

## Employers' Perceptions on Graduates in Malaysian Services Sector

Rahmah Ismail, Ishak Yussof and Lai Wei Sieng  
Faculty of Economics and Management, University Kebangsaan Malaysia,  
43600 Bangi, Selangor, Malaysia

**Abstract:** In this challenging world, competition is everywhere. Individual works hard to equip themselves with knowledge and skills to avoid being left far behind and survive. Obtaining a degree from institute of higher education in local or overseas has become necessary in order to get a good job with nice salary. However, a quite alarming issue is a high unemployment rate among graduate in this country. Among the factors that cause unemployment among graduates are lacks of soft skills, high employers' expectation, mismatching and the fluctuation of economy in the country. The main purpose of this study is to get the perception of employers' in services sector on graduates performance. Services sector is selected since, it has become the main sector in the country. A total of 749 employers' in the services sector in Lembah Klang involved in this research. The questionnaires were distributed to employers' and human resource managers and head of other departments in the organization in 2009 and 2010. The difference in mean score obtained by graduates from the University Kebangsaan Malaysia (UKM), graduates from other local institute of higher education and graduates from overseas were compared and tested. In general, the results show that respondents give moderate scores to all of the graduates. This shows that the graduates performances are good and satisfying but not the best. In addition, some weaknesses among graduates from UKM and other local and overseas institute of higher education have been recognized from the results of comparing the mean scores. The implication from this finding is that institutes of higher education still need to work hard to improve the ability and employability of their graduates in the job market where quality is more needed than quantity.

**Key words:** Employers' perception, graduates, unemployed graduates, services sector, market, Malaysia

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### INTRODUCTION

Malaysia is a highly motivated developing country with vision to achieve status as developed country. One of the important efforts taken is changing its primary economic sector from manufacturing to service which is also the main policy in other developed country. Services sector consists of wholesale and retail trade, restaurants and hotels, transport, storage and communication, finance, insurance, real estate and business services and government services. These services require skilled labors with recognized qualification from institute of higher education and promise to pay a higher wages compared to other sectors.

As a result, higher education is vital for individual to get a good job and high pay. Reactions can be seen from three parties which are government, households and private community. Government encourages more and more people to further their studies, parents are sending their children to obtain higher education and at the same time, more and more private institutes are established. The outcome from these chain reactions is the increasing of

output from institutes of higher education. According to statistics from Ministry of Higher Education, the total output of graduates is 168,879 in 2007, 173,183 in 2008 and 202,203 in 2009. The increasing number of graduates produced lead to a serious problem of increasing number of unemployed graduates. Unemployment among graduates occurred when supply of graduates and demand of graduates are not in the equilibrium. As a result, apart from increasing number of unemployed graduates there about 30% of graduates are paid below RM 1500 which does not match with their qualification.

Another factor that contributes to unemployment among graduates themselves is the quality of graduates. Employers' are complaining that lots of graduates do not meet their requirements. Among the weaknesses of graduates are lack of soft skills and not performing well at work place. Graduates nowadays are expected to not only excel in academic but at the same time also equipped with soft skills. This study attempts is to examine employers' perceptions on graduates performances in the services sector to determine skills that required by employers and

Table 1: Output of institutes of higher education from 2002-2009

Institutes	Years				
	2005	2006	2007	2008	2009
IPTA	79,934	81,095	85,448	94,622	104,870
IPTS	57,953	83,186	83,431	78,561	97,333
KTAR	11,205	8,925	8,974	9,064	9,522
Polytechnic	25,111	27,809	30,120	32,783	31,426
Community college	3,444	4,061	4,331	5,680	7,685
Total	177,647	205,076	212,304	220,710	250,836

Ministry of Higher Education, various years

Table 2: Graduates working status (graduated in 2008 and 2009)

Status	2008		2009	
	Number	(%)	Number	(%)
Working	73382	52.6	69,959	45.1
Further study	21306	15.3	28,586	18.4
Improve skills	1688	1.2	3,434	2.2
Waiting for job placement	9349	6.7	11,785	7.6
Not working	33,529	24.1	41,514	26.7
Total	139278	100.0	155,278	100.0

Ministry of Higher Education, 2010

to compare UKM graduates performance with other local graduates and overseas graduates based on employers perceptions.

