Graduate employability and preparedness: A case study of University of Malaysia Perlis (UNIMAP), Malaysia

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Abstract

Graduate employability and unemployment are issues that have given rise to many policy implications for higher education in many developing countries such as Malaysia. The employability of graduates depends on individual factors, the labour market and organizational practices. Individual factors refer to the graduate's proactive attitude and behaviours with respect to the desired career opportunities. This study examined the nature of Malaysia's undergraduate proactive actions in employment preparedness prior to entering the job market. The actions evaluated pertained to the employability potentials of 171 Universiti Malaysia Perlis (UniMAP) final year engineering undergraduate respondents as demanded by the market upon leaving the education system. The primary data were gathered from questionnaire surveys. Results showed that several forms of proactive actions taken by the undergraduates fell short of the clear and focused planning and strategy essential to fulfil the market needs of their potential careers upon finishing study. Thus interventions at University level for the students are crucial to enhance their employability.

Keywords: employability, higher education, labour market, proactive actions, undergraduates, unemployment

Introduction

Huge government expenditures are allocated annually to develop higher learning in Malaysia. Beside monetary grants, the steadily rising number of higher learning institutions is an important indicator of the country's efforts in providing greater opportunity for its citizen's access to higher learning. However, graduates unemployment problems and difficulties in getting employment are issues that give rise to negative perception of the country's higher education development policies. In terms of human capital development, the rise of monetary spending as well as growing number of higher learning institutions are positive indicators for creating greater opportunities for the people to get tertiary education and hence the growth of human capital accumulation of the country. However, unless the increase in the number of the graduates is in line with job opportunity of the same level of their education and field of learning, it could mean that the country's higher education is less than successful in producing matching manpower to market needs.

This is a dilemma Malaysia shared by similarly developing countries when the increase of highly educated students is not able to meet the needs of the available job market. This disparity in supply to the graduate's labour market demand given rise to many issues and not least the role of higher learning institutions and studies programme offered but also the quality of the graduates. The main objective of this article is to discuss the views of the undergraduate's students on the issue of employment employability, strategies and their proactive actions on the issue of graduate's employability. The UniMap case study involves engineering students will be able to come up with pertinent information

crucial to assessing the aspects of development of employability practices for graduates of higher learning institution in accurately meeting job market needs.

Literature reviews: Factors determining graduate's employability

Employability is a difficult concept to measure and to define (Harvey, 2001; Pegg, Waldock, Hendy-Isaac & Lawton, 2012; Sewell & Dacre Pool, 2010). Employability concept appears to grow in line with the changes in work pattern and manpower model. McQuaid and Linda (2005) stated that although employability was a vague concept in the past decade, it now plays an important role in determining the UK labour market policy, in some European countries and other countries also. Employability now is looked upon as the main target in most labour market policies and manpower strategies in most country especially for the employability of graduates. University graduates hold a high position in the economy and many countries deemed them as social elites and consequently as the work group to access high income with the potential to fulfil the career of knowledge worker. Nevertheless a disparity exists among the graduates as to their labour market outcomes.

Figure 1 shows the relationship between the individual's factor and market factor affecting particular individual's employability. The employability of graduates are not just determined as the outcome of discipline specific study programme or professional studies, but also the graduates ability to promote wider skills like communicative, problem solving, interactive skills, showing initiative and efficiency. Furthermore, employability also includes the aspect of attitude and personal attributes of loyalty, commitment, honesty, punctuality and integrity. It follows that employability encompasses aspects of proactive actions, personal management attitude and career management aptitude of the individuals as efforts to acquire desired career (Clarke, 2008).

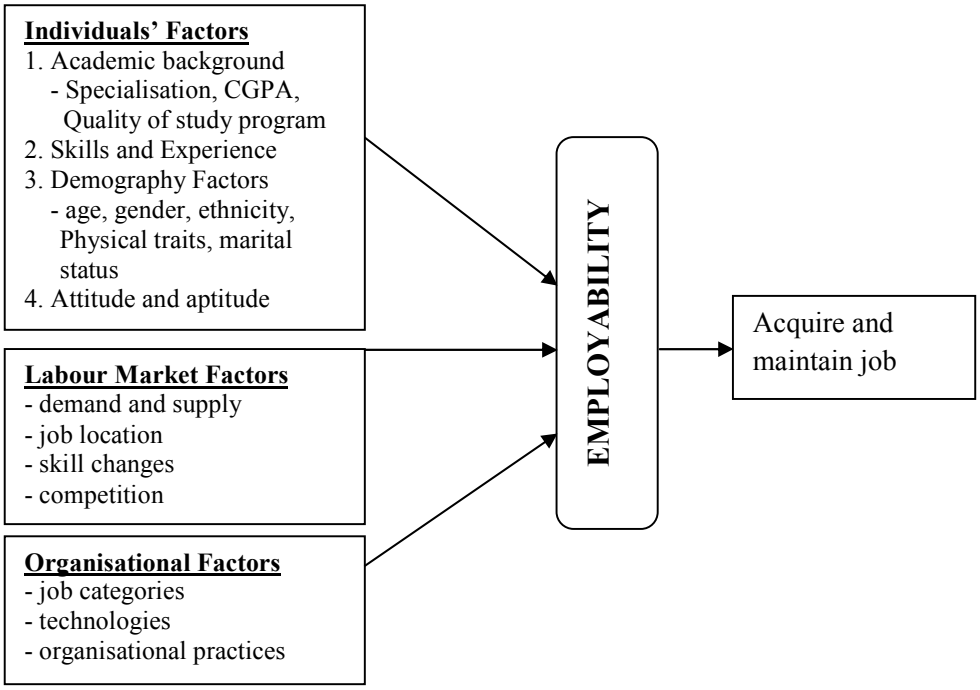


Figure 1. *The relationship of individual factors, the labour market and organisations that affects employability*

Saterfiel and Maclarty (1995) said that graduates employability refers to those skills graduates need to get and keep Jobs (in Litisha and Surina, 2010) through learning new skills for different functions as demanded by employers or industry (Koo et al., 2009). Whereas according to Hillage and Pollard (1998),

employability is having the ability to get the first job, keep it, and acquiring new job if needed. Harvey (2001) defines graduate employability as the ability of graduate to display the qualities needed by the employer for the organisations future requirements. Employability skills is a set of achievement, understanding, and personal attitudes/qualities that mark the individual as potentially more able to get desired job and successful in career choice. Generally, employability skills are those aspects of skills and knowledge students need to have to equip them to fulfil various employment demands in the labour market after they have completed their studies. The development graduates employability aspects is an important core in higher learning to enable them to be gainfully employed in the job market.

