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Malaysian Employers' Perspective on Engineering Graduates' Employability Skills: Evidence from 10 years of Studies

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The acquisition of employability skills has been debated all over the world in the academic community recently. Nowadays, acquiring knowledge in only academic field is no longer sufficient to ensure students' future career. Therefore mastering skills in this modern world would be vital for graduates to obtain a promising job where they are able to excel and grow. This study attempts to explore and prioritize the important employability skills required by the employers in Malaysian Engineering sector based on a literature survey of educational reports, empirical and theoretical research papers done in Malaysia for the last ten years (2003 to 2013). The findings indicate that many research studies have revealed a consistent core set of desirable employable skills acquired by employers in the engineering sectors from graduates such as communication skills, teamwork, problem solving skills, interpersonal skills, thinking skills, leadership skills, theory application, decision making, lifelong learning skills and ICT skills, ranked from the most acquired to least acquired skills. Therefore, higher education should take measures to plan and develop these skills into their curriculum and to be taught to the graduates in order to prepare them for the competitive working world.

Key words: Employability Skills, Engineering Graduates, Evidence

INTRODUCTION

The acquisition of employability skills has been debated all over the world in the academic community recently. Nowadays, acquiring knowledge in only academic field is no longer sufficient to ensure students' future career. Employers today are concerned about recruiting good workers who do not only have basic academic skills, but also equipped with higher order thinking skills like reasoning, thinking creatively, decision making and problem solving skills. Moreover, they look for employees who have personal qualities that among all include responsibility, self-confidence, social skills, honesty, adaptable and flexible, team spirit, punctual and efficiency, good work attitude, well-groomed, cooperative, self-motivated and self-management (Surina Nayan,2010). It has been suggested that by possessing an employability skill set, graduates invariably leave academia with better employment prospects (Chandha Deesha, 2011). Therefore mastering skills in this modern world would be vital for graduates to obtain a promising job where they are able to excel and grow. The debatable question here is whether our graduates are equipped with these skills and ready to face the working world or are they only equipped with merely the academic skills learned from their subject fields.

One thing for sure is that employability of graduates is seriously taken into consideration all over the world in this era. Many countries in the world have realized the importance of employability skills and many studies were done in order for these skills to be embedded in the higher education curriculum so that graduates meet the needs of the employers. For example, in a survey reported by the BBC, four out of 10 large employers in United Kingdom struggled to fill graduate vacancies because of a shortage of applicants with the right skills (Poh Yen *et al.*, 2009). Therefore higher education institutions throughout the United Kingdom are currently under tremendous pressure to develop abilities in their students that are some way transferable to contexts outside their academic field of study. The value of transferable skills is slowly being realised and more concerned with looking at methods to teach skills effectively (Deesha Chadha, 2006).

Many universities nowadays are working closely with industries and employers. Some of the Australia, UK and United States based universities, have identified specific generic competencies that graduates should develop to enhance their

employability. For example, the Kellogg Graduate School of Management (Northwestern University) treated students as "partners". The university worked closely with the industries and has introduced 50 new courses since 1995 to keep pace with the changes in the business world. Similarly, National University of Singapore's Business School is also providing a rigorous, relevant and rewarding business education that develops leaders for the global marketplace. Graduate employability is no doubt a central concern of contemporary higher education (Poh Yen *et al.*, 2009). Graduates around the world seem to be having the same problem in terms of acquiring employability skills which has created major concern of the higher education. Research has proven the need of graduates acquiring employability skills in order to be employable as well as grow in the job applied. As many other universities in the world, universities in Malaysia are also concern on the graduates being employable which will directly work towards the success of achieving Malaysia's Vision 2020. Therefore this study will focus on literature review of series of research done from the year 2003 till 2013 to explore what are the employability skills that employers of engineering firms in Malaysia expect from the graduates in the last ten years and rank them according the most expected to least expected (2003-2013). In the next chapter the background of the study will be explained in order to get the gist of the study.