**Graduates workforce:** The Ministry of Higher Education is the authority that managing institutes of higher education in Malaysia. Institutes of higher education in Malaysia consist of public institutes of higher education (IPTA), private institutes of higher education (IPTS), Tunku Abdul Rahman College (KTAR), community colleges and polytechnic. Table 1 shows the total number of graduates produced by institutes of higher education from 2005-2009. The numbers are increasing where IPTA produces the most number of graduates in recent years. As the number of unemployed graduates increases in recent years, the Ministry of Higher Education (MOHE) has started to produce statistics on graduates working status 6 months after they graduate.

Table 2 and 3 show the statistics released by the ministry for 2008 and 2009. Statistic for graduates that finished their studies in 2008 shows that only 52.6% graduates working 6 months after graduate and 24.1% unemployed. Meanwhile, statistics for graduates that finished their studies in 2009 shows that only 45.1% graduates working and 26.7% unemployed. The increasing number of unemployed graduates reveals the fact that unemployment among graduates is getting worse. In addition, the Ministry of Higher Education also identified some reasons why graduates were not working after finished their studies in 2009. As shown in Table 4, the main reason is they are still looking for jobs. This indicates that graduates do want to work but they are not employed. Another important reason is jobs offered to them are not suitable.

Table 3: Reasons of not working for graduates in 2009

Reasons	Total	
	Amount	(%)
Looking for jobs	29,807	71.8
Jobs offered are not suitable	28,586	18.4
Responsibility in family	835	2.0
Not confident to work	271	0.7
Chose not to work	179	0.4
Not interested to work	164	0.4
Want to rest	1,189	2.9
Health problem	171	0.4
Waiting for placement to further studies	6,923	16.7
Others	1,060	2.6
Total	41,514	100.0

Ministry of Higher Education, 2010

Table 4: Profile of respondents

Subjects	Amount	(%)
<b>Gender</b>		
Male	327	43.7
Female	422	56.3
<b>Race</b>		
Malay	612	81.7
Chinese	102	13.6
Indian	21	2.8
Others	14	1.9
<b>Position</b>		
Senior officer and manager	498	66.5
Professional	121	16.2
Technician	130	17.4
<b>Working experience</b>		
<5 years	232	31.0
5-10 years	297	39.7
11-20 years	156	20.8
>20 years	64	8.5
<b>Status</b>		
UKM graduate	162	21.6
Non-UKM graduate	587	78.4

Field survey, 2009/2010

**Literature reviews:** Technological developments and globalization that have changed dramatically has formed significant impact on the nature of work where advanced use of technology is a necessity in order to compete in the global arena (Singh and Singh, 2008). Therefore, a more flexible workforce with well developed generic skills such as creative thinking, problem solving and analytical skills is greatly needed by employers in various industries in order to meet the challenges faced by businesses. Employers are also increasingly seeking graduate to be recruited with a wide variety of skills apart from those associated directly with their area of studies (Rawlings *et al.*, 2005).

Now-a-days, graduates are required to possess more than their academic qualifications. They must equip themselves with soft skills such as personality, presentable and communication skills (Barclay, 1993; Lim, 1994; Ivancevich and Lee, 2002; Mason *et al.*, 2009). Changes in social structure and improvement in educational attainment have resulted in new perspective amongst employers' when choosing new workforce

especially graduates. According to Li and Zhang (2010), employers' tend to choose graduates with high performance.

**The job matching theory:** The underpinning theory that governs the theoretical framework of this study is job matching theory. The main goal of education and training is to prepare graduates for the tasks they are going to perform on their jobs (Holton and Trott, 1996; Barnard *et al.*, 2001). According to the job matching theory, a mismatch between the required skills and the skills, a graduate actually possesses has important consequences for productivity, wages and probability to get a job. Therefore, the competency level (qualification) required by employers must be equivalent with competency level of the graduates. The match between graduates field of specialization and the field of specialization which is required for the job is also relevant. Job match also can be identified by the degree to which graduates are able to utilize the knowledge, skills and attitudes to the work context (Barnard *et al.*, 2001).

