a higher percentage of FG Chinese students compared to NFG Chinese students. The results also showed that the majority of FG students originated from big and small towns and more rural areas while the majority of NFG students originated from cities and big cities. Therefore, it was not surprising to see that the majority of FG students came from families whose monthly household incomes were RM2000 or lower whereas the majority of NFG students’ household incomes were RM3000 or higher. This finding confirmed previous research that FG students tend to come from small towns and rural areas and from low socioeconomic status.

Key words: First generation student profile, Non-first generation students, APEX university, Universiti Sains Malaysia

INTRODUCTION

Since the 1980’s, the booming economic growth in countries in Asia has witnessed a significant growth in participation in higher education and educational system. In fact, the rate of admission in higher education has been on the rise throughout the world. In Ireland, for example, the rate of admission has increased more than double for the past 20 years (Thomas & Quinn, 2006) and in United Kingdom, the government is planning to have 50 percent of young people (those under 30) participating in higher education by 2010 (Thomas & Quinn, 2006). In Malaysia, the Ministry of Higher Education (MOHE) shares a similar vision with the International Association of Universities (IAU) in increasing equity and widening access to higher education for more people. Access to higher education particularly Malaysian public higher education institutions is an important gateway for the underprivileged students to enhance their academic achievement and social status (Abdul Halim & Norzaini, 2010). This is particularly true for first-generation students who mostly come from low socioeconomic status and therefore are more likely to experience greater adversity and deprivation compared to other groups of students.

However, there has been a paucity of research on first-generation students in Malaysian universities. This study, therefore, aimed to compare the first-generation (FG) and non-first generation (NFG) students in Universiti Sains Malaysia (USM), and to identify characteristics that distinguish the two groups in terms of ethnicity, gender, parental education and parental income. USM is Malaysia’s first APEX (Accelerated Programmed for Excellence) university awarded by the Ministry of Higher Education in 2008. APEX university
is created as part of the Malaysian National Higher Education Action Plan 2007 – 2010. With the APEX status, USM is considered and expected to be the university with the greatest potential among Malaysian universities to be world-class, and as such, is to receive additional assistance from the Malaysian Government to compete with top-ranked global institutions. With this status, it is timely for USM to systematically track its first-generation students.

First-generations students is generally defined as those individuals whose neither parent has had access to a university education and completed a degree (Thomas & Quinn, 2006) or whose parents possess education only at the secondary school level (Choy, 2011; Ishitani, 2003). Past studies reveal that there are many differences between first-generation students with their peers, non-first generation students (Thomas & Quinn, 2006; McCarron & Inkelas, 2006). Among the findings is that first-generation students come from low income families (Dooley, Payne & Rob, 2009) and therefore tend to have low aspirations (Terenzini, Springer; Yaeger, Pascarella, & Nora, 2001). Due to these factors, first-generation students have higher chances of dropping out of higher education institutions. The CIRP Freshman Survey Report revealed that due to low socioeconomic status, attending college to “make more money” was more likely to be cited as an important reason for first-generation students (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). In terms of ethnic representation, studies have revealed that FG students are more likely to be from underrepresented minority and low-income groups (UCLA, 2010) whereas females are the most common FG applicants for both universities and colleges (The Educational Policy Institute, 2009). In terms of academic achievement, a study conducted among first year students in York University revealed that NFG students experienced a slight advantage in GPA compared to FG students (Grayson, 1997).

In other studies, finance is an important factor in making various decisions including the choice of specific college, college distance and choosing the right college (Thomas & Quinn, 2006). However, in other studies, parental education is a key factor in determining access to higher education and was found to be more important than financial status (Saenz et al., 2007). A study conducted by the National Center of Education Statistics found that many, if not most, low-income students were the first in their families to go to college (Nunez & Carroll, 1998). They do not have much financial support from their families and therefore must work to support their college expenses. In order to reduce cost, many of them have to live near their families and commute to campus. In Malaysia, a study conducted among Form 4 students (age 16) showed that the level of educational aspirations of first-generation students to pursue studies at higher education institutions is high. The study also showed that parental factors influence the first-generation students’ educational aspirations in pursuing tertiary education (Abdul Hamid & Norzaini, 2010).