BACKGROUND OF STUDY

Every organisations are looking into employing graduates who are all rounded which means the graduates who are not only equipped with disciplinary knowledge but also well equipped with employability skills. Graduates who appear with these skills are perceived as more valuable for the organisations during the recruitment process as organisations are spending significant amount of money on their new recruits for providing training of soft skills. In Malaysia, there are huge number of engineering graduates who are still unemployed. The Economic Plannning Unit of the Prime Minister's Department found that around 60,000 Malaysian graduates are unemployed due to lack of certain skills such as communication skills, poor command of English and lack of experience. From the report it was found that 70% of graduates are from public universities, 26% from private higher learning universities and 34% of those graduated from foreign universities are still jobless (Robinson, Zaiton Bakar, 2008). Further to that, in the year 2010, The Principal Statistics of Labour Force, Malaysia reports on the unemployment rate in February 2010 and figures that the rate remained at 3.6 % which indicated an increment as compared to December 2009 (3.4%). It was indicated that the urgent need of workers with eligible skills due to the change of economy structure especially in Malaysia where manufacturing sector has been gradually replaced by the service sector. Therefore people with soft skills and technically knowledgeable are currently demanded. People from industries reported that health and safety skills, self management skills and teamwork skills are among the generic skills of the highest importance for employability (Nurbiha, et al., 2010) Besides that, based on the resources of job vacancies and job placement in Peninsular Malaysia in 2012, it revealed that job vacancies are increasing from year to year, however the vacancies are filled only with a small number of workers. This shows that the unemployment issue is not because of the lack of job opportunities instead it is because graduates are not equipped with the necessary skills to be employed (Zaliza Hanapi & Mohd Safarin Nordin, 2014). Therefore this study focuses on what are the employability skills the engineering sector in Malaysia look for so that the future engineers can benefit from this study to be equipped with the necessary skills to be employed. The objective of this study is discussed in the chapter below.

OBJECTIVE OF THE STUDY

There is a dire need for Malaysian Engineering graduates to acquire employability skills in order to be employable in the engineering sector. Only knowledge of the engineering field is no longer sustainable to be employable. Therefore the objective of this study is to explore and rank the important to least important employability skills required by the employers in Malaysian Engineering sector based on a literature survey of educational reports, empirical and theoretical research papers done in Malaysia for the last ten years (2003 to 2013).

LITERATURE REVIEW

Definitions of employability skills range from a vague notion of having something to do with preparing for a first job, through to very precise lists of specific skills, and on to employability being seen as a learning process (Surina, Nayan 2010). Furthermore Yorke and Knight (2003) define employability as a set of achievements – 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 and the economy (Susima, 2009). The term employability is also used to refer to the ability of an individual to gain employment appropriate to his/her educational standard (Dearing, 1997). The literature suggests three key elements of employability, for example the ability to gain initial employment, the ability to maintain employment and make transitions between jobs and roles within the same organizations to meet new job requirements and the ability to obtain new employment, if required by being independent in the labour market and able to manage employment transitions between organizations. Employability of an individual depends upon assets in terms of knowledge, skills and attitudes, the way these assets are used and deployed, the presentation of assets to potential employers and context within which the individual works (Hillage and Pollard, 1999).

According to Robinson (2000), employability skills are those basic skills necessary for getting, keeping and doing well on a job and they can be divided into three categories: Basic Academic Skills, Higher-Order Thinking Skills and Personal Qualities.). Employability skills are also known as job readiness skills. The term also refers to the skills required to acquire and retain a job and recent usage of the term is often used to describe the preparation or foundation skills upon which a person must build job-specific skills for example preparing a sales-report (Saterfiel & Mclarty, 1995 cited in Surina, Nayan 2010). Employability development has three aspects which are the development of employment attributes, the development of self-promotional and career management skills and willingness to learn and reflect on learning (Rob Martin, 2008). According to Rob Martin based on his research (2008), employability is a set of attributes. skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace to the benefit of themselves, their employer and wider economy. He further explains that there are eight top employability skills which are the self management, team working, problem solving, communication, business awareness, and customer care, application of numeracy and application of ICT. Based on the definitions given by many researchers above, it can be concluded that employability is being employed, maintain and progress to succeed in their career. In order to be employed, every individual are required to possess a set of skills that can be developed. The skills are the skills that will be applied by graduates in their work every day and if they are not capable and could not manage the skills, then their knowledge on the subject matter will also go to waste as they will not be able to use it effectively. Therefore every graduate should be equipped with these skills while they are in the university itself as they are more exposed to managing themselves and they are the ones who will fill up the professional job vacancies to develop themselves, their organisation and the nation. Meanwhile Bianca K.& Peter F. (2004) defined engineering as a profession directed towards the skilled application of a distinctive body of knowledge based on mathematics, science and technology, integrated with business and management, which is acquired through education and professional formation in a particular engineering discipline. Engineering is directed to developing, providing and maintaining infrastructure, goods and services for industry and the community.' Therefore, engineering graduates obviously need to have a certain skills to help them applying and practicing the knowledge effectively in workplace known as employability skills. Employability upon graduation is a major priority for most of engineering students. According to Mohammad (2004), new and fresh engineering graduates these days confront with more "challenges and competitions" in getting employed compared to previous graduates. Therefore Engineering graduates are required to possess the employability skills to help them practicing their knowledge and technical skills effectively. Engineering employability skills, also known as generic skills are highly related to non-technical skills.

