



Soft Skills Competencies of Quantity Surveying Graduates in Malaysia: Employers' Views and Expectations

Hasbullah Shafie, Sharifah Mazlina Syed Khuzzan*, Nur Affah Mohyin

Department of Quantity Surveying, International Islamic University Malaysia

*Email: smazlina@iiium.edu.my

History:

Received: 19 August 2014

Accepted: 10 October 2014

Available Online: 30 October 2014

Keywords:

Quantity Surveying (QS) graduates; employers; soft skills; performance; expectations; Higher Education Institutions (HEIs)

Contact Number:

+60-3-61966202 (Sharifah)

ABSTRACT

Various organizations employ Quantity Surveying (QS) graduates. The diversity of employment opportunities bring the needs of QS graduates to equip with the key competencies to be able to work effectively and efficiently with other professionals. The QS profession faces threats to its traditional roles and functions as a result of changing client needs in the construction industry advances in technology and the particular needs of a developing economy. Within the context of the current situation, the globalization is pushing QS graduates to become competitive in term of soft skills that they possess such as communication skills, problem-solving skills, leadership, and teamwork. This research adopted a survey approach, using a questionnaire as the data collection technique. 80 questionnaires were distributed to employers, or human resource (HR) managers of the organizations that had QS graduates working with them. This paper reports on the views and expectations of the employers towards the soft skills of QS graduates in Malaysia. The employers were asked to rate their views towards current QS graduates' soft skills' performance in Malaysia as well as to assess their expectations of these graduates' soft skills based on a five-point Likert scale. From the findings, a 'competency gap' between the current local university QS graduates' soft skills' performance and their expectations were identified, and discussed. This paper also presents the recommendations made by the employers towards Higher Education Institutions (HEIs) in Malaysia producing QS graduates in order to improve and prepare the graduates for their work place.

1. Introduction

A Quantity Surveyor's scope of works is diversifying in this modern day. It does not only cover works in terms of financial budget. It also expands towards the contracting document, risk allocation, the legal aspect of advisor, value engineering and management, project management and others related. However, the technical skills possessed by Qs will not go any further without the support of soft skills (Schulz, 2008). Hence, QS graduates must prepare themselves with valuable and competitive soft skills in order to get good positions within the construction market. Lacking of soft skills will be considered unmarketable (Chua, 2000). Moreover, graduates that are lacking in learning the generic competencies, i.e. soft skills in undergraduate programs are highly expected to be in the unemployment statistics (New Strait Times, 2004). Employers seem to be uninterested to employ graduates that do not have the generic competencies, such as good communication skills, leadership, and working in teams (New Straits Times, 2004). Ai-Hwa (2005) and Mahbob (2001) furthermore stated that the problem of employees' soft skills will lead to employers having to retrain these workers, and it is considered very costly. Khaled (2010) encourages graduates to acquire and upgrade their soft skills in order to face up the challenging jobs under the *1Malaysia's* theme. MOHE (2006) identified seven attributes of soft skills. The soft skills include communication skills (CS), critical thinking and problem-solving skills (CTPS), teamwork skills (TS). It also embraces lifelong learning and information management skills (LL), entrepreneurship skills (ES), ethics and

professional moral (EM) and leadership skills (LS).

The Malaysian Soft Skills Scale (My3S) program had identified two main weaknesses amongst graduates in Malaysia; i.e. poor command in English and poor communication skills (Shaharuddin, Noriah, Khaidzir & Jumali, 2010). It creates a mismatch between employers' expectations and the university's output (Quek, 2005; Khir, 2006; Malhi, 2009; Pandian, 2010 as cited in Lim, 2011). According to Shaharuddin, et al. (2010), poor communication skills in respect of mastering more than one language seems to be less globalization skills. Insufficient command of language amongst graduates will affect competency in handling the intellectual discussion in the workplace. Therefore, causing employers to criticize the graduates' communication skills and analytical skills (Roselina, 2009) in which is leading to limitation of job opportunities among graduates (Pandian, 2010).

This paper aims to report the findings from a survey conducted with QS employers within the Lembah Kelang area, Malaysia on the views and expectations of the employers towards the soft skills of QS graduates in Malaysia. From the basis of the recommendations made by the employers, a simple framework was designed on how Higher Education Institutions (HEIs) in Malaysia can work hand-in-hand with the industry. This collaboration is to bridge the gaps (i.e. between the views and expectations of employers) towards a 'better' quality of QS graduates with respect to soft skills.