It is hoped that the present study will contribute to the literature on first-generation students’ profile at higher education institutions, particularly in Malaysia.

**Methodology:**

This study used a survey method with a sample of 3512 first year students from all three USM campuses: Main, Health and Engineering Campuses. 1128 (32.1%) of these participants were male, and 2360 (67.2%) were female with the mean age of 19.84 (SD = 1.97). Of the 3360 participants who reported parental education background, 2649 (78.8%) were categorized as FG students, whereas 711 (21.2%) were NFG students. Questionnaires were distributed during the orientation week at the university. The principal researcher explained the objectives of the survey to the participants and gave guidelines on how to respond to the questionnaires. Other researchers were also present to answer any questions about the questionnaires. Participants took 15-20 minutes to respond to the questionnaires. Completed questionnaires were collected at the end of the session.

The questionnaire had 7 sections: demographic background, knowledge and expectations about university, motivation to attend university, attitude towards education, social support, general and specific self-efficacy, self-esteem, and perception of stress in university. However, for the purpose of this paper, the discussion will only focus on the analysis of demographic background and to compare profile of the FG and NFG students. The section on demographic background asked about age, gender, ethnicity, religion, marital status, residence, educational background, financial assistance, household income, parental education and work background, and siblings. The data collected were analyzed using SPSS version 17.0. Descriptive statistics (mean, frequencies and percentages) were used to analyze the demographic data.

**RESULTS AND DISCUSSION**

**Age and Gender:**

Descriptive analysis showed that the overall mean age for the FG students was 19.9 (SD = 1.7) and for the NFG students, 19.6 (SD = 1.5). Nearly 99% of FG and NFG students were still single with a very small percentage of them who were married (1.2% among NFG students and 1.1% among FG students). This pattern reflects the social expectation of new graduates to get married after completing their tertiary education. By
gender, there were more females among the NFG students (68.1%) compared to the FG group (67.5%). However, there were more males in the FG group (32.5%) than in the NFG group (31.9%).

**Ethnicity:**

By ethnicity, although the Malays formed the majority in both the FG and NFG groups, the percentage of the Malays was much higher among the NFG students (75.3%) than among the FG students (62.4%). Chinese students made up the second largest group but the proportion of Chinese students in the FG group was much higher (32.9%) than in the NFG group (19.5%). Meanwhile, the percentage of Indian students was slightly higher in the NFG group (2.8%) in comparison to that in the FG group. The data showed that Malay students were much higher among NFG students compared to their peers whereas Chinese students were more dominant among FG students. Meanwhile, Indian students were much higher among NFGS compared to FGS group.

**Residence:**

This study also showed that a majority of NFG students originated from cities (51.6%) and a much smaller percentage of FG students came from cities (41.5%). A majority of FG students originated from small towns, villages, and rural villages. 27.2% of FG students originated from villages compared to only 16.9% of NFG students. Although a group of NFG students originated from rural villages but their percentage is smaller (2.6%) than their peers in the FG group (4.2%). This finding confirmed previous research that FG students tend to come from small towns and rural areas and from low socioeconomic status (Abdul Hamid & Norzaini, 2010).

**Siblings:**

As for number of siblings, 83.6% of NFG students had 1 – 5 siblings compared to 75% of FG students. More NFG students (61%) were either the first or the second child in the family compared to FG students (53.8%). However, the percentage of FG students who were either the third or the fourth child in the family was much higher (29.8%) compared to NFG students (26.9%). In addition, a great proportion of FG students (77.8%) had 1 – 2 siblings who were at or had graduated from university compared to NFG students (71%). However, NFG students had more siblings (2 – 4 siblings; 24.4%) who were either still in university or had graduated from university, compared to only 18.7% among FG students.