METHODOLOGY

This study is based on existing literature review on surveys of educational reports, empirical and theoretical research papers done in Malaysia for the last ten years on studies and practices of employability skills from the employers' perspective. Studies on employability skills done since the year 2003 till 2013 were collected. Based on these researches the employers' perspective on what are the essential skills that they are expected are analyzed and tabulated using the SPSS version 20.0 and excel.

FINDINGS & DISCUSSIONS

Lee Fui Tong (2003), conducted a study on identifying essential learning skills in students' Engineering education aims to shed light on the importance of Project Management (PM) skills as perceived by employers in engineering organizations in Malaysia. A total of 600 questionnaires were utilized and sent to engineering firms in Malaysia. The survey results revealed significant gaps between what universities currently offer and what industries demand. An estimate of 70 % of participants interviewed expressed the view that university programmes focused too intensely on scientific theories and technical knowledge in most subjects. These participants indicated that they were not interested

in theories/concepts per se but rather they wanted to see practical results, a demonstration by graduates that they were able to do something with the knowledge/experience they had acquired at university. Most participants also indicated that the teaching and learning of PM skills was an important subject and should be integrated into the university curriculum to complement technical knowledge. They concurred that these essential skills could not be developed in one PM taught subject and suggested that these be consistently built and developed into other subject areas and practiced throughout the four- year engineering degree programme. The findings support the trend toward seeing essential PM skills education as one method for addressing the soft-skills deficiency issues of new graduates. The principal skill gaps identified were attributed to skills such as interpersonal communication, project planning/scheduling, people management, problem-solving and team management. It was hoped that the results of this study would provide useful information to educators as input to review, study and reassess their present engineering curriculum (Lee Fui Tong, 2003). Meanwhile studies done in Malaysia in the year 2004 by Mohd Sam and also Kamsah shows that, engineering graduates have good basic engineering knowledge and they do not lack of technical competency. However, employers in Malaysia complaint on the graduate-level job applicants are lacking generic skills (Azami Zaharim et al., 2009). Furthermore on another study done in the same year entitled "Enhancing Teaching and Learning through the Incorporation of Generic Skills for Civil Engineering Undergraduates", revealed that new and fresh engineering graduates these days confront with more "challenges and competitions" in getting employed compared to previous graduates. The researcher points out that the excellent academic degrees alone are inadequate as employers are definitely required potential engineers for "competencies and capabilities" in generic skill since globalisation demands the companies to be more competitive in their management system. Engineering graduates are required to possess the employability skills to help them practicing their knowledge and technical skills effectively (Mohammad, et al, 2004).