2. Employability of Graduates: The Malaysian Context

Acquiring soft skills competencies becomes increasingly important and relevant for those who are providing services (Rahmah et al., 2011). Fairuzia et al., (2011) assert that the Human Resource practitioners and employers find lacking relevant soft skills competencies of graduates. Thus, causing graduates difficulty in getting employments. Hence, it justifies the need of this paper in identifying the gaps in QS graduates' soft skills. Within the context of an increased demand for skilled workers and reported skills shortages, the phenomenon of rising graduate unemployment are doubly worrying (Bello, 2011; Rahmah et al., 2011). According to Patent (2012), the demands of employers have changed. It is no longer advantageous to simply have an undergraduate degree. The graduates should also need to draw on, or cultivate, the soft skills necessary in the workplace which should have been acquired through their group work, part-time jobs, volunteer work, sports teams and other out-of-class activities (Chang, 2004; Archer and Davidson, 2008; Rahmah et al., 2011; Patent, 2012).

Since it has become increasingly important to meet the demands of employers on soft skills possessed within graduates; HEIs should work hand-in-hand with the industry in matching the demands of the industry by providing opportunities to acquire them. Technical skills are easily quantified by the level of education; soft skills however, cannot be learned through books; as they must be acquired through experience (Ruggiero, 2012). Thus, students within HEIs should look outside the classroom in order to find them, i.e. through joining extra-curricular activities either offered within the HEI or outside the campus.

Malaysia has an enormous number of graduates entering the local employment market every year. This trend shows no signs of slowing down (Sirat et al., 2012; Rahmah et al., 2011). At the same time, the 1996 financial crisis had negative effects in terms of rising unemployment (Sirat et al., 2012). Even now, Malaysia continues to face the stark reality of rising graduate unemployment in spite of significant changes in the Malaysian economy since 1996. Sirat et al. (2012) identified the context of the continuing supply of graduates against a backdrop of changing economic fortunes and graduate unemployment and employability. Policy makers, academics and industry have revisited the issue regarding the role of HEIs as a center for the development of intellectual, creative and other higher level skills versus the need to supply workers for the labor market (university as a factory). Facing criticism from both the government and private industries, universities are being accused of producing unemployable graduates (Sirat et al., 2012). HEIs should play a big role in helping graduates to possess employability skills instead of only just focusing on academic and exam oriented activities (Morsidi, 2006). HEIs should take special note that soft skills, such as communication, integrity, intellectual capacity, teamwork skills, and analytical and problem solving skills are the four top priority skills sought after by the employers when hiring new employees. Therefore, HEIs may have to re-design or adapt their curriculum to ensure that these qualities are instilled in their students, and this should be done in collaboration with the industries (Morsidi, 2006; Sirat et al., 2012).

The term employability has gained prominence of late because of the changing world of work. According to Saterfield and McLarty (1995), employability skills are the skills required to acquire and retain a job, including job-specific skills, academic skills and a range of attitudes and habits. It can be seen through the graduates' soft skills such as, communication, problem solving and management skills. Moreover,

Hillage and Pollard (1999) highlighted that employability is "(a) the ability to gain initial employment, (b) the ability to maintain employment and make 'transitions' between jobs and roles within the same organization to meet new job requirements, and (c) the ability to obtain new employment if required, to be independent in the labor market by being willing and able to manage employment transitions between and within organizations". Hence, in order for graduates to attain employability, graduates need to acquire a certain job-specific skill and a range of soft skills. With respect to this research, the paper will only look into the issues of employability with respect to the soft skills to be attained by graduates.

3. Soft Skills: Definitions

There are many interpretations on soft skills by creating diverse terms such as 'employability skills', 'generic competencies' and 'transferable skills' but it carry an equal meaning on that. Agency Training (1990) clearly defined "transferable skills are the generic capabilities which allow people to succeed in a wide range of different tasks and jobs". Yassin *et al.*, (2008) mentioned that generic skills are also known as soft skills, key skills, common skills, essential skills, employability skills, basic skills, competencies skills, and transferable skills. Hence, in this case, it can be concluded that soft skills are also means of generic skills. A study conducted by Bennett *et al.*, (1999) pointed out the debate on the employability skills mostly involved the generic ability of any range of contexts either in educational level or at the workplace. Therefore, employers expect the graduates to master and understand the essential of generic skills in working space (Harvey *et al.*, 1997). Kate (2007) later on, referred 'soft skills' as "a cluster of personal qualities, habits, attitudes and social graces that make someone a good employee and a compatible co-worker". In addition, soft skills are considered the personal adaptation through life of learning environment that will be possessed by practices. Soft skills can also be defined and argued in many informative ways as well. Within the context of the Malaysian industry, soft skills are defined as the generic skills in which included the wide interpersonal skills and teamwork (Malaysian Soft Skill Scale, 2010). A study from the QS industry defined soft skills as a behavioral skill (Derus *et al.*, 2009), meta-competencies includes versatile and adaptable, pro-active and positive thinking, able to communicate effectively, high self-esteem, highly creative and innovative with problem solving ability, able to work in team, high ethical and moral value lifelong learning outlook (Said *et al.*, 2008), transferable or softer skills (Perera *et al.*, 2010), good attributes and interpersonal skills (Zakaria *et al.*, 2006), personal and interpersonal skills (RICS, 1998), relationships (Nkado, 2000). Therefore, notwithstanding the diversify definitions of soft skills/employability skills as highlighted above, within the context of this research, soft skills are defined as:

"a cluster of qualities, habits, attitudes and social graces that can enrich a good perspective employment and fit into any market jobs; which includes amongst all; effective communication, pro-active and positive thinking, teamwork, good attributes and interpersonal skills"

4. Types of Soft Skills

There are various types of soft skills that have been constructed by researchers and institutions (Malaysian Soft Skill Scale, 2010; Perera *et al.*, 2010; Derus *et al.*, 2009; Yassin *et al.*, 2008; Said *et al.*, 2008; Kate, 2007; Zakaria *et al.*, 2006; Nkado, 2000; Bennett *et al.*, 1999; RICS, 1998 and Harvey *et al.*, 1997). Basically, the types of soft skills that are usually used are communication skill, interpersonal skill, lifelong skill, problem solving ability and teamwork (Devadason and

Subramaniam, 2010). In addition, Vathsala (2010) categorized soft skills into many subjects such as oral communication, writing, reading, basic arithmetic, problem solving, creative and innovative thinking, learning skills, decision making, responsibility/dependability, positive attitude towards work, working as a team member, punctuality, self-confidence, ability to work without supervision and adaptability. Crebert et al., (2004) suggested communication skills, problem solving, analysis capabilities and teamwork skills as the types of soft skills. Davies (1999) previously pointed out the identification of soft skills include interpersonal skills, leadership competencies, language ability, good commercial awareness and problem solving skills. However, Bill (2004) highlighted that the type of soft skills that employer are really looking forward from graduates are: (a) working attitudes, (b) communications, (c) information gathering, (d) human-factor skills, and, (e) analytical and problem solving skills. Lorenz (2007) then further refined the types of soft skills according to the most common soft skills that people are normally interrelated with, as follows:

- Strong work ethic
- Positive attitude
- Good communication skills
- Time management skills
- Problem solving skills
- Acting as team player/teamwork
- Self confidence
- Ability to accept and learn from criticism
- Flexibility/Adaptability
- Working well under pressure

Within the Malaysian of Higher Education context, the Ministry of Higher Education (2006) classified seven traits of soft skills specifically to be embedded and assessed by HEIs as follows: communication skills (CS), critical thinking and problem solving skills (CTPS), teamwork skills (TS), lifelong learning and information management skills (LL), entrepreneurship skills (ES), ethics and professional moral (EM) and leadership skills (LS). Notwithstanding, the diversify types of soft skills available. Since the scope of research is in the Malaysia context, how the HEIs and the industry can work hand-in-hand to improve the level of graduates' soft skills needs to understand. This research narrows down the types of soft skills in accordance with the seven traits of soft skills as classified by MoHE (2006), as shown in Table 1.

5. Quantity Surveying: An Overview

The role of quantity surveyors have existed since the ancient Egyptian civilization where they dedicated to carry out estimates and costing for their aesthetic structure and building at that time. A quantity surveyor offers a distinct service in the built environment, and would like their professional status and services to be known and upheld in society (Bennett, 1991). According to Hassan et al., (1996), within the context of a QS, the professionalism aspects are amongst others; i) able to make decision independently, ii) committed to the public interest, and iii) observe the code of ethics and achievement of high level of expertise.

Khairuddin (2002) categorized the traditional job scope of Quantity Surveyors in Malaysia's construction industry as follows:

- Provide estimates during the initial stages of the process of construction procurement for the project initiators;
- Prepare the Bill of Quantities from architectural, engineering and other specialist drawings
- Describing the material, workmanship and the quantities

required

- Analyze tender documents; prepare and analyses cost data and perform contract administration including evaluate interim payments to contractors, assess variations and claims and handle contract account.

Table 1: Types of Soft Skills (MoHE, 2006)