In job matching theory, unemployment or underutilisation of graduate-level skills in employment reflects mismatches between graduates and employers' that may emerge for a number of reasons (Mason *et al.*, 2009). Mason *et al.* (2009) highlighted that matching theory, together with the literature on over-education and under-utilisation of skills, pointed to several reasons why the teaching, learning and assessment of employability skills might be expected (all else being equal) to contribute to superior labour market outcomes for graduates in possession of those skills. Arrow and Spence (in Tachabanaki) introduced screening hypothesis that postulates employers' behaviour in choosing new staff. According to this theory, employers will screen the applicants qualifications and chose them if they match the available jobs. Employers will choose the most suitable candidates to avoid any expensive training cost later. This group of workers will be paid higher than the group without matching skills.

**Employees' work skills:** The definition of work skills has broadened to include not only academic and technical skills but also a variety of attitudes and habits to gain employment and progress within enterprise (ACCI, 2002; McLeish, 2002). According to Sherer and Eadie, research skills are not job specific but are skills which cut horizontally across all industries and vertically across all jobs. Australian Council for Education Research/ACER articulated work skills as the qualities needed for success not only in work but also in life as a whole. The qualities discovered are resourcefulness, adaptability and

flexibility. Semeijn *et al.* (2005) studied the personality of graduates entering the labour market and found that human capital variables (education, training and employees experience) and graduates personality significantly affect their ability to fulfil labour market requirements. In recent years, many tasks are interdependent and employers seek graduate who display a blend of technical and human relations skills (Zargari, 1997).

Based on comprehensive previous evidence, Cotton (2001) suggested that employers prefer graduates who possess basic, higher-order and affective skills. In another study, DeLeon and Borchers (1998) discovered that employers require graduates with more intrinsically humanistic skills rather than academic or technical skills. Technical skills remain important but many employers are beginning to recognize that it is another category of skills that are crucial to a worker's ability to work smart but not harder. A study by McLeish (2002) stated that work skills for small and medium enterprises consist of five core abilities, i.e., personal values, interpersonal skills, initiative and enterprise skills, learning and workplace skills. Poole and Zahn (1993) categorized work skills required by employers as personal values, problem solving and decision making, relation with other people; task related skills, communication skills, maturity, health and safety as well as job commitment.

The core component of work skills consists of communication, team work, problem solving, initiative and enterprise skills, planning and organizing, self management, learning skills and technology that contribute productive employee (ACCI, 2002). The nature of work has changed dramatically, requiring a highly skilled graduate with proficient in more language, mathematics, technological literacy and problem-solving skills (Zargari, 1997). A SCANS report for America 2000 (SCANS, 1991, 1994) pointed that graduates should be competent in basic skills, thinking skills and personal qualities along with workplace competencies in the areas of resources, interpersonal, information, systems and technology. DeLeon and Borchers (1998) regrouped the work skills into nine skill categories namely; reading, writing and math, communication, critical thinking, group interactions, personal development, computer skills, technical systems, leadership and team work. The following skills were mentioned most frequently, knowing how to learn, competence in reading, writing and calculation, effective listening and oral communication skills, adaptability through creative thinking and problem solving, personal management with strong self esteem and initiative, interpersonal skills, the ability to work in teams or groups, effective leadership and basic

technology skills. However, Cotton (2001) segregated the work skills into three clusters, basic skills, higher order thinking skills and affective skills and traits.

In addition, one literature proposed a new term known as Work skills 2000<sup>+</sup> which is defined as the work skills needed to enter, stay in and progress in the world of work. Work skills 2000<sup>+</sup> consist of communication, problem solving, positive attitudes and behaviours, adaptability, working with others and science, technology and mathematics skills (The Conference Board of Canada). Further, Kilpatrick *et al.* (2001) concluded that work skills with high demand are skills for knowledge work (ideas, design, innovation, marketing, monitoring and management), soft skills (conflict resolution, leadership, team-building and workplace communications), literacy and numeracy skills. Baker and Henson (2010) identified only three areas of work skills namely generic skills, career management skills and career sector knowledge. However, Le Deist and Winterson (2005) associated employee's competency with cognitive, functional and social competence.