Meanwhile, Zulaikha, Ariffin, Ezanee, & Fazli, A (2005) in their research on "Employer ratings on recent IT graduates competency" identified graduate competency gaps, based on the differences between employers' rated importance levels and competency levels. They found that the top three gaps were non-verbal interpersonal skills, verbal presentation skills, and written interpersonal skills. They also realized that most of the elements with wide gaps were the soft skills related to effective communication and teamwork. Moreover, study done by Rosdiadee Nordin and Azah Mohamed (2006) on "Evaluation of Technical Communication Skills among Recent Electrical Engineering Graduates of UKM", reveals the need for technical communication skills in order to allow graduates to adjust to job demand and achieving career goals. A direct correlation exists between the degree of technical communication skills and career advancement. Former graduates also give recommendations for providing relevant technical communication subjects to improve the existing engineering curriculum.In the year 2007, a study on "The Future of Engineering Education in Malaysia" was conducted. This study identifies that employers and leading engineers agreed that local engineering graduates are lack of oral and written communication skills. The study done by Hassan (2007) shows that there is an urgent need for engineering programmes to improve in all areas, especially in non-technical aspects of engineering education. In other words, the education programmes are recommended to enhance employability skills by emphasizing on improvements in the non-technical skills aspects amongst undergraduates. The Employability Skills Framework developed by Hassan (2007) listed ten (10) most important generic skills acquired by the engineering graduates. The skills are based on criteria emphasized for professional skills from the Accreditation of Engineering Programmes (EAC) Manual which is communicating effectively, competent in application and practice, interpersonal or team working skills, engineering problem solving and decision making skills, applying knowledge of science and engineering principles, competent in specific engineering discipline, understand professional, social and ethical responsibilities, lifelong learning, engineering system approach and knowledge of competency. Furthermore, another study conducted on the same year, 'Assessing Employability skills of technical-vocational students in Malaysia", by A.Rahim & Ivan.Hanafi (2007) revealed that production technology and Industrial Electronics students from a technical training institute in Malaysia have acquired slightly high degree of employability skills during their education and training programme. Students in this institute are equipped with the skills needed for current workplace environment, especially in industrial sectors that focus more on technical and employability skills. Therefore it is clear that the electronic industry also is seeking for employees who are not only technically equipped but also the essential employability skills. Moreover, Hazmilah Hasan, Ian Dunn and Ray Jones (2008), found out that the employer's interview had contributed evidence that based on the weakness of the student's performance on documentation writing, they need more guidance from the university. The employers also would like the university to review the curriculum to balance the theoretical and practical aspect of the engineering education. According to the employers, there is evidence that students find it difficult to understand and perform during their placement in the industry. Thus, the finding of this study suggests that both university and industry have to work on the collaboration agreement to see how each party can complement each other.

Further to the earlier study, Zubaidah, & Rugayah (2008) identified seven important nontechnical skills from an employer's perspective, namely communication, creative thinking and problem solving, information management, leadership and organization, group effectiveness and teamwork, work related disposition and attitudes, and personal

traits and self-management. Under the communication skill's category, they found that English was the most important language used by both local and foreign companies. However, Bahasa Melayu was only found to be important within local companies. Meanwhile, in the creative thinking and problem solving category, both local and foreign companies placed importance on problem-solving, the ability to prioritize assignments and tasks, critical thinking through observation, and effective questioning. Furthermore, on computer skills, both foreign and local companies were looking for graduates that were able to analyze information, in order to make better decisions. They also found that teamwork commitment, group cooperation, and leading and managing groups, were most important. Foreign and local companies also placed significant importance on job commitment. Another study done in 2009, on "Importance of Employability Skills as Perceived by Employers of Malaysian Manufacturing Industry" managed to determine important aspects of the employability skills needed by employers in the manufacturing industries. The skills were ranked and results showed that all seven of the employability was considered important by Malaysian manufacturing industry with the basic skill, thinking skill, sources skill, resources skill, system and technology skill and personal qualities were most important skills whereas informational skill was considered moderately important. (Rasul et al., 2009). Another study conducted on "Employability and service science: Facing the challenges via curriculum design and restructuring" done in 2009 based on the model of the T-shaped professional and drawing insights from the newly developed field of service science, management and engineering (SSME), proposed that a combination of approaches is undertaken in restructuring the curriculum so that future graduates from the faculty in particular, and the university in general, will be ready to face the challenges posed by the new era of services (Muhktar et al., 2009). Moreover, another study conducted in the year 2009 on "Employability Skills for An-Entry-Level Engineer as seen by Malaysian Employers" suggested that the employers perceived employability skills as "required" with an average rating score of 4.06 out of 5.00. The most required skill is "communication skills" while the least required is "engineering system approach". However, there are differences in the priorities of employability skills by the four different categories of industries considered in this study. The framework and the findings presented are believed to be used as guidance for the employers in their recruitment exercise. The findings in this study also believes to be helpful in guiding the education providers, trainers, career advisors and the likes in increasing the employability skills of engineering fresh graduates (Yuzainee, Zaharim & Omar, 2009). Besides employers, the university leavers also realized the importance of acquiring soft skills in order to be employable. This is supported by a study done on "Students' Perception on the Developed Generic Skills in Universiti Teknologi Malaysia". In this study the university leavers happen to realise that critical thinking and problem solving skills as well as the team working skills are essential to survive the working field. Both domains are viewed as equally important for professional development (M=3.7). This finding is aligned with UTM's effort on empowering the students' creativity and problem solving skills while working in group simultaneously. A strong relationship has been proven to establish between students' perception on the importance of the domains of generic skills (QE) and the levels of generic skills (QL) that have been developed by UTM in this study (Nurbiha, Noor Dayana, Norazila Othman, Ahmad, 2010). Rahmah Ismail, Ishak Yussof and Lai Wei Sieng (2009-2011) conducted a study from on "Employers' Perceptions on Graduates in Malaysian Services Sector". In this study respondents were given 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.

