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Stereotyping in Graduate Education: An Insight of Women's Participation in Malaysia

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Abstract

An equal access to the higher education in terms of gender has been successfully promoted in Malaysia. An increasing number of women succeeded in having secured places and graduating from local private and public universities in this country. This shows that more and more women have gone through higher education, and a significant number of them are now holding high posts both in the private and the public sectors. This is the result of various government policies n human capital development. Consequently, the previously 'denied' right of women to higher education because of gender is now a history in this country and more women are pursuing graduate education. This paper attempts to analyze an involvement of women in higher education in Malaysia with particular

reference to graduate study in Universiti Teknologi Malaysia. The study shows an increasing interest and access to programs related to sciences and technical field by women, as opposed to the art and education which were previously associated with women. This trend signals a positive development of women's involvement in higher education in preparing knowledgeable human resources to the nation, and thus provides a strong support to the women empowering strategy in Malaysia.

Keywords: Stereotyping, graduate, education and Malaysia

Introduction

Malaysia has successfully overcome gender inequality over the period of 1980 – 2004. This has been a result of improved health status of women and increased access to education which provides girls with social and economic opportunities and choices throughout their life. As highlighted by Leete (2007), gender equality, equity and the empowerment of women are fundamental to human development. On the contrary, gender inequality is a feature of social relations in most societies and it is linked to poverty, violence, labor market, health, housing and education. The success story of gender equality in Malaysia is the fruits of various efforts to recognize the contribution and the important role played by women in this country. It is also due to the government continuous effort to recognize the importance of

gender equality and women empowerment. This can be seen in the establishment of a Cabinet Committee on Gender Equality in 2004. Although women's participation in the House of Representatives is still low compared to other countries, other areas show improvements in the number of women participating especially in education. The important role played by women in this country is constantly gaining recognition.

The agenda for women empowerment is greatly enhanced by a strong participation of women in the political decision making process. Interestingly, a special and serious attention cast on women has been heavily addressed in the Ninth Malaysia Plan (2006-2010) [9th MP] compared to other MPs in terms of targets for gender equality and women empowerments, in the form of new policies and strategies to deepen the mainstreaming of

women in the country development. To be able to cope with the need, it is important to equip women with necessary knowledge to enable them to be more competitive and versatile to meet challenges of a knowledge-based economy. This includes reviewing the legal and constitutional constraints that inhibit women greater participation in the economy. Perhaps more importantly, setting a target of 30 per cent of women involvement in decision making positions in government indicates another serious commitment by the government.

In making way to women involvement in the decision making, access to higher education has been widening. Previously, literature on gender, development and education rarely considered higher education. Gender has begun to be a category of analysis at the basic level of education in lower income

countries which presumes that higher education is at the ‘luxury’ end of the educational market following the hierarchy of needs approach. As the concern becomes less, literature on higher education in the ‘developing’ countries tends to be characterized by a gender-neutral approach. Gender was only used to be a category of analysis in relation to access and quantitative representation while the qualitative aspect remains unknown. At the same time, economics becomes a dominant discipline influencing higher education studies. Other literature focuses on the complexities of structural, attitudinal and psychological impediment to gender equity is patriarchal organizations of women in higher education.

There has been little evidence to show that entry to the higher education is discriminated by gender, but to certain extent it can be seen that the lower threshold applies to male applicants as compared to females. Nonetheless, the emerging trend witnesses a very stiff competition amongst male and female as the entry is based on meritocracy. As a result, the number of women who are qualified and secured places in the higher learning institutions outweighed male counter-parts. A recent national intake shows that women dominate more than 60 per cent of the overall intake in Malaysia. Over the last three decades, there has been an increased participation of women in higher education. It is generally accepted that there are still broad regional differences in the availability of higher education for women and in women's access to these opportunities. However, one common observation made by UNESCO is that women tend to concentrate in

traditionally “female” subject areas such as arts and social sciences. In a related issue, Aminah (1998) showed that despite equitable access to all levels of education in Malaysia, gender stereotyping is still significant in higher learning programs selection, such as in the tendency to choose and participate in female-dominated programs i.e. education and services. Thus, it is important to analyze whether this stereotyping issue in undergraduate studies can also become an issue in graduate study.

