Full Length Research Paper

Changing skills required by industries: Perceptions of what makes business graduates employable

Rohaizat Baharun[1]*, Ebi Shahrin Suleiman[1] and Zubaidah Awang[2]

[1]Department of Management, Faculty of Management and Human Resource Development Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.
[2]Department of Modern Language, Faculty of Management and Human Resource Development, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.

This study relates to employers assessment of graduates' skills as deemed required by industries. The need for accelerated performance levels in businesses have induced a corresponding need for rapid change in the skills required of university graduates. This changing environment with resultant organizational restructuring means graduates now find jobs more demanding as businesses become more competitive. In the past, managerial competence went hand in hand with specific skills and abilities, today however, it involves much more. Empirical evidence from this research suggests that respondents share a basic commitment to the development of common skills within the context of a business and management studies programme. It is evident that employers participating in this study placed greater emphasis on major subjects on management and business and less on elective subjects. In terms of key skills in management and business programmes, verbal and written communication skills were ranked higher than numeracy skills. This finding is supported by findings in the programme structure, where importance on communication subjects must be emphasized in designing management and business syllabus or curriculum. In academic and intellectual skills, employers placed the ability to be independent and to solve business problems as the most important skills. In line with that, employers also hope that graduates will be able to carry out responsibilities assigned to them and always be on time or can keep appointments.

Key words: Skills, perceptions, business graduates, employability, Malaysia.

INTRODUCTION

In today's world, industries are experiencing rapid changes which are propelled by various factors such as trade blocks, globalization, internationalization, changes in technologies and intense competition among companies and countries. These changes have a profound impact on higher education institutions, as providers of a competitive workforce that contribute positively to the economic development of a country (Mpinganjira, 2009). Despite some impressive improvements in the performance of higher education institutions, many students still emerge from the education system ill-equipped to meet the challenges of life and employment. Today, knowledge and applied intelligence is the key to national survival and success as organizations need "knowledge" workers in order to gain competitive advantage through the application of skills in technology, innovation, production and service (Gregory, 1996). As industries are in constant need for a consistent and reliable supply of educated and skilled business graduates, universities are expected to produce graduates that will be able to meet the requirements of the industries. However, universities are found to be lagging behind in this aspect (Hernaut, 2002). There is a

*Corresponding author. E-mail: m-rohaizat@utm.my. Tel: +607-5531823. Fax: +6075566911.

gap between the knowledge, skills and qualities that university graduates possess and the knowledge, skills and qualities required by prospective employers. This gap exists due to the differences in the perceptions between industry leaders and academics as highlighted in Nicholson and Cushman's (2000) study. They found that industry respondents believed that strong affective skills such as "leadership" and "decision making" were the most desirable characteristics for future executives, while academics favoured interpersonal affective competencies and ranked cognitive skills higher than skills in the other groups. The purpose of this study is to identify the knowledge, skills and qualities that business graduates should possess as perceived by prospective employers. Thus the objectives of this research are:

i)　To identify the key skills required by business graduates from the employers' perspective,
ii)　To identify the academic, intellectual and personal skills required by business graduates from the employers' perspective,
iii)　To identify the skills business graduates possess from the employers' perspective.

THE ROLE OF HIGHER EDUCATION INSTITUTIONS IN GRADUATES' CAREER DEVELOPMENT

An individual's career development is influenced by a range of previous life experiences such as the society in which the individual lives in, educational experiences and parental influences. These life experiences would have influenced the individual's self and opportunity awareness that is, + brief explanation of what it means when the individual makes a choice to enroll in higher education institutions (HEIs). Hence we argue that HEIs have a role to play in making students aware of the full range of employment opportunities that exist upon graduation. HEIs can work at fostering/developing partnerships with other organizations to assist in the process of enabling both students and businesses realize the benefits that each can offer.

Although Williams and Owen (1997) recommend a better flow of information to encourage more students to seriously look into the skills required in their chosen careers, the notion of opportunity awareness does not rest solely on the students. Academics also need to keep pace with the changes that have, and are, occurring in the graduate labour market. While the reasons students choose to continue their formal education are varied, the common expectation is that the development they go through during their courses will enhance their prospect of employability upon graduation. The authors, therefore, argue that students must develop / have an interest to gain insight into the reality of, and understand the graduate labour market rather than belief that the degree they earn is the sole means of securing employment.