DEST (2002) defined employability skills as skills required not only to gain employment but also to progress within an enterprise so as to achieve one's potential and contribute successfully to enterprise strategic directions. According to Moreau and Leathwood (2006) employability refers to a set of achievements related to skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations which benefits themselves, the workforce, the community as well as the economy. As a consequence, many higher education institutions have attempted to embed skills in the curriculum. In relation to this they also (Moreau and Leathwood, 2006) highlighted the importance of some employers placed on generic skills (such as communication skills and team-working) and personal attributes (such as resilience and commitment).

**Empirical findings:** Empirical studies that related to employers perception on the graduates cover many aspects and demonstrate various findings. Most studies find that the highest rating criteria from employers' perception is communication skills (Scheetz, 1977; Dean *et al.*, 1981; Henry and Raymond, 1982; Dench *et al.*, 1998; Ducoffe and Ducoffe, 1990; Kim *et al.*, 1993; Scott and Frontezak, 1996). Other important criteria are team work and learning skills followed by technical skills. The importance of communication skills is found from studies in developed and less developed countries. For example, Billing (2003) conducted a comparative study between United Kingdom, United States, New Zealand,

Australia and South Africa on skills requirement amongst the graduates. His study demonstrates that for all countries under study, communication skills are the most important. According to Scheetz (1977) the communication skills include oral, writing, listening, positive thinking and interaction with customers. Apart from this, his study finds that employers are looking for workforce with leadership skills, diligent, follow instructions, adaptable, matured, confident and interpersonal skills.

A study by Azmi revealed that employers rated items such as arrive on time, demonstrate a sense of responsibility, cooperate with supervisor and possess a positive attitude toward work as the major desirable employee traits. Mustapha and Greenan (2002) identified the employers' perceptions of work skills and found that besides the basic work skills (such as technical skills, communication skills, social and interpersonal skills, self-motivation, critical thinking and problem solving skills), entrepreneurial skills and positive attitude toward work are components needed by the k-economy. Recent studies indicated that private university graduates exhibited slightly higher level of mismatch between employers' needs and undergraduates skills namely in criteria such as critical analysis, planning, problem solving oral communication, decision making and negotiating skills (Wye and Lim, 2009).

The Malaysian employers prefer to recruit graduates with high ICT skills, ability to work as a team, interpersonal skills and proficient in English (Singh and Singh, 2008; Maros, 2000; Nair-Venugopal, 2000). According to them, interpersonal and communication skills, academic qualifications and work experience are key selection criteria used by employers when recruiting new graduates. A research done by Wilton (2008) highlighted knowledge gained by graduates, combined with transferable skills and widely recognised, highly valued, certificated degrees may give graduates and their employers critical advantages in the local and global market.

National Higher Education Research Institute, Malaysia (IPPTN) conducted a research on unemployment among graduates. Employers' were interviewed to discover the reasons of graduates not employed. The main reason is weaknesses among graduates, for example, weak in English language proficiency, weak interpersonal and communication skill, not proactive, unable to work as a team, unwilling to learn from subordinates and narrow minded. Employers' suggested that collaboration between university and industry should be enhanced. University should cooperate with industry in designing courses to make

sure the contents of the courses will eventually produce graduates that meet the needs of the industry. A more study by NEAC (2001) stated that the main determinant of graduates employability is communication skills while academic achievement is rated number eight.

Nurita, Shaharudin and Ainon concluded that graduates in Malaysia are lack of soft skills as required by employers' such as communication skill, problem solving and flexibility. Besides that English language proficiency ability to present ideas and seek for solutions are some of the vital skills (Chang, 2004; Singh and Singh, 2008). Apart from this, Archer and Davison (2008) suggest ten main skills which are greatly emphasized by the organization or employers' when hiring graduates. Among the three most important are communication skills, teamwork skills, integrity. However, employers mostly not satisfied with graduates performances on these skills.

Employers' in the public sector listed few criteria which are important such as good personality, good communication skill, fitness and general knowledge and personalities. In another study, Rahmah ishah and Mohd Fauzi looked on the differences on perceptions of employers from the public sector and the private sector on UKM graduates performances.