Therefore, this study investigates the likely pattern of breaking stereotyping in programme selection by female graduate students in Malaysia. An analysis of the intake, enrolment and output statistics for graduate studies will provide general indication on the shift in the area of interest among women in

Malaysia. Then, further investigation on the pattern in graduate education at Universiti Teknologi Malaysia was conducted to compare it with the national pattern.

Gender Issues and Equality in Malaysia

An effort of overcoming gender inequality requires proactive promotion of greater participation of women and equitable participation of men of all social and ethnic groups. To having more women in both public and private sectors, so as to become role models for women and girls in traditional communities where gender, discrimination and sex aggregation are the norm, can be a challenging effort but such effort has been continuously undertaken in Malaysia. For example, gender as a development focus was first mentioned in the Third Malaysia Plan (1976-

1980). The plan encouraged active participation of women in development and recognized their contribution to the economy. The subsequent five-year development plans have given greater prominence to gender issues , and the Sixth Malaysia Plan (1991-1995) dedicated a full chapter related to policies and programs that promote women in development. The National Policy on Women (NPW) was a major initiative affecting gender equality and women's empowerment in the plan. Its contents were incorporated into the Sixth Malaysia Plan and have formed the basis for many subsequent policies and programs. The NPW primary objectives are to ensure equitable sharing in the acquisition of resources and information, opportunities and benefits of development for men and women; to integrate women in all sectors of national development in accordance with their capabilities and needs in order to eradicate poverty, ignorance,

and illiteracy; and to ensure a peaceful, harmonious and prosperous nation. The main areas covered in the NPW are health, education and training, law, employment, power sharing, sports, media, religion and culture. The subsequent five-year plans have incorporated additional initiatives to empower women, such as in the 7th and the 8th Malaysia Plans.

It is clear that gender inequalities have decreased from the year 1980 to 2004 due to the increasing levels of achievement for both women and men in the country. This is owed to the realization of the importance of the initial expansion of the education system, and women increasing participation in the development process was also facilitated by the increasing interest in gender issues and by pragmatic policies and programs to main stream women in the development. Probably, the most significant key to women

achievement is the accessibility to education and higher education. The quest for knowledge has always applied to everyone, regardless of their gender. In Islam, God has made no difference between genders in this area. The Prophet Muhammad (saws) once said: “Seeking knowledge is a mandate for every Muslim (male and female)”. (Sahih Bukhari)

Women Participation in Higher Education Sector in Malaysia

Higher Education is considered a sector as it is a vast and varied terrain which encompasses general subject disciplines, such as sciences, humanities, arts, mathematics, social and cultural sciences and technical disciplines such as engineering, medicine, agriculture etc. Rapid growth and diversification of higher education is also attributed to types of higher education, training,

research institutions as well as innovative approaches to mode of study. Innovative approaches to education and training has altered traditional approaches to education which promote faster progression in higher education. An educated environment, better academic performance and government encouragement provide background and opportunities for higher learning education. The responsible ministry for higher education in Malaysia is the Ministry of Higher Education (MOHE). The especially dedicated ministry for higher education reflects the importance of higher education in Malaysia. To date, there are twenty public universities and more than a hundred private universities and college universities actively offering courses to Malaysians as well as foreigners. Rapid development in graduate study in Malaysia takes place as the government target educated society in 2020. The target of achieving 60,000 PhD holders in

2020 had aggravated the intake of graduate students and provide wider opportunities to post-graduate studies in all areas.