Another study conducted on "Employability Skills Performance Score for Fresh Engineering Graduates in Malaysian Industry" shows that the rank of skills according to the level of requirement and there are weight differences among the skills required by the industries. The result of analysis offers a suggestion for employers and undergraduates to calculate employability skills score based on the Normalised Skill Weight performed by engineering graduates. Furthermore, employers, who need to evaluate the quality of engineering graduates during interviews, might find this approach as key performance score for the assessment process to select new engineers. The listed skills and criteria are communication Skills, teamwork, lifelong learning, professionalism, problem solving and decision making skills, competency, knowledge of science and engineering principles, knowledge of contemporary issues, engineering system approach and competent in specific engineering discipline (Yuzainee et al., 2012). In a separate survey done in the year 2012 on "The Senario from an Employer Perspective: Employability Profiles of Graduates", reported on the skills employers value most highly among graduate engineers and measures satisfaction ratings on how far graduate engineers demonstrate these capabilities. The four main generic employability profiles (skills and capabilities) of graduate engineers described in this paper are academic (academic performance, college and job experiences); personal management (positive attitudes, responsibility, and adaptability); connectivity (communication, IT (information technology), team work, and commercial awareness); and exploration skills (imaginative, innovative, and creative). Gap analysis (importance rank-satisfaction rank) out of 10 scales showed that the satisfaction gaps ranged from -1.5 to 5 and the largest gap was connectivity skills. The findings illustrate that universities need to equip graduates engineers

with excel intellectual capabilities and applied practical skills which make them more "work ready" (Mohd Sahandri G. B. et al, 2012). Another study was done on "Employability Skills Element's: Difference Perspective between Teaching Staff and Employers Industrial in Malaysia" in the year 2013. This study found that the five mean elements of employability skills which were always integrated by the teaching staff of agricultural vocational training institutions during the teaching process were: "cooperating with others", "working in a team", "possessing honesty", "following instructions given", and "interacting with others". Five mean important elements of employability skills needed by employers in the industry were: "possessing, cooperating with others", "using technology instrument and information systems effectively", "making decisions", and "managing times". Three main constraints that the teaching staff of agricultural vocational training institutions have to face in order to integrate the elements of the employability skills are; "did not clearly understand the term of employability skills", "Curriculum designed not emphasized on employability skills", and "No evaluation of employability" was done (Yahya Buntat, 2013). These are some of the studies done in the period of ten years, from 2003 till 2013 on finding out what are the employability skills the employers seek from mainly the engineering graduates in Malaysia. The table below shows the summary of the skills acquired by employers according to the years of the researches were done.

Table 1: Summary of the Employability Skills acquired by the Employers from Engineering Graduates

No	Year of the research done	Specific & General Employability Skills Acquired by the Employers
1	2003	Project management Skills, Interpersonal communication, Project planning/scheduling, People management, Problem-solving & Team management
		Employability Skills
2	2004	
3	2005	Non-verbal interpersonal skills, Verbal presentation skills, Written interpersonal skills, Effective communication & Teamwork
4	2006	Technical communication skills in
5	2007	Oral and written communication skills, Communicating effectively, Competent in application and practice, Interpersonal or team working skills, Engineering problem solving and decision making skills, Applying knowledge of science and engineering principles, Competent in specific engineering discipline, Understand professional, social and ethical responsibilities, Lifelong learning, Engineering system approach & Knowledge of competency.