Types of Soft Skills	Descriptions
Communication Skills (CS)	<ul style="list-style-type: none"> • Ability of graduates to communicate fluently in Bahasa Malaysia and English within any work place or range of condition • Graduates are expected to be able present their thought and information confidently either in written or speaking • Good listener and responder and the ability to use technology during presentation.
Critical Thinking And Problem Solving Skills (CTPS)	<ul style="list-style-type: none"> • The skills for graduates "to think critically, logically, creatively and analytically" • Involved in analyzing problems and making judgments, contributing new ideas by expressing their "out-of-the box" thought. • Focused on their task and can adopting in new community as well as environment
Teamwork Skills (TS)	<ul style="list-style-type: none"> • Graduates' skills to work with different approaches of people within variety of cultural background to archive common goals • Graduates must have a good relationship with others, understand scope of works been given, take a charge of leader in group productively and responsible towards team mates.
Lifelong Learning and Information Management Skills (LL)	<ul style="list-style-type: none"> • Graduates to be able self-learnt independently in the area of skills and knowledge. • Graduates to possess the ability to "manage relevant information from a variety of sources", creating and opening new ideas from the varied learning conditions and having a good passion towards knowledge.
Entrepreneurship Skills (ES)	<ul style="list-style-type: none"> • Graduates to create news idea for business opportunities and work related while facing risk awareness. • Graduates expected to explore business plans broadly and able to work independently which lead to self-employment
Professional Ethics and Moral (EM)	<ul style="list-style-type: none"> • Graduates to adapt with economic, cultural and social impact in their decision makings. • Graduates must be responsible and show a good attributes in working place or any other environment.
Leadership Skills (LS)	<ul style="list-style-type: none"> • The ability to show and manage the teams in various activities. • Graduates are to be able to understand the concept of leadership, ability to lead projects, take turns as "arbitrator" if conflict happened between team members and have skills to lead members in ethical and professional ways

Today's competitive and ever changing construction business landscape have significantly caused changes to the quantity surveying profession (Cartlidge, 2011); as well as having to deal with other parties within the industry. There are some major reasons that brought changes to the quantity surveying practice (Kumaraswamy & Morris, 2002; Fellows, Liu, & Fong, 2003; Cartlidge, 2011; Wong & Fan, 2013):

- The rise in the usa of information technology in the construction industry cause traditional practice becomes less relevant.
- The increment of project under public private partnership expands the need of construction professional in post construction management.
- The emergence of the private sector as a main client with higher requirement and demand compared to the public sector.
- The effect of globalization catalyzing competition in procuring project and profit.

Therefore, not only Qs are required to remain up to date with the changes in the industry and prepare to deviate from the traditional

practice to remain relevant (Frei & Mbachu, 2009). They are also expected to meet with employers' demands on the level of soft skills possessed in order to compete for employment and stay competent within the market.

6. Expected/Essential Soft Skills of Graduate: An Overview

Over the past decade, reports abound of mismatch between the expectations of employers and that of university outputs, as well as cases of local university graduates lacking in generic competencies such as communication of skills, problem solving skills and inter-personal skills (Quek, 2005; Juhdi, Yunus & Abu Samah, 2006; Khir, 2006; Malhi, 2009; Pandian, 2010). The top most lacking soft skills as identified by Gurcharan Singh and Garib Singh (2008) was Problem solving and Adaptability skills; followed by Interpersonal and Team skills, Personal organization and Time management skills, English language proficiency, Information, communication and technology skills, Leadership skills, and lastly Communication skills. Later on, Agus et al., (2011) highlighted that the wide gaps between the expectations of employers and the soft skills possessed by the graduates were (a) decision-making and Problem solving skills (17.3%), (b) thinking (17.3%), (c) communication and interpersonal skills (16.9%), and iv) ethical and values (16.4%). The result from their study shows that problem solving and adaptability/decision-making skills are the most lacking from graduates in Malaysia.

Quantity surveyors work alongside other parties within the construction field, in particular with clients; they have to possess a certain set of skills to deliver the project to the client with satisfaction (AIQS, 1998). These skills do not only include job-specific skills, but also 'appropriate' soft skills. With respect to soft skills, in the context of the Malaysian QS profession, Rohana (2001) highlighted that the soft skills' expectations of QS graduates lies highly on the areas of communication skills (both good spoken and written command in English), commitment and have the initiative to work, and learn; as well as mentally and physically prepared for works. Since this research focuses on soft skills of QS graduates, this section describes the types of soft skills that previous research have identified to be essential for a QS graduate (refer to Table 2).

Table 2 shows 7 types of soft skills that QS graduates need to possess for their employability. With respect to this scope of research, these types of soft skills we then categorized these types of soft skills following the classification by MoHE (2006). Among 7 soft skills identified, the three authors agreed that personal and interpersonal skills as well as synthesis and critical thinking are important. The rest were equally important, but nevertheless, only RICS (2009) thought that the business skills/ entrepreneurship skills is important for a graduate QS.

7. Graduates' Soft Skills

It has been argued that existing undergraduate programs are not producing graduates who possess the kind of professional and lifelong learning skills that they need to be successful in their careers (de la Harpe et al., 2000). It is said that the Higher Education (HE) system has failed to closely match the needs of the current labor market (United Nations, 2005). This mismatch between the kind of education being provided and the demands of the labor market has been cited many times in the literature (e.g., Egulu, 2004). HEIs are expected to produce a competent workforce for industries but it can be argued that a

university's purpose must not be defined solely by the expectations of employers, but also by the aspirations of the nation.