The government effort to empower higher education in Malaysia has led to the establishment of ranking amongst universities in Malaysia, such as awarding the status of Research University (RU) and Apex University. Five (5) universities were awarded the RU status, that are Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Putra, Universiti Sains Malaysia and Universiti Teknologi Malaysia. In addition, one university was given the status of Apex University, allowing it to be self-accredited as well as having full autonomy in most of its operations not enjoyed by other public universities. The conferment of the RU status has intensified research activities, and since then, graduate studies

in Malaysia have developed tremendously since the year 2000. As depicted in Figure 1 and Figure 2, the number of intake and enrolment increased steadily since 2002. Although the response of output to the intake and enrolment is quite slow, what is more interesting is the increased interest of Malaysians to undertake graduate education.

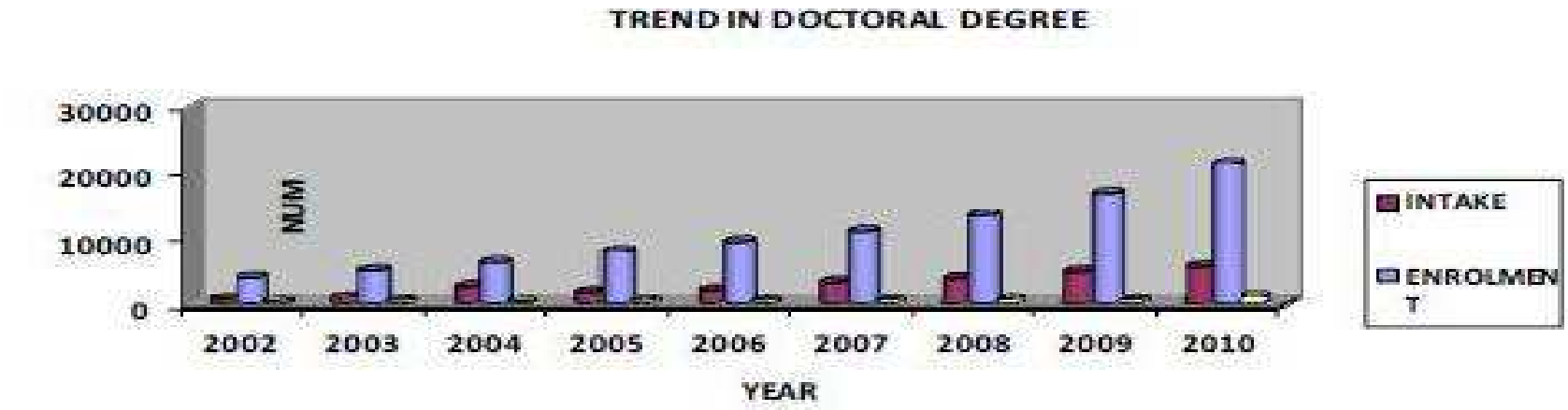

Figure 1 (a) and (b) Trends in Intake, Enrolment and Output

The percentage of women with higher education in the total population vis-a-vis men has increased gradually over time. In 1980, women comprised 31.7 per cent of people with higher education. The figure increased to 40.6 per cent in 1991 and further increased to 47.5 per cent in 2000. Women enrolment at all levels of higher education increased significantly between 1985 and 2008. Have women overtaken men at all levels of higher education? In general, Malaysian women made up 55.2 per cent of the enrolled population in higher education in 2008. In 2010, 64.8 per cent of the population of new registration for graduate education is dominated by female students. Statistics show that in 2008, women represented 57.2 per cent of all graduates from higher learning education institutions. The share of 62.7 per cent of graduates in the public higher learning

institutions are women, while in private institutions their share is 56.5 per cent.

Traditionally, significant gender-related issues in education pertain to gender-segregation and stereotyping as highlighted by Aminah (1998). This is because women have been associated with traditional fields such as education. However, nowadays women have been given chances to select any program without limitation. As a result, more and more women are taking programs which were previously associated with the 'masculine' type. Thus, the enrollment of women at all levels of education is equitable to that of men. In reality however, gender segregation arising from gender stereotyping which mediates the choices of courses is still prevalent. Other issues are technical and vocational education as well as geographical disparities to access

education in remote areas in Malaysia. One important issue that arose is whether it is true that women who were given access to 'masculine' type of programs are interested and taking the program as their career and lifelong learning. The issue is explored in the finding and analysis sections.