Continuation of **Table 1**

6	2008	Communication, Creative thinking and problem-4 solving, Information management, Leadership and organization, Group effectiveness and teamwork, Work related disposition and attitudes, Personal traits and self-management.
7	2009	Communication skills, Thinking skill, Sources skill, Resources skill, System and technology skill & Personal qualities
8	2010	Critical thinking Problem solving skills & Team working
9	2011	Communication Skills, English language, Writing skills, Thinking Skills, Decision Making & Problem Solving, ICT Skills, Team work, Work planning, Value & Ethics, Self confident, Leadership, Personality, Intelligence & Public knowledge Communication Skills, Teamwork,
10	2012	Lifelong learning, Professionalism, Problem solving and decision making skills, Competency, Knowledge of science and engineering principles, Knowledge of contemporary issues, Engineering system approach and Competent in specific engineering discipline, Academic (academic performance, college and job experiences); Personal management (positive attitudes, responsibility, and adaptability); Connectivity (communication, IT (information technology), team work, and commercial awareness); & Exploration skills (imaginative, innovative, and creative).

11	2013	Cooperating with others, Working in a team, Possessing honesty, Following instructions given, & Interacting with others.
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Table 1 above shows the list of skills acquired by employers of engineering sectors in the last ten years from 2003 till 2013. These are some of the employability skills expected by Malaysian Engineering organizations from engineering graduates in Malaysia. Based on these skills it is obvious that eleven skills are repeated either every year or every other year. Therefore it can derive that these eleven skills are the skills mostly acquired by the engineering firms in Malaysia for the last ten years. The eleven skills are problem solving skills, teamwork, interpersonal skills, communication skills, application of the theories, decision making, lifelong learning, thinking skills, management skills, leadership skills and ICT skills. Meanwhile Table 2 below shows the frequency or basically the mean, the median and the standard deviation of these eleven skills.

Table 2: Frequency Table of the Significant Skills Acquired by Employers

	Year	PS	Teamwor	Interpersona	Comminicati	Applicatio	Decision	Lifelong	Thinkin	Managemen	Leadership	ICT
			k	1	on	n			g	t		
Valid N	11	11	11	11	11	11	11	11	11	11	11	11
Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2008.00	.73	.82	.73	.91	.45	.45	.18	.55	.45	.55	.18
Median	2008.00	1.00	1.00	1.00	1.00	.00	.00	.00	1.00	.00	1.00	.00
Mode	2003 ^a	1	1	1	1	0	0	0	1	0	1	0
Std. Deviation	3.317	.467	.405	.467	.302	.522	.522	.405	.522	.522	.522	.405

a. Multiple modes exist. The smallest value is shown

Furthermore, based on Table 3 below, when these eleven skills are tabulated into percentage, it shows that the skills that is demanded or acquired the most to the least by the employers in Malaysia for the last ten years are communication skills (15%), followed by teamwork (14%), problem solving skills and interpersonal skills with each 12%, thinking skills and leadership skills with both 9 %, then followed by theory application, decision making and thinking skills with 8 % each and finally lifelong learning and ICT skills with 3% each.

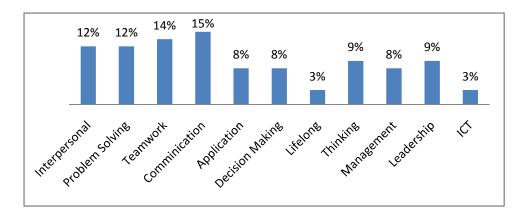


Figure 1: Percentage of the significant acquired by employers

CONCLUSION

There are ample of research done and proven that acquiring employability skills in every engineering graduate have so much of advantage in getting a job in this very competitive era. This study concludes that many research studies have revealed a consistent core set of desirable employable skills acquired by employers in the engineering sectors from engineering graduates such as communication skills, teamwork, problem solving skills, interpersonal skills, thinking skills, leadership skills, theory application, decision making, thinking skills, lifelong learning skills and ICT skills. Therefore, higher education should take measures to plan and develop these skills into their curriculum and to be taught to the graduates in order to prepare them for the competitive working world. This study not only provides a literature on the employability skills but also beneficial for graduates and higher education as a reference as it is extremely important to develop not only academically excellent graduates but also to develop employable graduates.