They found that employers' perceptions on UKM graduates performance are at the moderate level and employers from the public sector gave higher rating to UKM graduates performances compared to employers from the private sector.

**MATERIALS AND METHODS**

The analysis in this study is based on the primary data obtained from the field survey through distributing well-designed questionnaires. The questionnaires were distributed to employers or representatives of employers' such as managers and head of the departments of the organizations in services sector. The target group of this research is personnel who dealing with recruitment of employees and managers who have a number of subordinates under his or her department. A total of 749 respondents in services sector were involved where 469 of them were from the public sector while 264 of them were from the local private sector and 16 of them are from multinational organizations. There are five parts in the questionnaire. The 1st part is information of respondents including their position, race, sex, work experience and their status whether they are graduates of UKM or not. The 2nd part is the information of organization which consists of sector of economy' sector of occupation, medium of language used in organization, number of employees in respondents departments and field of studies related to respondents departments. The 3rd part

is UKM graduates recruitment information. The 4th part is employers' perception on graduates performance where employers evaluate graduates performance in listed criteria or type of performance using Likert scale 1-5. There are 11 categories of performance and 3 groups of graduates to be evaluated which are UKM graduate, other local graduate and overseas graduate. The last part is organization needs for future graduates where respondents are required to rate the level of importance of given criteria. In addition, respondents are also required to state their preference of hiring UKM graduates.

The focus of this study is to compare the min scores given by the respondents to the groups of graduates in each criterion. Min scores will be calculated by using statistic software SPSS 16.0.

The difference of min scores between the groups of graduates in each criteria will then being tested for level of significance by using ANOVA F-test. The difference of min scores which significance at 1 and 5% will then be tested with Tukey-test.

**Model specification:** A linear regression model is used to find out the relationship between respondents background and min scores obtained by graduates. Respondents background included are race, sex, work experience, status (UKM graduates or not) and sector of occupation. Some dummy variables are used in these linear regression models to explain the categorical variables. The models of linear regression for each group of graduates are:

$$MSUKM = \beta_{10} + \beta_{11}R_i + \beta_{12}S_i + \beta_{13}EX_i + \beta_{14}ST_i + \beta_{15}SEC_i + \mu_1 \tag{1}$$

$$MSO = \beta_{20} + \beta_{21}R_i + \beta_{22}S_i + \beta_{23}EX_i + \beta_{24}ST_i + \beta_{25}SEC_i + \mu_2 \tag{2}$$

$$SPOV = \beta_{30} + \beta_{31}R_i + \beta_{32}S_i + \beta_{33}EX_i + \beta_{34}ST_i + \beta_{35}SEC_i + \mu_3 \tag{3}$$

Where:

- MSUKM = Min scores of employers' perception on UKM graduates
- MSO = Min scores of other local graduates
- MSOV = Min scores of overseas graduates
- S = Dummy variable for respondent's gender, 1 = male, 0 = female
- R = Dummy variable for respondent's race, 1 = Malay, 0 = others
- EX = Respondent's working experience
- ST = Dummy variable for respondent's status, 1 = UKM graduates, 0 = others
- SEC = Dummy variable for work sector, 1 = public, 0 = others

**RESULTS AND DISCUSSION**

**Profile of respondents:** Among the 749 respondents, 43.7% are males, 81.7% of them are Malays, 66.5% are senior officers and managers of departments, the majority of them with working experience of 5-10 years and 21.6% are UKM graduates. Table 5 shows the details of respondents.

**Organization information:** Among the organizations involved, 86.3% of them using Malay as medium of language. About 50.9% using English, 4.3% using Chinese and 3.0% using other languages. Table 6 shows the field of studies which related to respondents department. Field of studies that related to most of the respondents department is economics, business and accountant followed by information science and technology. On UKM graduates recruitment information, 35.6% of the respondents stated that there are UKM graduates in their organization. The main reason for not having UKM graduates is no application from UKM graduates to join them.