This is reinforced by secondary and empirical research findings (Raybould and Sheedy, 2005; Nabi, 2003) that many employers, both large and small, are seeking "well rounded graduates" who have acquired a reasonable degree of skills, are equipped with, and are aware of, the range of skills and qualities that can be transferred to the workplace. It is therefore argued that curriculum development which addresses the importance of both self and opportunity awareness not only assists students to face the realities of the workplace but similarly requires academics to do the same. It is clear from these findings that HEIs have a role to play in a graduate's career development. This illustrates the authors' view of how curriculum development within this area could, more formally, deliver the outcomes advocated by the Dearing report (1997), namely "to inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well equipped for work, can contribute effectively to society and achieve personal fulfillment." However, Yorke and Harvey (2005) argue that "alignment of higher education with workforce needs should be based on careful action by institutions to embed skills and attributes within instructional programs." In addition, there is increasing evidence that both the academic community and industry are now more aware of each other's perspectives of the specific skills required especially in the fields of business and management (Bhanugopan and Fish, 2009).

TRANSFERABLE SKILLS AND QUALITIES

While employers place emphasis on skills, the skills required, however, vary depending on the type of job role to be carried out within an organisation. Skills refer to "certain personal abilities of an individual, which can be taken from one job role to another, used within any profession and at any stage of their career" (Raybould and Sheedy, 2005). Few studies have attempted to identify the needs of industries in terms of the skills needed / required by graduates especially in Malaysia. Laughton and Montanheiro (1996) conducted a study of the core skills required in higher education from the perspective of students in the United Kingdom. Major findings were the complexity of common skills strategy, difficulties in the area of assessment, the different value placed by the students and the fact that the development of skills was not undertaken with sufficient reference to probable context where they could be utilized. In contrast, Dench (1997) conducted a study to find out the changing skills required by industries. They noted that employers are becoming more demanding in the skills they require of their employees and recognized that with the content of jobs changing; different combinations of skills and abilities are required. This suggests that there is more widespread need for up-skilling and re-skilling rather than any reduction in the level of skill required.

Gibbons-Wood and Lange (2000), examined the experiences of Germany and Sweden in their attempts to develop core skills and key competencies among trainees and young employees. They highlighted the importance of employer enthusiasm in the development and delivery of core skills.

Yen et al. (2001) classified critical knowledge / skill set according to content or domain of knowledge by means of a survey. This was conducted in accordance with what practitioners and educators in industry can easily relate to. Nabi (2003) found that unemployed graduates reported significantly lower opportunity for skill use, and significantly lower intrinsic (job, career and life satisfaction) and extrinsic career success relative to the employed graduates.

In a recent study, Bhanugopan and Fish (2009) found that significant differences existed between students' and employers' perceptions on the importance of certain general business, technical skills and personal attributes which contribute to students' employability in industries in Papua New Guinea. What are the general management or business skills required by employers? Harvey et al. (1997) conducted research which focused not only on large organizations but also Small and medium enterprises (SMEs) to establish the value placed on skills in the workplace concluded that "there are large numbers of graduates looking for jobs and employers, as we have seen, no longer recruit simply on the basis of degree status. A degree might be necessary or desirable but employers are looking for a range of other attributes when employing and retaining graduates." Little research has been carried out on the skills and qualities of business graduates, especially local business graduates in Malaysia. As the needs and expectations of employers differ, the current emphasis on industry as the customer has underscored the need to identify employers' expectations of local business graduates. Unfortunately there is lack of studies on the core skills required by industries from business graduates in Malaysia. This poses a problem as universities are in danger of producing students who lack the skills required by industries. It is thus, essential that the need of industries be ascertained in terms of skills they expect of university graduates as many organizations are now taking into account the abilities of the new recruits in terms of these generic or common skills in their recruitment process and internal appraisal systems (Dench, 1997; Roselina, 2009, Paul and Sinha, 2010).