In addition to the knowledge skills, employers also demand good personality from graduates. Among the important factors to be considered are the ability to adapt to the culture of the firm and the desire to learn continuously (Cai, 2012; Bui & Porter, 2010).

Eric, Serge & Karim (2015) explored the gaps between industry expectations and perceptions of engineering graduates' skill sets in the Middle East and North Africa region. They measured the importance that managers of engineers placed on 36 skills relevant to engineers. Results showed significant gaps between managers' expectations of and satisfaction with all 36 skills. The managers felt that graduates needed most improvement of communication, time management, and continuous learning. Managers reported that recent engineering graduates exhibited low overall preparedness for employment.

Yee Ting Ngoo, Kui Ming Tiong, Wei Fong Pok (2015) found that employers demand a more independent and leader instead of a follower, and a more management prone graduates. The soft skills of communication skills, critical thinking and problem solving skills, ethics and professional moral skills, leadership skills, lifelong learning and informational management skills, and teamwork, while the technical skills of financial accounting, management accounting, taxation, auditing, and information system are suggested. The graduates are urge to adjust themselves in meeting the market needs of the increasing important of both soft and technical skills for better job opportunities. The competitive labor market required the collaboration and understanding between firms and universities. In response, universities could develop curriculum in nurturing leadership prone graduates under the deliverance of well-informed academics on the current market needs.

Employability skills play a significant role in current job trend. However, all the studies evaluate graduates and those who have graduated. There is very little research that looks into the problems at the undergraduate level. In order to fill the vacuum of the situation, this study will look into the problem in reference to the undergraduate as the units of analysis as the problems of graduates employability engulfs the rise in the rate of graduates unemployment and negatively affects the image of universities as the countries higher learning institutions, human capital development, economic development and investments in higher learning.

Development of higher education and graduate labour market in Malaysia

Currently today the important role of higher education and universities is viewed favourably. With the advent of contemporary economics and the increase of competitiveness, demands for higher education rocketed. Many countries have duly acceded by allocating resources and efforts to develop education level and people's skills to respond to competition pressures following globalization (Organisation for Economy Cooperation and Development (OECD), 2007). In Malaysia, higher education increasingly receives the governments attention for the ultimate success of the nation's development process depends living on the ability of Higher Institutions of Learning (IPT). This is evidently obvious by increasing annual government grants for the purpose of education development and trainings through the various Malaysian Plans. The government allocation for IPT for the year 2001 of RM3.5 billion rose sharply to RM14.1 billion in 2009 and even more again to RM38.7 in 2013 (The Country's Annual Budget 2001-2013) showed an increase of almost 91% compared to 2001.

The annual number of IPT graduates coming out of learning institutions showed an increasing trend. In 2000, the overall graduates by the Malaysian IPT consists of those from IPTA, IPTS, College Tunku

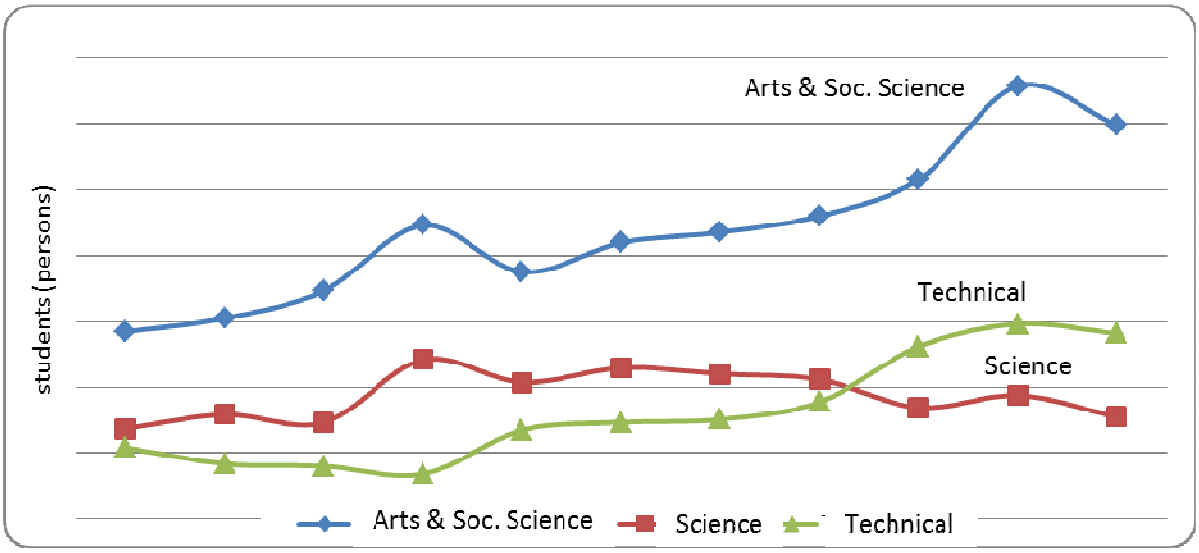
Abdul Rahman (KTAR), Polytechnique and Community Colleges are 116 673. The figure rises every year. The latest data in 2011 recorded as many as 198 625 graduates (Ministry of Higher Learning, 2012).