**Employers' perceptions on graduates performances:** Performances of graduates are measured by using Likert scale of 1-5. Higher score means performance of the graduate is better. Table 7 shows the min scores for graduates of UKM, other local graduates and overseas graduates. The differences in min scores are tested using ANOVA F to look for significance. In general, the result shows that employers' gave moderate scores for graduates performances.

The min scores for all listed criteria or skills are as four which mean that graduates performances are not at the best level. The results of ANOVA F-test show that the differences of min scores for the 3 groups of graduates are not significance for graduates performances in skill of ICT work planning, value and ethic and other skills. The differences in min scores among the 3 groups of graduates that found significant at 1 and 5% level were then tested using Tukey-test to determine which group of graduates is significantly gained higher scores than the others. Table 8 shows the results of Tukey test for nine criteria that found significant through ANOVA F-test. Results show that overseas graduates gained the highest scores significantly for empowering field of specialization while the difference in min scores between UKM graduates and other local graduates is not significant. This indicates that overseas graduates empower their field of studies better than UKM graduates and other local graduates. Besides that overseas graduates are also better than that of other

Table 5: Field of studies related to respondents organization

Fields of study	Amount	(%)
Economics business and accountant	335	44.7
Pharmacy	8	2.1
Engineering	42	6.7
Education	54	8.3
Islamic studies	154	20.6
Dental	4	0.5
Medical	22	2.9
Science and technology	86	11.5
Health science	33	4.7
Social science and humanitarian	148	19.8
Information science and technology	260	34.7
Law	176	23.5

Field survey, 2009/2010

Table 6: Min score of employers perceptions on graduates

Criteria	Min score			F value	p value
	UKM	Other local	Oversea		
Empowering field of specialization	3.7493	3.7073	3.8218	11.06	0.0001*
Interpersonal and communication	3.6282	3.7190	3.6552	4.84	0.0080*
Decision making and problem solving	3.4663	3.6132	3.4339	17.01	0.0001*
Skill of ICT (Information)	3.7944	3.8611	3.8001	2.69	0.068
Leadership	3.7707	3.7547	3.6552	7.61	0.0005*
Team player	3.7146	3.7677	3.6923	4.48	0.031**
Work planning	3.6926	3.6749	3.6869	0.18	0.83
Thinking skill	3.6649	3.6308	3.7116	3.51	0.030**
Value and ethic	3.7393	3.7407	3.6862	2.38	0.092
Other skill	3.6705	3.6926	3.7210	1.66	0.190
Malay language proficiency	4.3405	4.1469	4.0454	36.27	0.0001*
English language proficiency	3.9346	3.6595	4.2230	115.60	0.0001*

Significant at 1%, \*\* significant at 5%

Table 7: Results of Tukey-test

Criteria	Institutes	q value (absolute value)		
		UKM	Other local	Oversea
1	UKM (3.7493)	-	2.412	4.164*
	Other local (3.7073)	2.412	-	6.001*
	Oversea (3.8218)	4.164*	6.001*	-
2	UKM (3.6282)	-	4.287*	1.275
	Other local (3.7190)	4.287*	-	3.012
	Oversea (3.6552)	1.275	3.012	-
3	UKM (3.4663)	-	6.343*	1.399
	Other local (3.6132)	6.343*	-	7.742*
	Oversea (3.4339)	1.399	7.742*	-
5	UKM (3.7707)	-	0.572	5.092*
	Other local (3.7547)	0.572	-	4.387*
	Oversea (3.6552)	5.092*	4.387*	-
6	UKM (3.7146)	-	2.557	1.074
	Other local (3.7677)	2.557	-	3.631**
	Oversea (3.6923)	1.074	3.631**	-
8	UKM (3.6649)	-	1.576	2.158
	Other local (3.6308)	1.576	-	3.734**
	Oversea (3.7116)	2.158	3.734**	-
11	UKM (4.3405)	-	7.778*	11.855*
	Other local (4.1469)	7.778*	-	4.078**
	Oversea (4.0454)	11.855*	4.078**	-
12	UKM (3.9346)	-	10.932*	11.005*
	Other local (3.6595)	10.932*	-	21.502*
	Oversea (4.2230)	11.005*	21.502*	-

\*Significant at 1%, \*\*significant at 5%

Table 8: Results of ANOVA F-test on respondents' min score according to work sector