Methodology

The study analyses data on graduate (Doctoral and master programs) intake, enrollment and output in universities in Malaysia referring to 20 public universities and private universities. The source of information in the study is from the Ministry of Higher Education Malaysia and the School of Graduate Studies, Universiti Teknologi Malaysia. Statistics on the intake, enrolment and output from the year 2002 to the year 2010 are

analyzed to observe pattern over four years. The gender parity index is calculated from the data set. The gender parity index of female to male is calculated by dividing the number of female over male students. Gender parity index is used to measure the relative access to education of males and females. It is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education (in this case graduate education). It is originally used by international organizations to measure the progress of developing countries. In situation where target is set on certain level of gender parity index (GPI), its usage could be more meaningful. However, in this study, the GPI will only be used as indicator to the phenomenon. The information is consistent with the period from the year 2002 to the year 2009 as the same categories are used. For 2010 data set, an adjustment has been made to suit the previous categorisation,

hence some possible error may occur. Nonetheless, due care has been taken to minimize any possible error.

Analysis and Discussion

As mentioned earlier, the paper seeks to explore the potential of the likely pattern of breaking stereotyping in program selection by female graduate students in Malaysia. To achieve this, the analysis is undertaken at two levels: National and Universiti Teknologi Malaysia.

National level

The analysis shows that there has been an increasing trend for graduate intake, enrolment and output in Malaysia. A significant

increase was recorded annually from starting from the year 2002. Access to the graduate studies is enhanced by flexible modes of study, such as distance learning, modular approach and research mode either full time or part time. The increasing number of graduate students is also attributed to the availability of financial incentives by the government. For example, MyBrain15 which was launched by the government in 2010 was one of the critical agendas under the National Higher Education Strategic Plan (PSPTN). The program was targeted to produce 60,000 PhD holders among Malaysians which were aimed at the knowledgeable group. The group is expected to be a catalyst for research and innovation. Four schemes were offered under My Brain 15 that are MyPhD, MyMaster, Industrial PhD and Public Higher Learning Institutions Academic Training Scheme. The schemes finance the study and provide financial incentives to

those who are qualified to further study at the master and doctoral levels. In addition to these, selected universities which are research universities were allocated fund for research students. These research universities offered attractive financial packages which resulted in an increase in intake and enrolment since 2002.

As mentioned earlier, this paper focuses on gender issue in the graduate study in Malaysia. For this reason, gender parity index was analyzed for the period of 2007 to 2010. The period was sufficient to provide information on the issue under investigation. The period also witnessed a development in graduate study as the government is aggressively involved in promoting graduate study in Malaysia. Female involvement in graduate study based on three main fields is shown in Table

1.0. It is important to note that GPI is calculated by dividing the number of females to the males in each segment of the selected factor. For example, in Table 1.0, the number 0.6 indicates the involvement of females in intake as compared to males.

Table 1 Gender Parity Index (GPI): Intake, Enrolment and Output According to Gender (National)

	2007		2008		2009		2010	
PhD	Public	Private	Public	Private	Public	Private	Public	Private
Intake								
- All	0.6*	0.62	0.65	0.68	0.74	0.5	0.7	0.48
- Science	0.72	0.98	1.01	0.9	0.95	1.08	0.94	0.41
- Art & Humanities	0.64	0.44	0.63	0.58	0.80	0.43	0.74	0.2
- Technical	0.35	0.44	0.36	0.70	0.41	0.24	0.47	0.38
Enrolment								
- All	0.62	0.57	0.58	0.67	0.65	0.56	0.7	0.5
- Science	0.75	0.8	0.84	0.95	0.81	0.94	0.74	0.4
- Art & Humanities	0.65	0.65	0.57	0.57	0.67	0.43	0.77	0.42
- Technical	0.38	0.28	0.37	0.42	0.41	0.46	0.45	0.28
Output								
- All	0.50	0.55	0.63	0.67	0.4	0.53	0.5	0.47
- Science	0.54	0.25	0.62	0.65	0.53	0.73	0.5	0.75
- Art & Humanities	0.75	1.00	1.0	0.88	0.67	0.56	0.62	0.61
- Technical	0.34	0.5	0.23	0.5	0.2	0.13	0.48	0.2