Table 2: Types of Soft Skills
(Adapted from RICS, 2009; Said, Shafei and Omran, 2008; AIQS, 1998)

Author/ Source of Reference	Types of Soft Skills						
	Self- De- velop- ment	Leader- ship/ Manage- ment skills/ Team- work	Com- munica- tion	Person- al & Inter- persona l Skills	Info. & Tech. Com- puter Litera- cy	Busi- ness/ Skills/ Entre- preneur ship	Synthe- sis/ Critical think- ing
MoHE	EM*	TS*&LS*	CS*	EM*	LL*	ES*	CTPS*
RICS (2009)				●	●	●	●
Said, Shafei and Omran (2008)	●	●	●	●			●
AIQS (1998)	●	●	●	●	●		●
Total	2	2	2	3	2	1	3

* Cross reference with Table 1

8. Roles of Higher Learning Institutions (HEIs) In Improving

The task of producing graduates who are prepared for the many challenges of the real world cannot be left only to HEIs but is the responsibility of the entire continuum of the education system, including the primary, secondary, and post-secondary education stages (Sirat et al., 2012). All education institutions must together discharge the role of developing individuals who contribute to their society. Since it has been increasingly argued, the quality of HE should not only be measured in terms of the employment rate of graduates but should also be measured by the extent to which higher education has addressed all of its purposes (Sirat et al., 2012).

HEIs have the aim of producing fully functional individuals who not only serve in the workforce but must also be actively functioning members in their respective communities. When HEIs are confined to meeting the demands of employers, this neglects the important role of universities in nurturing the characteristics that help graduates to function across all aspects of life after they graduate. In other words, individuals must not only be geared towards serving the work sector, but must also develop the skills that allow them to benefit their family, community and the nation (Dan, 1999). HEIs are expected to train the future workforce and assist in the creation and dissemination of knowledge. Therefore, the study by Chua (2004) had resulted that the course content and curriculum in HEI education must be balanced, up-to-date and meets the needs of the local profession and industry.

Given the many challenges in life that graduates must deal with, it is very important that HEI is concerned with promoting comprehensive excellence amongst university graduates. Amongst the important part of life is the development of characteristics that epitomize the philosophy of a university and the aspirations of a nation, rather than simply the production of graduates who have the ability to secure employment after completing their studies (Sirat et al., 2012). HEI must prepare graduates for all aspects of the outside world: employment, local issues and global problems. Thus, the HE curriculum must prepare graduates to play adequate roles in discourse on issues such as nuclear energy, climate

change and globalization, and to not only fit the needs of the industrial sector. Nevertheless, within the context of the Malaysian HEIs' QS graduates, the industry should be able to give their upmost commitment to work hand-in-hand with HEIs towards improving the level of soft skills possessed by QS graduates in Malaysia.

9. Research Methodology

This research aims to investigate the views and expectations of Quantity Surveying employers towards the soft skills possessed by QS graduates in Malaysia using a set of questionnaire sent out to 80 respondents, consisting of employers from different construction organizations.

10. Discussion and Findings

Out of the 80 sets of questionnaires distributed, only 35 sets of questionnaires were completed and returned by the respondents. This section discusses on the findings of this study in accordance to the questionnaire distributed:

10.1 Current Malaysian QS Graduates' Soft Skills: Employers' Views

Majority of the respondents had chosen technical skills as the top priority skill required in a QS graduate in Malaysia in contrast with soft skills. However, QS graduates nowadays are expected to not only excel in academic but at the same time be equipped with soft skills (Ismail *et al.*, 2011; Archer and Davidson, 2008; Chang, 2004). The Malaysian employers seem to have a low impression towards the performance of communication skills possessed by local university QS graduates in contrast with the QS graduates from abroad (Rahmah *et al.*, 2011; Archer and Davidson, 2008; Chang, 2004). This is due to many possible reasons, i.e. the environmental influences that surround the graduates from abroad which push them to communicate in English as their daily routine; either within the surroundings of the university, or whenever they are outside of the university. This is in contrast with the local university graduates; whereby they tend to use Bahasa Malaysia as their medium of communication; and teaching instruction.

Table 3 shows the employers' views on the rank of soft skills possessed by local QS graduates. It can be seen that the top three soft skills possessed by local QS graduates viewed by the employers, i.e. the respondents are i) teamwork skills; ii) professional ethics and moral, as well as iii) leadership skills. This is perhaps due to the trend of Malaysian HEIs emphasizing on group work assignments and projects, making them used to working in teams. Having good professional ethics and moral might be due to our culture and the moral inculcated within our society. However, the employers viewed that the local university QS graduates were very bad on their communication and language skills; i.e. ranked as no 8, as well as lacking on the critical thinking, problem solving and decision-making skills. This might be due to our current traditional-teaching centered which does not really encourage active thinking and problem solving skills causing the graduates to be dependent instead of independent.