RESEARCH METHODS

This research adopted a descriptive research design and data collection was mainly through the use of structured questionnaires. Primary data were collected through a survey conducted with managers who employed graduates from one of the universities situated in the southern part of peninsular Malaysia. Using a database from the alumni office which had been compiled for a previous research, the population was defined as "companies that employed graduates from one of the universities situated in the southern part of peninsular Malaysia as their employees and focused on the Klang Valley and Johor Bahru regions." From the database, 1,020 companies met this criterion and formed the population of the study. Next, was to draw a random sample, from which any subsequent findings can be generalized or extrapolated (Gill and Johnson, 2005). This method was deemed appropriate for composing a random sample, as the method complies with the definition proposed by Gill and Johnson (2005) of "a sample in which all members of the specific population from which the sample is drawn have an equal chance of selection". Saunders et al. (2007) suggested that researchers work to a 95% level of certainty, and argued that the impact of absolute sample size on the margin of error decreases for larger sample sizes. De Vaus (2002) argued that it is for this reason that market research companies limit their sample size to approximately 200. Taking into consideration the issues surrounding response rates and time scales influenced the decision of electing to work with a random sample size of 200 companies. Having obtained the population and random sample, the next issue to be addressed was the questionnaire design.

A structured questionnaire looking at different variables relating to employability was the main instrument used to collect the data. The questionnaire was developed based on the AGR report (1995), Harvey et al. (1997), Nabi (2003) and Levenburge (1996). The main reason for selecting questionnaires from these researchers is that all respondents were business graduates and the skills were therefore more discipline-specific. The employability skills incorporated a range of academic or intellectual skills, core skills and personal skills. The resulting questionnaire was piloted on a non-random sample of 10 companies in other regions. The questionnaire was divided into two parts. Part one sought demographic information from the respondents while Part two comprises of three sections: academic, intellectual, personal skills and questions regarding structure of business academic programmes. For questions in Part two, respondents were asked to indicate the level of importance on a five-point Likert scale, where 1 = high importance; 3 = medium importance; and 5 = low importance, on the sections for academic, intellectual and personal skills. However, open-ended format were used for questions on the structure of business and academic programmes. After an initial period of three months the questionnaire was again distributed to employers who had not responded. Personal interviews with managers of the organizations, the unit of analysis, were also conducted as it is considered a good contact method for more immediate and reliable data to the survey. Although this method was useful, it was difficult to contact and set interview times with the managers. Questionnaires were sent to 200 employers with 63 completed questionnaires returned, yielding a response rate of 31.5%. Data was gathered and captured by trained field workers over a period of seven months from April 2007 to December 2007.

RESULTS ANALYSIS

For this study, the Statistical Package for Social Sciences (SPSS) was used to analyze the completed profiles and data. Responses are summarized in Table 1 according to age, gender, education level, income level and work experience in their present organization. As can be seen from Table 1, a majority of the respondents (55 or 88.7%) were in the age group category of below 40 years old. This finding indicates that a majority of them were still in the middle management level with the other variables also showing a similar pattern/ trend. From the respondents' profiles, education level played an important

Table 1. Subject demographics (n = 63).

Variable	Frequency	Percentage
Age groups		
Below 30 years	25	40.3
Between 31 to 40 years	30	48.4
Between 41 to 50 years	6	9.7
Above 51 years	1	1.6
Gender		
Male	32	51.5
Female	30	48.4
Education level		
Postgraduate	17	27.9
Undergraduate	38	62.3
O-level	4	6.6
A-level	2	3.3
Income level		
Above RM50K	3	4.9
Between 30K-50K	17	27.9
Below 30K	41	67.2
Experience in current organization		
Up to 5 years	36	57.1
Between 6 to 10 years	19	30.2
11 years and above	8	12.7
Years in current designation		
Up to 5 years	47	74.6
Between 6 to 10 years	12	19.0
11 years and above	4	6.4

Table 2. Summary of key required skills by rank (n=63).

Variable	Mean	STD	Ranking
Verbal communication	2.29	1.57	1
Written communication	2.71	1.49	2
Team work	3.49	1.84	3
Leadership	3.76	2.05	4
Information technology	3.90	1.68	5
Reading skills	4.49	1.84	6
Numeracy	5.48	2.05	7

1 high importance to 5 low importance.

role in the background of the respondents. Almost 90% have higher education qualification and had experienced being in the higher education system. Further analysis was carried out by ranking all the factors in the data results collected from the questionnaires. Rank, means and standard deviation were utilized to create the sample profile ranking presented in Tables 2, 3 and 4 to show the differences in importance of all the factors in terms of the three areas, "key graduate skills required for the job market", "academic and/or intellectual skills", and "personal skills." As shown in Table 2, of the key skills that graduates must possess, the top three required skills ranked in order of importance are "verbal communication", "written communication" and "team work." This finding is supported by the findings of Yen et al. (2001) who also found that "interpersonal communication skills" were more important for the graduates. Jenkins and Galloway (2009) also found that language and communication are the main problems faced by international students in universities in Taiwan.