Sectors	Min score			F value	p value
	UKM	Other local	Oversea		
Public	3.8779	3.6726	3.9066	16.9700	0.0001*
Private	3.7054	3.4825	3.6348	23.7500	0.0001*
Multinational	3.8813	3.9190	4.0536	0.7273	0.49

\*Significant at 1%

Table 9: Result of ANOVA F-test on respondents' min score according to race

Sector	Min score			F value	p value
	UKM	Other local	Oversea		
Malay	3.8273	3.8973	3.9356	1.4390	0.2400
Chinese	3.6975	3.4041	3.6285	18.4300	0.0001*
Indian	3.8988	3.9830	3.9354	0.7273	0.8200
Others	3.6467	3.7640	3.5357	1.1790	0.3200

\*Significant at 0.01

local graduates in thinking skill since they gained the highest min score. Results for criteria of interpersonal and communication and team player shows that other local graduates gained the highest min score which means that other local graduates are better in interpersonal and communication skill and team player. Besides that other local graduates also gained the highest min score in decision-making and problem solving skill which mean that they are also better in making decision and solving problem. For the leadership criteria, the result shows that UKM graduates and other local graduates are better than that of the overseas graduates. For language proficiency, the UKM graduates are better in Malay while the overseas graduates are better in English.

ANOVA F-test is then applied to determine the differences in min scores given by respondents according to work sector which are public sector, private sector and multinational organization. The results are shown in Table 9. The results show that respondents from the public sector gave higher score to the overseas graduates followed by the UKM graduates and least score to other local graduates. Meanwhile, respondents from the private sector gave higher score to the UKM graduates followed by the overseas graduates and least score to the other local graduates. ANOVA F-test also applied to compare min scores given by respondents by race. The results show that the Malay respondents gave higher scores to the overseas graduates. The Chinese gave higher scores to the UKM graduates whereas the Indian and others gave higher scores to the other local graduates. However, only differences in min scores given by the Chinese respondents between groups of graduates are significant at 1% (Table 10).

**Linear regression analysis:** Linear regression analysis is another method used for determining the relationship

Table 10: Descriptive statistics for variables

Variables	Min score	SD
UKM graduates min score	3.449	0.360
Other local graduates score	3.450	0.494
Oversea graduates score	3.448	0.395
Race	0.820	0.387
Gender	0.440	0.496
Working experience	8.950	6.921
Status	0.215	0.411
Sector	0.630	0.484

Field survey, 2009/2010

Table 11: Result of OLS analysis for UKM graduates

Variables	Model 1	Model 2	Model 3
Constant	3.263 (95.462)***	3.137 (69.185)***	3.172 (86.292)***
Race	0.085 (2,261)**	0.062 (1.710)	0.102 (2,756)***
Gender	-0.007 (-0.203)	-0.033 (-0.932)	0.050 (1.383)
Working experience	0.000 (0.011)	0.057 (1.638)	0.054 (1.518)
Status	0.028 (0.778)	-0.012 (-0.361)	-0.002 (-0.070)
Sector	0.254 (6.783)***	0.358 (9.883)***	0.288 (7.828)***
<b>N = 749</b>			
	<b>R<sup>2</sup> = 0.089</b>	<b>R<sup>2</sup> = 0.150</b>	<b>R<sup>2</sup> = 0.124</b>

\*\*\*Significant at 1% \*\*significant at 5%

Table 12: Min scores on respondents' interest in recruiting UKM graduates

Subject	Min score
If there is any vacancy, the preferred choice is UKM graduates	3.1689
If there is any interview, the preferred choice is candidates from UKM	2.9745
<b>If there is any vacancy, it is preferred to contact UKM first</b>	<b>2.8928</b>

Field survey, 2009/2010

between scores gained by the graduates and backgrounds of the respondents. Table 11 shows the descriptive statistics for the variables of the regression models. Result of OLS analysis with dummies for model 1 shows that variable work sector is significant at 1% while variable race is significant at 5%. Coefficients for both variables are positive which means that the Malay respondents and respondents from public sector gave higher scores to UKM graduates than non-Malay respondents and respondents from non-public sector.