Table 1. Percentage of IPTA's graduates in Malaysia, 2005 -2011

Universiti	2005	2006	2007	2008	2009	2010	2011	Total
Universiti Malaya (UM)	7.8	8.3	7.6	7.7	6.8	6.7	7.5	**7.4**
Universiti Sains Malaysia (USM)	7.3	8.7	8.4	7.4	6.9	5.8	5.7	**7.1**
Universiti Kebangsaan Malaysia (UKM)	8.6	8.0	8.0	7.1	6.5	5.8	6.5	**7.1**
Universiti Putra Malaysia (UPM)	13.0	8.7	9.3	8.4	7.2	6.7	6.7	**8.3**
Universiti Teknologi Malaysia (UTM)	7.8	7.8	9.8	9.7	7.1	6.6	5.0	**7.6**
Universiti Islam Antarabangsa Malaysia (UIAM)	3.7	4.5	4.4	7.6	6.3	7.2	4.1	**5.5**
Universiti Utara Malaysia (UUM)	7.7	7.1	5.0	4.3	7.5	8.1	7.7	**6.8**
Universiti Malaysia Sarawak (UNIMAS)	1.7	1.5	1.8	1.7	1.5	1.6	1.5	**1.6**
Universiti Malaysia Sabah (UMS)	3.3	4.5	4.9	3.5	3.8	4.2	3.5	**3.9**
Universiti Pendidikan Sultan Idris (UPSI)	2.2	4.5	4.4	4.4	4.1	5.2	4.1	**4.2**
Universiti Sains Islam Malaysia (USIM)	0.5	0.7	0.7	0.3	0.6	0.8	1.6	**0.8**
Universiti Teknologi MARA (UiTM)	31.3	30.1	29.0	29.0	33.4	33.3	36.7	**32.1**
Universiti Malaysia Terengganu (UMT)	1.4	1.6	1.8	1.7	1.5	1.4	1.7	**1.6**
Universiti Teknologi Tun Hussein Onn Malaysia (UTHM)	2.9	1.7	1.8	2.1	2.3	1.9	2.2	**2.1**
Universiti Teknikal Malaysia Melaka (UTeM)	0.6	1.2	1.6	1.3	1.3	1.4	1.4	**1.3**
Universiti Malaysia Pahang (UMP)	0.1	0.2	0.8	0.9	0.9	0.9	0.9	**0.7**
Universiti Malaysia Perlis (UNIMAP)		*0.1*	*0.7*	*0.7*	*1.0*	*1.1*	*1.2*	***0.7***
Universiti Sultan Zainal Abidin (UniSZA)		0.8		1.5	1.0	0.8	1.1	**0.8**
Universiti Malaysia Kelantan (UMK)						-	0.3	**0.04**
Universiti Pertahanan Nasional Malaysia (UPNM)				0.4	0.3	0.4	0.7	**0.3**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**		**100.0**

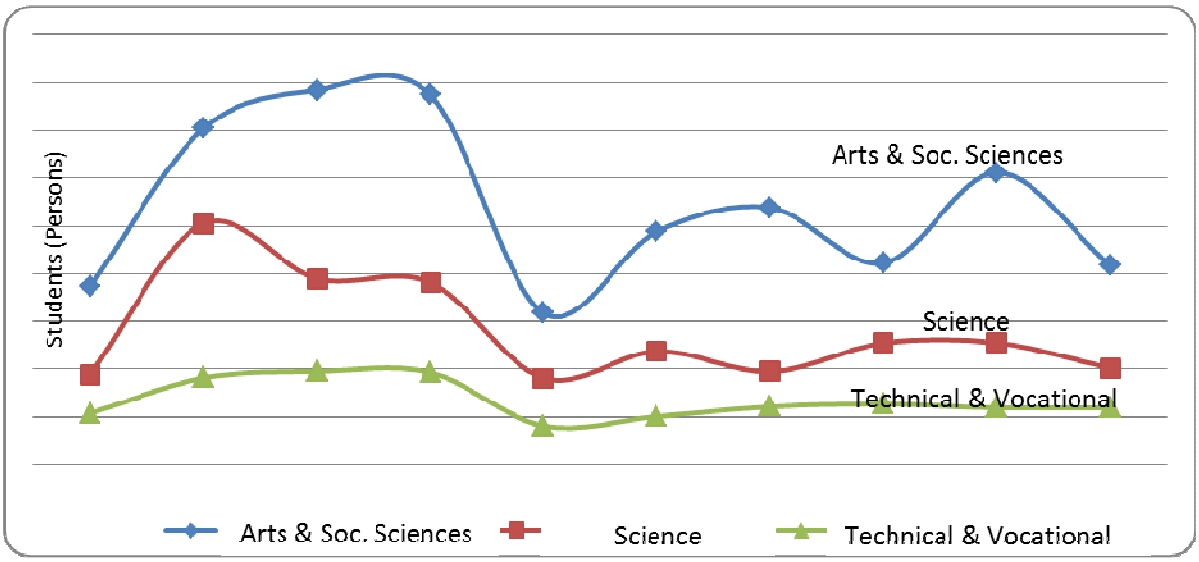
Source: Malaysia (2012a). Adaptation from Malaysia Higher Education Statistics, 2005-2011. Malaysia. 2005 – 2011. Malaysia Higher Education Statistics, 2005-2010. Putrajaya: Ministry of Higher Education, Malaysia.

From the total output of graduates from either public or private universities in Malaysia from 2000-2011, it was found that the number of graduate of literary fields outnumbered greatly those of the science and technical disciplines. However, the output of the IPTA technical fields showed an increasing trend (Figure 2 and 3). This is in line with mainstreaming government strategy for technical and vocational training as stressed in the 10th Malaysia Plan to provide alternatives for individuals to realise their potentials fully based on their tendencies and talents. The figure for technical fields students output as of 2010 are 28,171. The intake for technical and vocational public institutions rise 1.5 % annually, following the building of 10 new skill training institutions and the upgrading of 16 existing institution (Malaysia, 2010).