REFERENCE

A.Rahim and Ivan.Hanafi. (2007). Assesing Employability skills of technical-vocational students in Malaysia. (From) http://www.sciub.org/fulltext/jss/jss34202-207.pdf. Retrieved 22 November 2014.

Bianca Kubler and Peter Forbes. (2004). "Student Employability Profiles Engineering", Enhancing Student Employability CoordinationTeam (ESECT), The Higher EducationAcademy.

Chandha Deesha. (2011).Remodelling Employability Skills Teaching in an Engineering Curriculum: Making Way for Employers. (From) http://www.srhe.ac.uk/conference2011/abstracts/0113.pdf Retrieved 3 November 2012

Chandha Deesha. (2006). A Curriculum Model for Transferable Skills Development (From) http://www.heacademy.ac.uk/assets/documents/subjects/engineering/1-1-chadha.pdf Retrieved 5 October 2012

Dearing, R. (1997), Higher Education in the Learning Society, Report of the National Committee of Inquiry into Higher Education, HMSO, Norwich

Hazmilah Hasan, Ian Dunn and Ray Jones. (2008). Engineers Employability Competency: Employer Perspective. (From)http://dspace.unimap.edu.my/xmlui/bitstream/handle/123456789/5684/ENGINEERS%20EMPLOYABILITY%20COMPETENCY;%20EMPLOYER%20PERSPECTIVE.pdf?sequence=1. Retrieved 22 November 2014.

Hassan, B., Mohd Zaidi, O., Zainal, M., Abang Abdullah, A.A., Badrulhisham, A.A., Abdul Hamid, H,Nik Abdullah, N.M., Azmi, H, & Zaidi, M.R., 2007. "The Future of Engineering Education in Malaysia", a report by the Department if Institutions of Higher Education Management, Ministry of Higher Education, Malaysia.

Hillage, J. and Pollard, E. (1999), "Employability: developing a framework for policy analysis", DfEE, Research Brief 85. (From) http://www.dfes.gov.uk/rsgateway/DB/RRP/u012855/index.shtml. Retrieved 13 February 2008.

Lee Fui Tong. (2003). Identifying essential learning skills in students' Engineering education. (From) http://www.herdsa.org.au/wp-content/uploads/conference/2003/PDF/HERDSA31.pdf Retrieved 10 December 2011

Mohd Sahandri G. B. Hamzah ,Hapidah Bt. Mohamed ,Saifuddin Kumar Abdullah. (2012). The Senario From an Employer Perspective: Employability Profiles of Graduates (From) http://www.davidpublishing.com/davidpublishing/upfile/9/16/2012/2012091668458753. Pdf. Retrieved 23 November 2013

Mohammad, S. and Md. Nor, H. and Omar, W. and Mohamed, D., 2004. "Enhancing Teachingand Learning through the Incorporation of Generic Skills for Civil Engineering Undergraduates", Conference On Engineering Education (CEE 2004), 14-15, Kuala Lumpur.

Mukhtar, M. Yahya, Y.; Abdullah, S.; Hamdan, A.R.; Jailani, N.; Abdullah, Z. (2009). Employability and service science: Facing the challenges via curriculum design and restructuring.(From)

http://ieeexplore.ieee.org/xpl/abstractAuthors.jsp?tp=&arnumber=5254712&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxpls%2Fabs_all.jsp%3Farnumber%3D5254712. 22 November 2014

Nurbiha A Shukor, Noor Dayana Abd Halim, Norazila Othman, Ahmad Hj Khalid. (2010). Students' Perception on the Developed Generic Skills in Universiti

Teknologi

Malaysia.