As mentioned earlier, GPI measures the relative access to the matter (in this case graduate program). The table illustrates that the level of women or female participation in three main areas of study improved from 2007 to 2010. Nonetheless, it is interesting to note that higher participation is in the field of Art and Humanities. While this seems true to the public higher learning institution, the same pattern was also recorded for private higher learning institutions. Despite the argument that there are more women than men in Malaysia, the level of intake, enrolment and output of women is a lag behind the male counterpart. Generally, the involvement of women in graduate studies is higher in the science stream. The finding is rather shocking as the initial anticipation of access and involvement would be Art and Humanities under which some stereo-type courses fall. For some good reasons, the

accessibility and involvement in intake and enrolment indicate higher index as compared to other fields. A similar pattern is recorded for private higher learning institutions. Nonetheless, as far as the output is concerned, Art and Humanities recorded higher graduation index for women. Whilst this is not conclusive, it can be suggested that women in this case performed better in Art and Humanities. Table 1.0 demonstrates that generally women are less involved in Doctoral Degree level, but the opposite trend exists at the Master level as demonstrated in Table 2.0.

Table 2.0 illustrates higher and better women participation in two fields that are Science and Art and Humanities than in Technical. In general, this increase in number could be contributed to factors such as the need to have higher

qualification in order to be more competitive and difficulties in penetrating job market (the current assumption holds that male are in better chances of getting a job). The number in all intake, enrolment and output is dominated by the females. Again there is similar pattern for Doctoral Degree in which there is higher intake and enrolment in the field of science. The higher number of intake and enrolment in 2007 and 2008 helps the improvement of the number of output for 2009 and 2010.

Table 2 Gender Parity Index (GPI): Intake, Enrolment and Output According to Gender

	2007		2008		2009		2010	
Master	Public	Private	Public	Private	Public	Private	Public	Private
Intake								
- All	1.12	*0.77*	1.13	*0.85*	1.34	*0.67*	1.3	*0.65*
- Science	1.37	*0.8*	1.62	*1.37*	1.58	*1.16*	1.44	*0.46*
- Art & Humanities	1.14	*0.7*	1.08	*0.73*	1.51	*0.60*	1.56	*0.56*
- Technical	0.67	*0.53*	0.71	*0.55*	0.75	*1.34*	0.92	*0.45*
Enrolment								
- All	1.12	*0.68*	1.05	*0.86*	1.18	*0.75*	1.3	*0.7*
- Science	1.34	*0.85*	1.51	*1.31*	1.43	*1.17*	1.3	*0.58*
- Art & Humanities	1.16	*0.71*	1.00	*0.84*	1.28	*0.7*	1.4	*0.64*
- Technical	0.65	*0.65*	0.68	*0.4*	0.65	*0.44*	0.85	*0.47*
Output								
- All	1.13	0.68	1.03	0.76	1.12	0.74	1.14	0.74
- Science	1.18	0.6	0.96	0.92	1.25	0.78	1.2	0.53
- Art & Humanities	1.34	0.6	1.54	0.62	1.18	0.55	1.46	0.60
- Technical	0.63	na	0.7	0.36	0.67	0.28	0.73	0.74

The finding in this section confirms the earlier finding by other studies, such as Aminah (1998) and UNESCO that despite the increasing level of participation in graduate level, the selection of programs tend to be gender biased. The low participation of females in technical program which is regarded as male – dominated is however better than those at the Doctoral level.