10.2 Employers' Expectations Towards QS Graduates' Soft Skills In Malaysia

Employers agree that QS graduates need both technical and soft skills because technical skills are the proficiency of graduates to understand the activities, process or even procedure; and at the same time soft skills play an exclusive ability to adapt with different working place in regard

to different perceptions as well as to occupy themselves with employers' demand on competitiveness of this industry. (Odusami & ASCE, 2002). Zakaria *et al.*, (2006) highlighted that employers expect certain areas for the QS graduates to be looked upon such as construction contact, more period of practical training for graduates, project management, commitment, creativity, self-motivation, good communication including presentation, writing skills and negotiation skills. With respect to this research, the findings show that the respondents were in the belief that graduates must not only equip themselves with knowledge but skills (soft skills) in dealing with people. This is because of when QSs will be working alongside other parties in particular with client; they need to have a certain set of skills to deliver the project to the client with satisfaction (AIQS, 1998).

Table 3: Employers' Views on Soft Skills Possessed by Local University QS Graduates

Rank	Local University QS Graduates
1	Teamwork Skills
2	Professional Ethics and Moral
3	Leadership Skills
4	Working well under Pressure
5	Capability to work Independently
6	Self Confidence
7	Time Management Skills
8	Communication and Language Skills
9	Lifelong Learning & Information Management Skills
10	Critical Thinking, Problem Solving & Decision Making

Table 4 shows the five most important soft skills that employers expect QS graduates to possess are as follows:

- critical thinking, problem solving and decision making,
- communication and languages skills,
- capability to work independently,
- Professional ethics and moral
- Self-confidence.

These findings are in line with the findings from Ranjit (2009). Whereby we highlighted the communication skills, creativity, analytical thinking and problem solving skills that graduates must possess. The skills are necessary to compete with other outside graduates. Employers view these skills as essential because of the nature of the QS profession which is challenging and require a high level of problem solving skills to tackle any problem that related to construction project and indirectly they expected QS graduates to be able to contribute to the growth of their company.

Table 4 also shows a comparison between the soft skills viewed possessed by QS graduates as compared to the soft skills that employers expect graduates to possess. From Table 4, it can be seen that the top 3 soft skills gaps are on the level of i) critical thinking, problem solving and decision making skills possessed by QS graduates, ii) communication and language skills, as well as iii) capability to work independently.

These three soft skills require attention and needs to be improved by QS graduates to meet to employers' needs and demands. The gap between the views and expectations of the employers are perhaps due to the way the traditional way the graduates are educated within their HEIs; whereas the expectations of the employers come from the changes that are happening within the industry and market demands. In order to remain at the competitive edge of the industry, these are the essential soft skills to be possessed by QS graduates.

Table 4: Comparison between the soft skills viewed possessed by QS graduates as compared to the soft skills that employers expect QS graduates to possess

Rank	Employers' Views towards soft skills possessed by Local University QS Graduates'	Employers' expectations towards soft skills to be possessed by Local University QS Graduates'	Remarks
1	Teamwork Skills	Critical thinking, problem solving and decision making	Needs attention, current soft skills possessed by students ranked at no. 10
2	Professional Ethics and Moral	Communication and languages skills	Needs attention, current soft skills possessed by students ranked at no.8
3	Leadership Skills	Capability to work independently	Needs attention, current soft skills possessed by students ranked at no. 5
4	Working well under Pressure	Professional ethics and moral	Ok. Employers currently view that graduates have good professional ethics and moral, i.e. no. 2
5	Capability to work Independently	Self-confidence	Needs improvement. Current self-confidence of graduates are ranked as no. 5
6	Self Confidence	Teamwork Skills	Ok. At the moment viewed as no. 1 soft skills possessed by graduates
7	Time Management Skills	Leadership Skills	Ok. Status better than expectation
8	Communication and Language Skills	Working well under Pressure	Ok. Status better than expectation
9	Lifelong Learning & Information Management Skills	Time Management Skills	Ok. Status better than expectation
10	Critical Thinking, Problem Solving & Decision Making	Lifelong Learning & Information Management Skills	Ok. Status better than expectation

10.3 Recommendations To Higher Learning (HE) Institutions To Improve Qs Soft Skills

From the Malaysian education's perspective, many changes as well as strategies been done in order to improve and to meet employers demand on graduates' soft skills competencies. Moreover, a study by Rohana (2001) has acknowledged that the HEIs in Malaysia have redrawn their strategy and policy to meet the demand for graduates of high quality and professionalism. Since then, Chua (2004) had

emphasized that the course content and curriculum in HEI education to be balanced, up-to-date and meets the needs of the local profession and industry. For example, Said et al., (2008) highlighted that the Board of Quantity Surveyors Malaysia (BQSM) as a team with Ministry of Higher Education (MOHE) having on the good track to produce the "Criteria and Standard for Educational Programs In the field of Quantity Surveying" comprising the required knowledge, skills and attributes to be used in public university in order to educate future Malaysian QS graduates.