(From)http://www.teknologimalaysia.academia.edu/noordayana/Papers/393232/Students Perception om the Developed Generic Skills in Universiti Teknologi Malaysia Retrieved 18 January 2012

Poh Yen, Ng, Shamsul Kamariah, Abdullah, Pai Hwa, Nee Nga Huong, Tiew .(2009). Employers' Feedback On Business Graduates: An Exploratory Study In Curtin Sarawak. (From) http://www.bizresearchpapers.com/25.Poh.pdf Retrieved 18 January 2012

Rahmah Ismail, Ishak Yussof and Lai Wei Sieng. (2011). Employers' Perceptions on Graduates

in Malaysian Services Sector. (From)http://www.medwelljournals.com/abstract/?doi=ibm.2011.184.193. Retrieved 22 November 2014Rob Martin, Frank Villeneuve-Smith,Liz Marshall and Ewan McKenzie. (2008). Research

reportEmployabilityskills explored. (From) http://www.norfolkunites.org.uk/media/pdf/ese.pdf. Retrieved 10 December 2011

.Rasul, Mohamad Sattar; Ismail, Mohd Yusof; Ismail, Napsiah; Rajuddin, Muhammad Rashid; Rauf, Rose Amnah Abd. (2009). Importance of Employability Skills as Perceived by Employers of Malaysian Manufacturing Industry. (From) http://connection.ebscohost.com/c/articles/51408762/importance-employability-skills-as-perceived-by-employers-malaysian-manufacturing-industry. Retrieved 22 November 2014

Rosdiadee Nordin and Azah Mohamed. (2006). Evaluation of Technical Communication Skills among Recent Electrical Engineering Graduates of UKM. (From) http://www.ukm.my/p3k/images/sppb06/27.pdf. Retrieved 23 November 2014.

Surina Nayan & Latisha Asmaak Shafie. (2010). Employability Awareness among Malaysian Undergraduates. (From)

http://www.mendeley.com/research/employability-awareness-among-malaysian-undergraduates/. Retrieved 10 December 2011.Susima Samudrika Weligamage (2009), Graduates" Employability Skills: Evidence from

Literature Review. (From) http://www.kln.ac.lk/uokr/ASAIHL/SubThemeA8.pdf. Retrieved 18 December 2011.

Thulasimani A/P Munohsamy.(2006). Effects of Traditional Grammar Teaching on Standard Six Learners' Performers in Grammticality Judgement and Use of Simple Past Tense, Pronouns and Articles. Sekolah Pendidikan dan Pembangunan Sosial; Universiti Malaysia Sabah.

Yahya Buntata, M.Khata Jabora, Muhammad Sukri Sauda, Syed Mohd Syafeq Syed Mansora, Noorfa Haszlinna Mustaffa. (2013). Employability Skills Element's: Difference Perspective Between Teaching Staff and Employers Industrial in Malaysia (From) http://www.sciencedirect.com/science/article/pii/S1877042813035222. Retrieved 23 November 2014.

Yuzainee, M.Y., Zaharim, A. & Omar, M.Z. (2009). Employability Skills for An-Entry-Level Engineer as seen by MalaysianEmployers. (From)http://www.academia.edu/1347963/Employability Skills for an EntryLevel Engineer as seen_by_Malaysian_Employers. Retrieved 22 November 2014

Yuzainee Md Yusoff, Mohd. Zaidi Omar, Azami Zaharim, Azah Mohamed & Norhamidi Muhamad.(2012). Employability Skills Performance Score for Fresh Engineering Graduates in Malaysian Industry. (From) www.ccsenet.org/journal/index.php/ass/article/download/22695/14671. Retrieved 22 November 2014

Zaliza Hanapi & Mohd Safarin Nordin. (2014). Unemployment Among Malaysia Graduates : Graduates Attributes, Lecturers' Competency and Quality of Education.

(From)http://www.academia.edu/6138347/UNEMPLOYMENT AMONG MALAYSIA GRADUATES GRADUATESATTRIBUTES LECTU RERS_COMPETENCY_AND_QUALITY_OF_EDUCATION. Retrieved 22 November 2014

Zubaidah, & Rugayah. (2008). Imperative Attributes for Graduate Employability in Manufacturing Firms:Issues for Internationalising Malaysia's Curricula. In Sarjit, Morshidi & Norzaini (Eds.),Globalization and internationalisation of higher education in Malaysia. Pulau Pinang: Penerbit Universiti Sains Malaysia.

Zulaikha.J,Ariffin,A.M,Ezanee,M.E,Fazli,A. (2005). Employer ratings on recent IT graduates Competency. Paper presented at the Konvensyen Teknologi Pendidikan ke 18, Kuala Trengganu