Universiti Teknologi Malaysia

The management of graduate studies in Universiti Teknologi Malaysia is under the jurisdiction of the School of Graduate Studies. One of the research universities, UTM encourages research and innovation works which is basically supported by graduate research. The programs run through taught course or by research work either full time or part time. The School of

Graduate Studies becomes significant as the total number of enrolment is about 10,000 which makes up half of the students' population in the main campus in Johor. The School of Graduate Studies becomes important in assisting in the attainment of national vision to achieve a target of 60,000 PhD holders.

The same explanation can be deduced from Table 3.0 as the low participation is observed in technical field which is traditionally associated with 'masculine value' with an even lower participation at the Doctoral level. The level of participation halved from the Masters category, which recorded a balanced parity index. As for Art and Humanities, the year 2009 witnessed the highest women involvement in Doctoral and Masters. This further strengthened the earlier

finding that gender stereotype is still in play; thus influencing the decision on the choice of program. The index also shows a better output for female participation in all fields which indicates the higher and better success story for women in their study.

Table 3 Statistics on Graduate Studies in UTM

PhD	2007	2008	2009	2010
Art and	I - 0.55	0.44	0.67	0.69
Humanities	E - 0.63	0.43	0.85	0.73
	O - 1.0	1.0	0.2	1.2
Science	0.71	0.64	0.72	0.76
	1.25	1.15	0.7	0.71
	1.6	2.67	0.8	0.22
Technical	***0.4***	***0.36***	***0.33***	***0.38***
	0.41	***0.35***	***0.39***	***0.41***
	0.34	***0.22***	***0.02***	***1.07***
Master				
Art and	1.18	0.46	1.96	1.01
Humanities	1.05	0.72	1.53	1.81
	1.23	0.64	1.12	1.24
Science	1.09	1.86	1.17	1.26
	0.9	1.33	1.06	1.3
	0.95	1.14	0.96	1.33
Technical	***0.6***	***0.7***	***0.67***	***0.61***
	0.54	***0.62***	***0.59***	***0.59***
	0.59	***0.63***	***0.56***	***0.59***

Note: I = Intake E = Enrolment O = Output

In general, it can be concluded that the involvement of women in graduate study improved from 2007 to 2010. However, lower involvement was observed in the area of technical, compared to art and humanities and sciences. Nonetheless, where output is concerned, better participation of women has shown a higher index recorded in many areas as exhibited in Table 3.0.

Conclusion

Higher education in Malaysia has transformed in terms of accessibility and gender equality. With mounting opportunities available through the creation of programs and increase in the number of higher learning institutions, wider opportunities will be made available to women. Graduate education has become a critical agenda for Malaysia due to the need to produce 60,000

PhD holders. To achieve this, greater access is made available to females which is also targeted at preparing 30 per cent female in the decision making segment. The paper shows that since 2007, there has been an increasing women involvement in graduate education in Malaysia but the tendency is toward art and humanities and science. Lower participation was observed in technical area which is still male dominant. Despite this fact, women performed better in graduating in all levels as the index has improved annually from 2007 to 2010. A similar pattern was observed in Universiti Teknologi Malaysia. Women involvement in intake, enrolment and output also improved in areas such as science and art and humanities.

Limitation, Implication and Recommendation of the Study

The findings of this study could be further strengthened in the absence of the following limitations:

a) The data for the study comes from secondary data provided by the Ministry of Higher Education and the Graduate School of UTM. Thus, it does not provide the qualitative aspect to the study.

b) The duration of the study could be for a longer period of time. A longitudinal study could offer a richer perspective to the phenomena under investigation.

There are a few implications of the study. Firstly, the relatively low number of female graduates enrolling in the technical programs might result in the possibility of not meeting the government target of having 30% females at the decision making levels in the public and private sectors in the technical area. Secondly, the increasing number of female graduates in the art and humanities might cause an influx of females in the fields. Both factors can create an imbalance in the availability of women in the decision making segment of the workforce which can slow down the development process of the country.

It is thus recommended that the government continues the current policy and effort to encourage graduate education in Malaysia, focusing on women participation especially in the technical field. A further qualitative study on female graduates

should be undertaken which might be able to provide a clearer picture about women involvement in graduate education in Malaysia.

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