Based on the findings as discussed in the previous section, the top three soft skills that employers believe most essential are lacking within the current QS graduates; i.e. (a) critical thinking, problem solving and decision making skills possessed by QS graduates, (b) communication and language skills, as well as iii) capability to work independently.

Some of the recommendations given by the respondents to the HEI in order to increase the level of the three mentioned soft skills are as shown in Table 5:

Table 5: Recommendations to HEIs to increase the level of essential soft skills to be possessed by QS graduates

Essential Soft Skills for Improvement	Recommendations by Employers
Critical thinking, problem solving and decision making skills	<ul style="list-style-type: none"> To include real-life case studies as assignments To increase presentation-based learning among HEIs students Encourage students to talk more, rather than having a traditional teaching environment whereby the lecturers do most of the talking.
Communication and language skills	<ul style="list-style-type: none"> Conduct assignments which require students to deal with outsiders so that students are exposed to the real working communication, i.e. the way to communicate with clients, contractors as well as other project consultants. Increase the number of presentations – include question & answer sessions to encourage students to defend their works
Capability to work independently	<ul style="list-style-type: none"> to have a combination of both group-work assignments as well as individual assignments – to reduce free riders to encourage more research work

11. Conclusion

Huge changes in the country development have changed the employers' expectation towards the university graduates. This research found that most employers in quantity surveying organizations are much interested on the QS graduates who are equipped with: (a) having high level of critical thinking, problem solving and decision-making, (b) fluent communication and language skills, and, (c) capable to work independently. Employers also believe that professional ethics and moral as well as good self-confidence need to be seriously looked in order to perform QS tasks. Generally Malaysian HEIs main objective is educating QS students with sufficient knowledge either in technical skills (i.e. measurement, contractual aspect, project management etc.) or soft skills aspects (i.e. communication skills, self-confidence, teamwork skills etc.). Hence, appropriate solutions need to take into account in order to close the gaps on the current performance of QS graduates' soft skills and the employers' expectations.

The employers highlighted several steps or ideas in order to improve QS graduates' soft skills, i.e. in order to improve communication skills, mostly employers agreed that Malaysian HEIs should increase the numbers of presentations to be conducted during lectures (others see Table 5). Nevertheless, in order to improve QS graduates' soft skills competencies, everyone, i.e. Malaysian HEIs and QS practitioners should sit together in coming up with recommendations or strategies to overcome these weaknesses. This research however, acknowledges that one of the limitations is by having a small set of respondents. The researcher feels that there should be other similar research conducted to contribute significant information and knowledge regarding QS soft skills because of the nature of the QSs scope of work nowadays; i.e. becoming more complex due to the rapid development in technology; and other; but to a larger sample set.