Source: Higher Learning Statistical Yearly Various Data, 2000 - 2010. Malaysian Higher Learning Statistics 2000 - 2010. Putrajaya: Ministry of Higher Education, Malaysia.

Figure 2. *Malaysian Higher Learning Public Output According to fields of learning, 2000 – 2010*



Source: Higher Learning Statistical Yearly Various Data, 2000 - 2010. Malaysian Higher Learning Statistics 2000 - 2010. Putrajaya: Ministry of Higher Education, Malaysia.

Figure3. *Malaysian Higher Learning Private Output According to fields of learning, 2000 – 2010*

To date, 20 Public Higher Institutions of Learning (IPTA) and 437 Private Higher Institutions of Learning (IPTS) (The Ministry of Higher Learning, Malaysia, 2011) have been establish to provide skilled manpower needed in the context of knowledge based economy. The increase in the number of Universities in Malaysia has led to a bumper output of graduates being dumped into the labour market. In terms of quantity, each year sees an increase in the number of graduates (Table 2). However, it was found that only a small part of the populace possessing tertiary level of education as compared to those with

secondary level of education in Malaysia, whereas the populace with only the tertiary education continues to rise annually (Table 3). Hence only 23% of Malaysians are equipped with tertiary level education as compared to the average level for the OECD of 28% and approaching 35% in Singapore and Finland (Malaysia Government, 2010).

Additionally, in terms of quality, the graduates generally are not able to fulfil the needs of industries. This is evident based on the study of graduate's employability that found most graduates of higher learning institutions are unable to fulfil the needs of employer in terms of soft skills and workability.

Table 2. Demand and supply in Malaysian labour market, 2002 – Jun 2012

Year	Supply				Demand	Unemployment rate
	Graduates (Degree level)			Manpower (million)	Manpower (million)	
	Public (million)	Private (million)	Total (million)			
2002	36.8	20.3	57.1	9,886.2	9,542.6	3.5
2003	50.2	17.8	68.0	10,239.6	9,869.7	3.6
2004	43.8	18.4	62.2	10,346.2	9,979.5	3.5
2005	51.8	20.3	72.1	10,413.4	10,045.4	3.5
2006	55.5	27.2	82.7	10,628.9	10,275.4	3.3
2007	59.5	23.6	83.1	10,889.5	10,538.1	3.2
2008	59.8	26.6	86.4	11,028.1	10,659.6	3.3
2009	65.8	40.5	106.3	11,315.3	10,897.3	3.7
2010	66.4	80.6	147.0	11,517.2	11,102.6	3.4
2011	66.3	54.3	120.6	12,825.9	12,440.3	3.0
Until June 2012				12,912.6	12,524.0	3.0

Source: Malaysia (2012a; 2011d). Adaptation from Higher Learning Statistical Yearly Various Data and Department of Statistics, Malaysia, 2002 – 2012.

Table 3. Percentage of working population based on economic status in Malaysia, 2002 – 2010

Year	No formal education (%)	Primary (%)	Secondary (%)	Tertiary (%)
2002	5.4	23.9	54.1	16.6
2003	4.8	22.7	55.0	17.5
2004	4.7	22.2	54.8	18.2
2005	4.6	20.9	55.4	19.0
2006	3.8	20.7	56.2	19.2
2007	4.0	19.6	56.2	20.1
2008	4.5	18.6	55.9	21.1
2009	3.9	17.6	55.1	23.4
2010	3.6	16.7	55.5	24.1

Source: Malaysia (2012b; 2011d).Adaptation from Department of Statistics, Malaysia Various Data, 2002 – 2010. Malaysia. 2011. Investigation on Labour workforce time series data, 1982-2010. Retrieved on 27th September 2011 from http://www.statistics.gov.my.

According to National Economic Advisory Council or *Majlis Penasihat Ekonomi Negara* (Majlis Penasihat Ekonomi Negara, 2010), the lack of skills (coupled with complaints of lack of creativity and English language skills) are consistently the main resisting factors faced by firms. The issue of the graduates bumper being dumped in the labour market are not only due to lack of soft skills and workability of graduate, but also relates to the country's manpower structure that focuses more on jobs not requiring tertiary level of education. During the period of 2000 and 2009, only 23.1 % manpower at tertiary level from workgroup of senior officers and managers, professionals and technicians and associated professionals (Table 4). The need for new jobs for graduate certificate holders is minimal.

This transpired from the ratio of the number of new jobs and students output numbers as recorded for the year 2008 and 2009 (Table 5).

Table 4. **Manpower based on major working groups, 1995 – 2009**

Major working groups	2000	2005	2006	2007	2008	2009
Manager and Senior Officers	639.9	871.6	903.9	832.1	810.4	906.4
Professional	537.9	680.9	613.8	649.7	671.4	697.2
Associate Professional and technicians	1,112.9	1,430.5	1,417.2	1,515.9	1,620.7	1,650.1
Total manpower	**9,274.6**	**10,894.8**	**11,159.0**	**11,398.0**	**11,576.5**	**11,620.5**

Source: Malaysia (2005) Ninth Malaysia Plan (2005-2010) and Malaysia (2010b) Tenth Malaysia Plan (2011-2015).

Table 5. The needs for new jobs for graduates and graduates output, 2008-2009

Graduates	2008			2009		Working ratio: graduates output
	Number of Occupation	Graduates output (IPTA & IPTS)	Working ratio: graduates output	Number of Occupation	Graduates output (IPTA & IPTS)	
Degree	12,222	72,066	1 : 6	13,284	106,294	1 : 8

Source: Malaysia (2011b; 2011c). Adaptation data from Higher Education statistics and Ministry of Human Resource statistics.