Result of OLS analysis with dummies for model 2 shows that only variable work sector is significant at 1% and its coefficient is positive which suggests that respondents from public sector gave higher scores to other local graduates than respondents from non-public sector (Table 12). Result of OLS analysis with dummies shows that variable race and work sector are significant at 1% and coefficients for both variables are positive which suggest that Malay respondents and respondents from public sector gave higher scores to the overseas graduates than non-Malay graduates and respondents from non public sector.

**Organization needs for future graduates:** Table 13 shows min scores given by respondents for the criteria listed. Higher min score means the more important the criteria is. Based on the min scores given by the respondents for all

**Table 13: Min scores for skills/criteria required in graduates in the future**

Skills/criteria	Min score
Field of study	4.0430
Good academic qualification (CGPA: >3)	3.7272
Curriculum activities	3.5444
Communication skill	4.2392
Malay language proficiency	4.2285
English language proficiency	4.2406
Writing skill	4.1196
Thinking skill	4.2191
Decision making and problem solving skill	4.2419
ICT skill (information technology)	4.0820
Team player	4.1559
Work planning	4.1532
Value and ethic	4.2675
Self-confident	4.4234
Characteristic and attitude	4.2540
Leadership	4.2083
Personality	4.5188
Intelligence and public knowledge	3.8750
Degree from local university	3.6841
Degree from oversea	3.4852
Degree from government university	3.7191
Degree from private university	3.4778
Working experience	3.7231
Pre-university qualification (STPM, SPM and others)	3.5384

Field survey, 2009/2010

the criteria listed, all the criteria are considered important. Almost all criteria listed gained min score >3.5 which suggest that employers are looking forward holistic graduates. However, there are 15 criteria with min scores >4 considered as more important than others. These criteria are field of study communication skills; Malay and English language proficiency, writing skill, thinking skill, decision making and problem solving skill, ICT skill, team player, work planning, value and ethic, self-confident, characteristic and attitude, leadership and personality. Compared with academic result, these soft skills are more important. Criteria that considered less important are working experience, intelligence and public knowledge and graduates origin institutes.

**UKM graduates recruitment and selection:** Table 13 shows respondents interest on recruiting UKM graduates. Result shows that respondents interests are quite low where min scores are <3.2. This indicates that UKM graduates are not employers' preferred choice to fill in vacancies in their organizations. In other words, UKM graduates will have to work hard to compete with other graduates in order to gain a post in any organization.

### CONCLUSION

In general, graduates performances are satisfying according to employers' perceptions. However, a lot of hard works still need to be done in order to improve their performances. Meanwhile, graduates from different institutes excel in some criteria. For example, UKM

graduates are better in leadership and Malay language proficiency whereas other local graduates are better in interpersonal and communication skill, decision making and problem solving skill and team player while overseas graduates are better in empowering field of study, thinking skill and English language proficiency.

Besides that respondents from the public sector gave higher score to the overseas graduates compared to the local graduates. Groups of respondents who gave higher score to the UKM graduates are Malay respondents and respondents from public sector compared to respondents from non public sector.

### RECOMMENDATIONS

There are some suggestions from respondents on how to improve work quality among graduates. For institutes of higher education, it is suggested that practical period for students in universities should be prolonged so that students have sufficient time and opportunities to be exposed to real work environment and adapt themselves better after graduated. Besides that more opportunities to involve in international events should be given to graduates in order to open up their minds and at the same time improve their language proficiency especially English language. In addition, students should be encouraged to involve actively in non academic activities to improve their soft skills.

As for students themselves, they should be more proactive to take part in non-academic activities besides working hard to obtain a good result in academic. Furthermore, students must empower their field of studies well so that they can apply when they start their careers. For UKM, initiatives need to be taken to promote their graduates among employers. Besides that appropriate actions should be taken to overcome UKM graduates weaknesses such as interpersonal and communication skill, decision making and problem solving skill, thinking skill and English language proficiency.

### ACKNOWLEDGEMENTS

The researchers would like to acknowledge the Universiti Kebangsaan Malaysia for sponsoring this project. Many thanks to all parties who are directly or indirectly involved to make this project successful.

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