**Household Income and Parental Education:**

A great proportion of FG students came from families whose monthly household income was RM2,000 and lower (see Table 1). A majority of FG students’ families (35.2%) earned RM1,001 – RM2,000 whereas a majority of NFG students’ families (29.2%) earned RM3,000 – RM5,000. A much higher percentage of NFG students (24.3%) came from families whose monthly household income was RM5,000 – RM10,000 whereas only 2.1% of FG students’ families earned an income this category. 25.9% of FG students’ families earned a monthly income of RM501 and below compared to only 4.6% of NFG students’ families. These data indicated that a majority of first generation students were from the low socioeconomic status.

The lower socioeconomic status of FG students’ families can be explained by the students’ parental education. A majority of FG students’ fathers completed their Form Five education (45.7%), and the highest education that FG students’ fathers received was Form Six (5.8%) (see Table 2). In contrast, a majority of NFG students’ fathers obtained Bachelor’s degrees (33.6%), and the highest education earned by NFG students’ fathers was at the PhD level (3.8%).

<table>
<thead>
<tr>
<th>Monthly Household Income (in RM)</th>
<th>FG (%)</th>
<th>NFG (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,001 and above</td>
<td>1.1</td>
<td>7.3</td>
</tr>
<tr>
<td>5,001 – 10,000</td>
<td>2.1</td>
<td>24.3</td>
</tr>
<tr>
<td>3,001 – 5,000</td>
<td>10.7</td>
<td>29.2</td>
</tr>
<tr>
<td>2,001 - 3000</td>
<td>17.3</td>
<td>18.7</td>
</tr>
<tr>
<td>1,001 – 2,000</td>
<td>35.2</td>
<td>13.9</td>
</tr>
<tr>
<td>501 – 1000</td>
<td>25.9</td>
<td>4.6</td>
</tr>
<tr>
<td>500 and below</td>
<td>7.7</td>
<td>2.0</td>
</tr>
</tbody>
</table>

A majority of FG students’ mothers completed Form Five education (47.7%) and lower. More than 61% of NFG students’ mothers attended higher education and a very small percentage received only Form Three and Secondary education. These data clearly showed the huge difference in parental education between FG and NFG students.
Although the data above showed that none of FG students’ parents received higher education, a small percentage of them (16.8%) managed to occupy jobs in professional and semi-professional sectors. However, a majority of FG students’ fathers worked in the non-professional sector (61.7%) whereas a majority of NFG students’ fathers worked in the professional sector (38.3%). FG students’ mothers were more likely to stay at home (72.7%), and only 12.5% worked in the non-professional sector. However, NFG students’ mothers were mostly either working in the professional sector (43.9%) or were homemakers (35.2%).

**Academic Achievement before Admission and Specialization Course:**
NFG students had slightly higher scores for their matriculation level (pre-university level) exams ($M = 3.73; SD = 2.74$) compared to FG students ($M = 3.60; SD = 1.01$). However, t-test indicated that the difference in exam scores was not statistically significant. 73.4% of NFG students registered at the main campus compared to 62.7% of FG students. The main campus offered non-engineering and non-medical courses such as arts, humanities, social sciences, communication, education, languages, management, architecture, physics, biology, chemistry, mathematics, industrial technology, etc. In contrast, 23.5% of FG students registered at the health campus to attend medical-health courses compared to 12.1% of NFG students. Finally, 14.5% of NFG students registered at the engineering campus compared to 13.8% of FG students.

**Conclusion:**
The findings above describe the characteristics of FG and NFG students. Many of the findings from this study were consistent with previous research on FG students. This study revealed that FG students were more likely than their NFG counterparts to come from lower income families, small towns and rural areas and had parents whose highest educational attainment was a high school certificate or lower. Consistent with their lower incomes, FG students’ parents were more likely to work in non-professional jobs. Given this kind of profile, universities in general and USM in particular must be prepared to provide specific support to address specific needs of low income, rural and small town FG students. Interestingly, although FG students were more likely than NFG students to come from lower income families, their exam scores during at the matriculation level showed that FG students’ academic performance was at a par as that of NFG students. This highlights the potential of FG students and provides stronger rationale to target more FG youth who are not yet participating in higher education. It also shows that with the right assistance and programs, FG youth have higher chances to participate in higher education. Therefore, more efforts should be made to have financial and informational programs targeting FG youth in order to increase their access to higher education.

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