The numbers of graduates entering the job market was 231,800 in 1982 as compared to 2.10 million in 2010. The trend continues for the demand of the graduate manpower for the same time period. Being an increase from 228,100 to 2.03 million (The Department of Statistics, Malaysia, 2011). The unemployment rate is highly susceptible to current economic situation. In 1987, the economy crashed. And with it the same year saw the highest rate of unemployment for the period 1982 to 2010 being 5.0 %. The rate decreased steadily afterwards as the economy recovered. As of 2010, the unemployment rate stood at 3.1% a much lower rate from the previous years (Table 6).

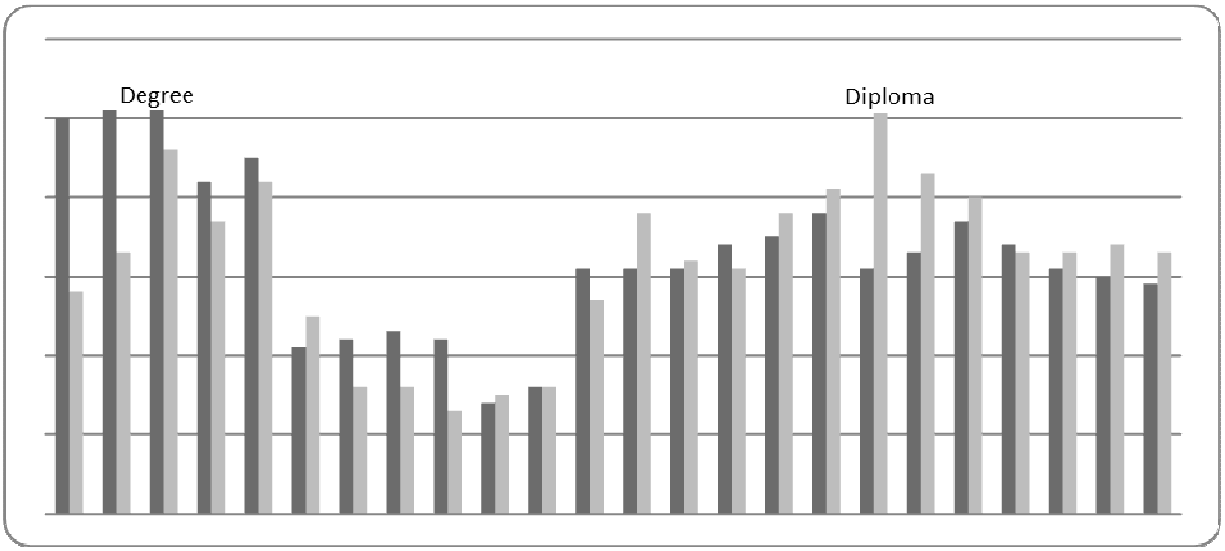
Table 6. Primer Statistics of Graduates Manpower, Malaysia, 1982–2010

Years	No. of Manpower ('000)	No. of working ('000)	Unemployment rate (%)
1985	281.8	271.0	3.8
1990	391.6	382.5	2.3
1995	572.8	563.1	1.7
2000	1,039.2	1,006.4	3.2
2005	1,637.2	1,574.3	3.8
2010	2,096.1	2,030.6	3.1

Source: Malaysia (2011). Manpower Investigation, Department of Statistic.

The graduate's unemployment rate according to the highest level of certificate achieved can be seen based on the graft in Figure 4. Based on the Malaysia Statistical Department, the rate of unemployment graduate holder in the 1980's was much higher from the diploma holder. The scenario was reversed in the 2000's where diploma holders was more of them being unemployed compared to the graduates. This may be due to market demand of that time that preferred those with higher degree of certification compared to demands in the early 1980's. Up to 2010, Malaysia has an overall graduates' unemployment rate of 27.6 %. This is much smaller figure as compared to the rate of unemployment recorded per universities in general. Out of the five main universities then i.e. UM, USM, UKM, UPM and UTM, only UKM showed a decreasing unemployment rate from 49.6 % in 2006 and thence a consistent drop in the following years

to 29.9 % in 2010. The other four universities were inconsistent in their unemployment rate. And all of them except UM recorded an unemployment rate of less than 32% in 2010 (Table 7). Meanwhile, new universities like UniMap and Universiti Sultan Zainal Abidin (UNISZA) recorded a high rate of unemployment in excess of 50.0 %.



Source: Manpower Investigation, Department of Statistics, Malaysia, 2011.

Figure 4. *Malaysian graduates unemployment rate according to higher certificate, 1985 – 2010*

Table 7. First degree graduates unemployment rate according to IPTA in Malaysia, 2006 -2010 (percent)

IPTA	2006	2007	2008	2009	2010
UM	41.5	26.0	28.6	28.6	31.7
UKM	49.6	37.4	33.0	32.6	29.9
UPM	30.4	26.5	15.9	23.7	20.3
UIAM	31.7	22.0	18.2	22.3	23.7
UiTM	33.4	26.2	21.3	27.0	24.6
USM	34.7	25.6	23.7	24.8	25.3
UTM	22.1	28.9	19.6	23.0	20.6
UUM	52.1	38.3	29.5	35.1	32.6
UNIMAS	55.2	53.0	43.3	41.2	40.9
UMS	58.3	54.0	51.7	44.4	40.9
UPSI	1.6	3.2	3.4	3.9	4.9
UTHM	31.9	27.7	31.9	37.1	27.2
UMT	60.2	51.5	64.1	50.9	49.9
UTeM	49.4	45.8	33.5	29.2	35.8
USIM	56.2	45.8	32.2	58.6	48.0
UMP	31.7	16.8	19.6	36.4	33.6
UniMAP	*67.9*	*55.7*	*44.7*	*49.9*	*54.9*
UnisZA				64.0	58.6
MALAYSIA	**37.3**	**30.3**	**26.2**	**29.1**	**27.6**

Source: Malaysia (2011b). IPT Graduates tracer study, Ministry of Higher Education of Malaysia.