Table 3. Academic and/or Intellectual skills (n=63).

Variable	Mean	STD	Ranking
Independence	3.25	2.41	1
Business problem solving	3.29	2.04	2
Autonomous learning	3.38	1.93	3
Critical analysis	3.92	2.12	4
Application	4.29	2.11	5
Research for decision making	4.59	2.27	6
Research methods	5.24	2.33	7
Reflection	5.30	2.30	8

1 – high importance to 5 – low importance.

Table 4. Summary of set of personnel skills.

Variable	Mean	STD	Ranking
Planning	2.32	1.79	1
Time management	2.35	1.45	2
Initiative	3.37	1.76	3
Self awareness	4.21	1.96	4
Listening	4.25	1.76	5
Adaptability	4.52	2.00	6
Negotiating	4.94	2.08	7

1 high importance to 5 low importance.

These findings clearly match the current trends in education and curriculum design. From the industries' point of view, there is an inclination or/and a preference to choose / hire employees or graduates who have strong interpersonal skills such as verbal and written communi-cation capabilities. Interestingly, strong knowledge in Information technology (IT) is not a major requirement, although the current trend is moving towards computer-mediated environment. By further examining the ranking for academic and intellectual skills presented in Table 3, the top three academic and intellectual skills listed in order of importance are "independence", "business problem solving", and "autonomous learning." This finding not only reinforces the findings presented in Table 2, but also provides additional information, which deserves further attention. This finding does not show that technical skills or academic skills or qualification are not important. However, finding people with the combination of personal and educational background is most often the problem. It must be stressed that any categorization of skill needs as shown in Table 3 will include elements of overlap. For example, independence, the skill ranked of high importance, requires both personal and technical skills. In retailing, for example, employees need to understand the needs and wants of the customers while simultaneously providing the service supported by the use of computers for inventory and sale. Further attention

is placed on the data set of personal skills, as presented in Table 4. The seven most critically required ability in personal skills are (1) planning, (2) time management, (3) initiative, (4) self-awareness, (5) listening, (6) adaptability and (7) negotiating. Clearly, the most important personal skills in today's environment are tools in the "strategic management" and "communication" categories.

In general, personal skills are required to enhance better communication and coordination in the organiza-tional environment and culture. This finding is similar to the findings obtained by Nabi (2003). Additionally, the researchers asked respondents' about their experiences working with local university graduates who are presently working with them or in their organizations. Table 5 summarizes the findings of this analysis. By further examining the level of agreement of the respondents on the skills possessed by the graduates working in their organizations, the top four skills listed in rank order are "able to carry out responsibilities assigned", "always on time and keeps appointments as required by clients and higher management", "has the inclination to improve knowledge" and "able to communicate and write in English and able to upgrade work achievement after receiving in service training." The results show a very interesting feature that is, what could be described as "managing and developing self" and knowledge of general operating business and management which still

Table 5. Summary of skills possessed by graduates.

Variable	Mean	STD	Ranking
Able to carry out responsibilities assigned	3.98	0.79	1
Always on time/keeps appointments	3.79	0.99	2
Inclination to improve knowledge	3.75	0.88	3
Able to write in English	3.71	1.08	=4
Upgrade work achievement after receiving training	3.71	1.01	=4
Able to communicate in English	3.71	1.01	=4
Able to fit into new work environment	3.67	1.00	5
Carry out duties to commensurate with position held	3.66	0.94	6
In-Depth IT knowledge	3.63	0.92	7
Abides to the rule of time in carrying out tasks	3.61	0.88	8
Supervise subordinates	3.60	0.96	9
Adapt to changing work	3.56	0.93	10
Possess mental strength	3.54	0.88	11
Bring something new	3.40	0.89	12

1 high importance to 5 low importance.

Table 6. Programme structure n = 63.