Conceptual framework of the study

Based on the literature that focuses research on employability, it was found that many factors affects graduates employability. To be employed immediately upon graduating depends on many factors that could be controlled or outside the control of the graduate. Outside factors not within the control of the graduate includes economic growth that is in direct relationship with the creation of job opportunities, the fluctuation in the demand and supply of the labour market, the quality of and reputation of the universities, as well as organizational factors involving the employer's practices in employee selection. Figure 5 shows the framework for conceptual research focusing on to analyse intervention at individual's level of the undergraduate to increase their employability during their term at the university. The unit of the analysis (the undergraduate) remains largely untouched by researchers in discussions of undergraduate's employability. It is important matter because the individuals (students) are involve in increasing their employability level in the job market except those who aims to be self-employed or being an entrepreneur. Being sensitive to job market needs and a good career planning do assist the students to be more competitive in the job market. Employability then has potentials that the graduates should seek to develop to land and succeed in a suitable employment in the context of the current labour market (Clarke 2008).

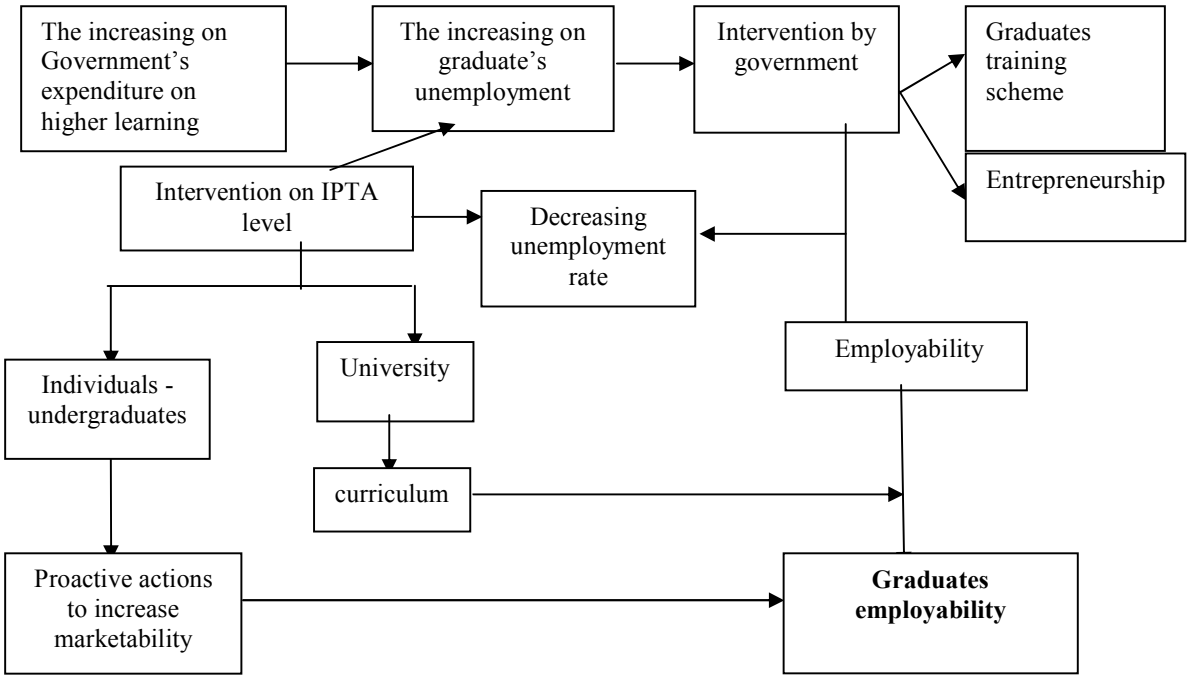


Figure 5. *The conceptual framework of the study*

Methodology

This study involves the collecting of primary data from final year engineering undergraduate of UniMap. The respondent sampling (the undergraduates) was initially done based on faculty/centre of the university using the systematic sampling method to get enough number of respondents for the purpose of the research. However, the target size of the sample was not achieved as the researchers were only allowed access to certain faculty/program at UniMap fixed campus. The other respondents from different faculty/program became inaccessible for this study. The instrument used to gather information was via

questionnaire distributed to the students during the visit by the researchers to the campus. The data was analysed descriptively and showed through tabulated and diagrammatized form to discuss the findings of the study.

Results: UNIMAP case

Universiti Malaysia Perlis [UniMAP] was previously known as Kolej Universiti Kejuruteraan Utara Malaysia (KUKUM) is the 17th public university establish in 2001. As an engineering based university, it was tasked to produce the human capital for the field in engineering specialising in electronic engineering to support the country's industrial development plan. UniMAP is based in Perlis. It offered higher education in the engineering field with emphasis on practical experience in learning. Graduates are produced with the remit to excel academically and skilled in the related engineering discipline as well as equipped with soft skills for communication, ICT and leadership. It offered eight engineering faculties catering for undergraduate and post graduate students.

Questionnaires were executed at the Pauh, Perlis, fixed campus involving 171 respondents from four faculties of study. Respondent's profiles are shown in Table 8.

The discussion in this section refers to the result of fieldwork of December 2011. Data was analysed using Statistical Packages for Social Science (SPSS) and discussed descriptively but also critically to see engineering undergraduate's students perception on the issue of employability and competition in graduates labour market. The actions taken by students to ready them for labour market competitions upon completing their study is also identified. The discussions hope to get better picture and understanding on the student's sensitivity level on employability.