Variable	Minimum	Maximum	Mean
Elective subjects	5	60	18.4
Minor subjects	10	50	28.1
Major subjects	20	60	53.5
Suggested subjects	Frequency	Percentage	Ranking
Communication	49	77.8	1
Knowledge management	44	69.8	2
Critical thinking	42	66.7	3
Project management	40	63.5	4
Foreign language	29	46.0	5
Safety and health	26	41.3	6
Intellectual property and law	25	39.7	7
Entrepreneurship	23	36.5	8
Ethics	14	22.2	9

receive sufficient attention in the field compared to the other functional disciplines such as computer-related fields. As mentioned by Laughton and Montanheiro (1996), the crucial issue provided from this finding is that "soft skills" such as management and business skills should be taught separately or integrated into the curriculum design and/or across the programmes and the extent to which all the "soft skills" should be developed across all years of a programme.

ACADEMIC STRUCTURE FOR BUSINESS AND MANAGEMENT PROGRAMME

Now, the discussion moves to the data set of programme characteristics. Table 6 summarizes the percentage that the respondents perceived to be appropriate for the programme structure of a business and management programme. The mean percentages for the basic programme structure were 53.5% for major subjects, 28.1% for minor subjects and 18.4% for elective subjects. The ranking of suggested subjects to be included in the programme structure based on the percentage assigned to them by the respondents, resulted in communication topping the list with 77.8% followed by knowledge management (69.8%), critical thinking (66.7%), project management (63.5%), foreign language (46.0%), safety and health (41.3%), intellectual property and law (39.7%), entrepreneurship (36.5%) and lastly ethics with 22.2%. This finding also reinforces the earlier findings presented in Table 2. Interpersonal communication skills are still receiving sufficient attention from the industry. This

finding is also consistent with the findings in previous research by Laughton and Montanheiro (1996), Yen et al. (2001) and Kondakei et al. (2009).

SUMMARY AND IMPLICATION

The aims of this study were to analyze the perceived knowledge and skills possessed by business graduates from the perspective of the employers. As organisations and economic environments become increasingly uncertain and competitive, the demands on employees also become increasingly complex. The key findings suggest that graduates must change their attitude when entering the job market as employers placed greater emphasis on the ability of graduates to fulfill their responsibility and keep appointments. On the other hand, based on experience, employers found graduates to be lacking in this positive attitude. The present findings indicate that undergraduates reported a relatively lower ability to fulfill responsibility, manage time and the inability to improve knowledge after graduation. This suggests that skills development opportunities during their study in university is a key issue that needs to be addressed. According to Roselina (2009), HEIs must create awareness to graduates on the needs and expectations of the globalized job market. However, given the lack of empirical research on opportunity for skill use, it would seem wise not to make strong practical recommendations without further confirmatory research. The implication of these findings for graduates and training providers are:

(i). To provide opportunities for graduates to develop and use a range of skills to remain more competitive in the labour market. This can be done through industry attachment during their study or by negotiated job enlargement and enrichment with industry managers via staff appraisal. This may not necessarily be with multinational companies, but may also include SMEs, which are the economic backbone for many developed and developing countries.

(ii). The present findings suggest that the most significant gaps between graduate skills and employer expectations were in terms of two skills: communication both verbal and written and management skills such as team work and leadership.

This suggests that graduates should focus more on the development of a mix of key intellectual and soft skills in order to make them more able to compete in the labour market (Nabi, 2003). On the other hand, to close the gap between employers and educators, the implementation of the syllabus structure must involve both parties. Employers can be involved in providing input for the design and evaluation of particular subjects in the curriculum.

(iii). Lastly, the quality of graduates is increasingly becoming an important issue to both the higher learning institutions and the country where graduates obtained their qualification. Many countries have already set-up government bodies such as the Quality Assurance Agency, to regulate the quality of programmes offered by the institutions so that graduates of these institutions can demonstrate evidence of their ability and quality of output from the institutions to the labour market.

The present study had some limitations. First, the sample population inevitably limits the conclusion that can be drawn from the findings, for example, graduates were only from one higher learning institution in Malaysia. Further research should incorporate a wider range of graduates from the different higher learning institutions. Future research may apply conjoint analysis to different attributes, and not be limited to certain factors. Researchers can also consider other sources of data such as feedback from current students and employers from other industries such as manufacturing, banking, telecommunications or significant others. However, despite these weaknesses, the present research is a preliminary investigation of the opportunity to increase value-added materials to strengthen the syllabus or curriculum in the university's programme.

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