Table 8. Profile of the respondents [N=171]

PROFILE	TOTAL	%
SEX		
• Male	87	50.9
• Female	84	49.1
ETHNICITY		
• Malay	119	69.6
• Chinese	42	24.6
• Indian	7	4.1
• Others	3	1.8
AGE		
• 20 - 25 years	162	94.6
• 26 – 30 years	4	3.0
• 31 - 35 years	1	0.6
MARITAL STATUS		
• Single	167	97.6
• Married	3	1.8
FACULTY/CENTRE		
• Bio medical	1	0.6
• Mechanical	8	4.7
• Mechatronic	130	76.0
• Manufacturing	32	18.7
Cummulative Grade Values Mean (CGVM)		
• Less than 2.00	1	0.6
• 2.00 – 2.49	23	13.5
• 2.50 – 2.99	78	45.6
• 3.00 – 3.49	51	29.8
• 3.50 – 4.00	16	9.4

PROFILE	TOTAL	%
HOMETOWN		
• Johor	13	7.6
• Kedah	33	19.3
• Kelantan	22	12.9
• WP Labuan	5	2.9
• Melaka	3	1.8
• Negeri Sembilan	5	2.9
• Pahang	21	12.3
• Perak	8	4.7
• Perlis	20	11.7
• Pulau Pinang	2	1.2
• Sabah	7	4.1
• Sarawak	10	5.8
• Selangor	2	1.2
• Terengganu	7	4.1
• WP Kuala Lumpur		

As manpower in the field of engineering is a source of human capital much needed by the market so UniMap was created and tasked to make huge contribution to fulfil this needs. Of the 171 respondents involved in this study, it was found that 51.3% stated UniMAP was their university of choice. Meanwhile, 48.5% stated otherwise. Nevertheless, 70.4% respondents stated their current field of specialisation were those they chose. Table 9 showed factors that affected this group in choosing university.

Table 9. Factors of university's selection by respondents

Factor's of selection	Frequency (person)	Percent (%)
University's image and reputation	13	14.6
Lecturer's quality	4	4.5
Studies quality/ program/courses	34	38.2
University's location	11	12.4
Suggestion by Family/teacher/friends	14	15.7
Others	13	14.6
Total	**89**	**100**

On overall observation, the respondents viewed the study program they followed has given them sufficient exposure to prepare them to face the working world as well as increasing their level of soft skills and big job prospects upon completion of study (Figure 6).

The strategies and proactive steps taken by graduates are displayed in Table 10. More than 90% of respondents prioritised employability skills development in line with employers' similarly high expectation for higher skills for current time. Although efforts are planned and taken to increase employability, nevertheless the respondents are apprehensive of some factors they feel might jeopardize their career objective (Figure 7), namely low academic achievement and no job experience. Although they are engineering students, 49.1 % stated they lack technical skills that would affect their employability (Figure 7). This situation obviously creates many UniMap graduates employability and marketability issues at the end of their study, more so of 66 % of them plan to search for work and be employed compared to 18.1% of them wishing to further their studies (Figure 8). The problems above are supported by unsatisfactory academic achievement (low CGPA grades) that cuts into their competitiveness in the labour market. Nevertheless, it was found that graduate level of confidence remains high, as 63% are confident to get job upon completing study as compared to 36% who have less confident to get job.

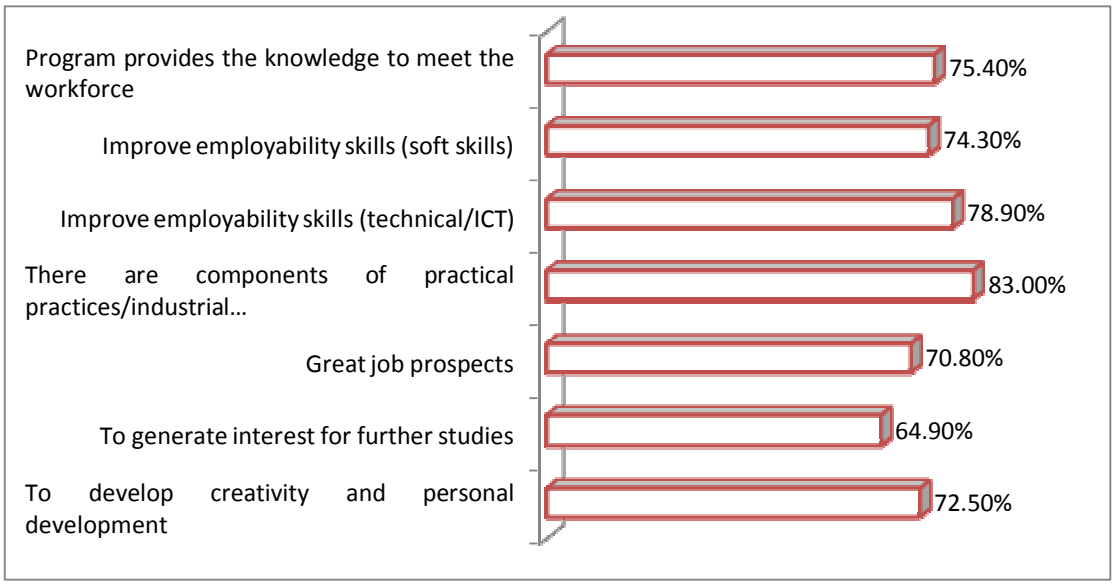


Figure 6. *Respondent's opinion on the program of study*

Table 10. Strategy and proactive actions taken to gain career goal needed

Proactive actions	Frequency	Percent (%)
Enhancing employability skills	155	90.6
Plan to further studies	118	69.0
Gaining information related to work and labour market needs [*guidebook*]	136	79.5
Building relationship (*contact*) and network	137	80.1
Attending and following workshops to enhance effectiveness during interview – guidance and advice	118	69.0
Gaining information about career and training program for the graduates	132	77.2
Attending workshops/career expo to enhance information/knowledge	128	74.9
Gaining information about program and financial assistance for entrepreneurship program	104	60.8
Have begun to make the search profile of company / organization that has the potential to build a career after graduation	116	67.8

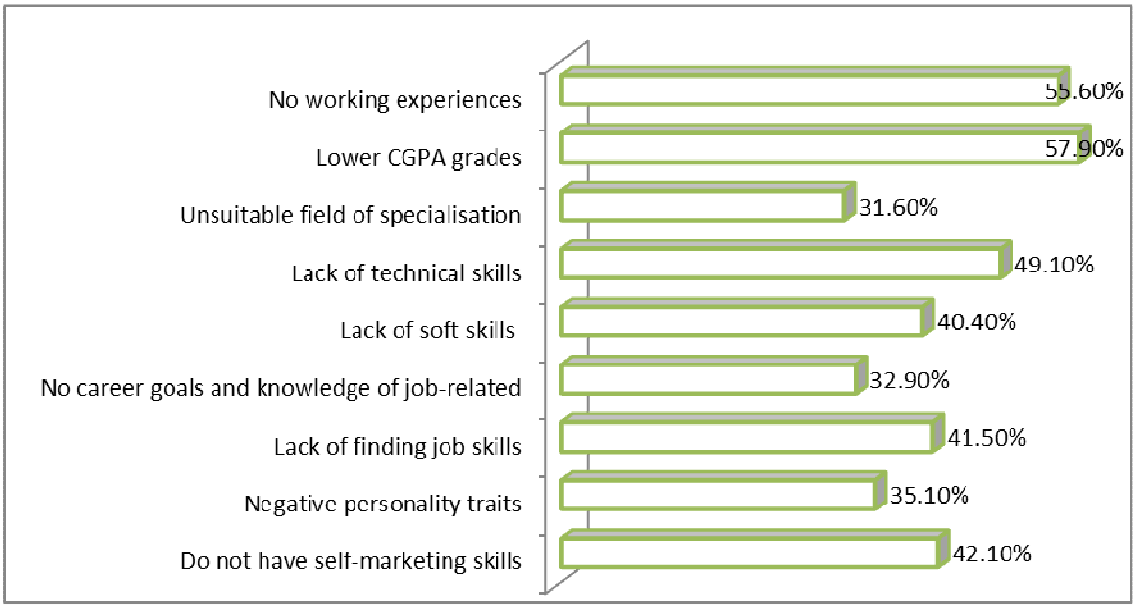


Figure 7. *Deprived factors that influenced career goal attainment*

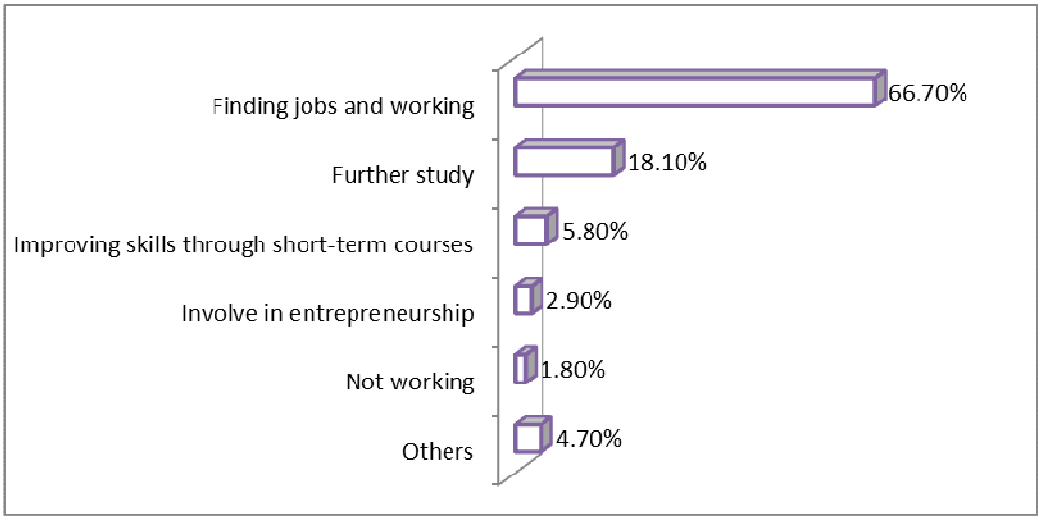


Figure 8. *Final year Unimap's engineering student's planning after completing their studies*

Conclusion

The results of this study showed that more than 50 % of respondents do not have planning and strategies to reach the objective of their employability upon completion of study. This is mainly due to the lack of information on the prospect and potential of their career despite the specificity of their field of study. It was found that 58.2 % of the respondents have not done any attempt to search for job although having the end of their study period. They are left without a good plan to identify job opportunities and economic sector or organisation that could be targeted for job application. By this stage, the students should already have completed their portfolio and resume as well as having good network with organisations and

prospective employer to avail them for the desired career, to build self-worth, and employment skills. Further, academic excellence is a key factor in an ever competitive environment. The employability of the graduates in terms of their employability is ultimately their responsibility individually to equip themselves with the planning and strategies to be gainfully employed. Have employability of graduate for employment is a human resource development issue that merits attention as it affects each graduate differently. Furthermore, the relationship of the employment- employability is still little understood as it is closely related to not only the individual factor but also other factors such as the labour market and organizational practise.

Although this study is an exploratory study, nevertheless its findings are useful as a guide for higher learning institutions and also a crucial input for formulating policies at the Malaysia Education Ministry level as well as Economic Planning Unit that monitors the unemployment issue of graduates. Government intervention programmes at the agency level, for instant the agency with the private sector is too limited in its scope. Intervention programs at IPT level are seen as important beginning to address the problem or the shortcomings of IPT graduates employability. Whereas the government venture of government agencies and the private sector are the second stage intervention to equip graduates needing exposures to the real world working environment. Further studies to explore the concept and the management of employability need to be increased to understand the dynamics and the relationship within the graduate's labour market to address the unemployment.

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