References

- Adebowale, B. D. (2011). *Educated and Employed: The Dilemma of Graduates in African*. Retrieved from <http://futurechallenges.org/local/educated-and-unemployed-the-dilemma-of-graduates-in-south-africa/>
- Ackroyd, S. & Hughes, J.A. (1992). *Data Collection in Context*. Longman (London & New York)
- Adelina Iskandar. (2002). Malaysia's Manpower Requirement for 21st Century: Making Industry Needs with Educational Output. Paper presented at the Malaysian Education Summit 2004 Seminar, Kuala Lumpur
- Advsh Consultancy Services.(2012). Competency Modeling. Retrieved from <http://www.slideshare.net/tsivasankaran/competency-presentation>
- Agus, A., Awang, A.H., Yusuf, I. & Mohamed Makhbul. (2011). The gap of analysis of graduates' employees' works skills in Malaysia. Retrieved from <http://www.bai-conference.org/BAI2011/Papers/7.OB&HRM/7012.doc>
- AIQS (The Australian Institute of Quantity Surveyors).(1998). National Competency Standards for Quantity Surveyors. Retrieved from <http://www.icoste.org/AIQS%20Competencies.pdf>
- Arjomand, L. (2002). Sampling distribution of the mean. Retrieved from <http://business.clayton.edu/arjomand/business/17.html>
- Badu, E. & Amoah, P. (2004). Quantity Surveying Education in Ghana. *The Ghana Engineer*.
- Baker, D.P. (2009). The educational transformation of work: towards a new synthesis. *Journal of Education and Work*, 22(3), 163-91.
- Barret, P. (1992). Measuring the ability gap for construction professionals. *Construction Management and Economics*, 10, 321-42.
- Birrell, B. (2006). Implication of low English standards among oversea students at Australia Universities. *People and Place*, 14(4), 53-64.
- Babbie & Earl, R. (1990). *Survey Research Methods*. Wadsworth Publication Cooperation.
- Barnett, R. (2004). Learning for unknown future, *Higher Education Research & Development*, 24(3), 247-60.
- Bennett, N., Dunne, E., and Carré, C. (1999). Patterns of core and generic skill provision in higher education. *Higher Education*, 37, 71-93.
- Bill, C. (2004). For new graduates, 'soft skills' are the secret weapon in job hunt. Retrieved from <http://www.usatoday.com/news/opinion/>
- Boyatzis, R. (1982). *The Competent Manager – A Model for Effective Performance*, John Wiley and Son, NY.
- Brandon, P.S. (1990). *Quantity Surveying Techniques: New Directions*, BSP Professional Books, Oxford.
- Business Monitor International. (2011). Malaysia infrastructure report Q2 2011. Retrieved from <http://www.prlog.org/11444155-malaysia-infrastructure-report-q2-2011-new-research-report-available-at-fast-market-research.html>
- Burgoyne, J. (1989). Creating the managerial portfolio: building on competency approaches to management development. *MEAD*, 12(1), 56-61.
- Carlton Advanced Management Institute. (2005). What is competency? Retrieved from www.carltonglobal.com/samplelesson_HR.pdf.
- Cartlidge, D. (2002). *New Aspect of Quantity Surveying Practice*. Butterworth: Heinemann.
- Chua, S.L. (2000a). Some recent development in quantity surveying education – issues and challenges. *The Surveyor*, 35, 4-9.
- Chua, S.L. (2000b). Towards *Enhancing Surveying Education*. *The Surveyor*, 35(2), 16-20.
- Coates, D.E. (2006). People Skills Training: Are you Getting a Return from Investment. Retrieved from <http://www.2020insight.net/PeopleSkills.htm>
- Cox, S., & King, D. (2006). Skill Sets: an Approach to Embed Employability in Course Design. *Education + Training*, 48(4), 262-274.
- Crebert, G., Bates, M., Bell, B., Patrick, C. & Cragnolini, V. (1999). Developing generic skills at university, during work placement in employment: graduates' perceptions. *Higher Education Research and Development*, 23(2), 147-165.
- Dan, F. 1999. *From full employment to employability: a new deal for Britain's unemployed?* Canberra, unpublished.
- David, R. M., Mei-I, C. & Andrew, R. J. D. (2002). Competence, competency and competencies: performance assessment in organization. *Work Study*, 51(6), 314-319.
- Davies, H. A. ,Csete, J. , & Poon, L. K. (1999). Employer's expectations of the performance of construction graduates. *International Journal Engineering Education*, 15(3), 191-198.
- De La Harpe, B., Radloff, A., & Wyber, J. (2000). Quality and generic (professional) skills. *Quality in Higher Education*, 6(3), 231-243
- DeSeCo Project. (2005). The definition and selection of key competencies. Retrieved from www.oecd.org/dataoecd/47/61/35070367.pdf.
- Devadason, E. S., Thirunaukarasu Subramaniam, & Esther Gnanamalar Sarajini Daniel. (2009). Final year undergraduates' perceptions of the intergration of soft skills in the formal curriculum: a survey of Malaysian public universities. *Humanities, Social Sciences & Law*, 11(3), 321-348.
- Egulu, L. (2004). The African perspective on youth unemployment. In Demaret, L. (ed.), *Policy proposals for decent work and employment for young people*. Geneva, International Labour Organization, 77-85.
- Eraut, M. (1994). *Developing Professional Knowledge and Competence*, Falmer Press, London
- Ferry, D.J. & Brandon, P.S. (1984). *Cost Planning of Building*, BSP Professional Books, London.

- Goi & Lai, C. (2010) Graduates employment: valuable of Curtin University of Technology Sarawak graduates. *International Journal of Marketing Studies*, 2(1), 127-132.
- Hair, J.F., Bush, R.P. & Ortinau, D.J. (2007). *Research Method for Business*. John Wiley & Sons, Ltd.
- Harvey, L., Plimmer, L, Moon, S. & Geall, V. (1997). *Student Satisfaction Manual*. Open University Press, Buckingham.
- Hassal, L., Dunlop, A. & Lewis, S. (1996). Internal audit education: exploring professional competence. *Managerial Auditing journal*, 11(5), 28-36.
- Hasyamuddin, Abdullah, Nor Ratna, & Yahya. (2009). The instillation of employability skills through problem based learning model at Malaysian's higher institution. International Conference on Teaching and Learning Education 2009. Kuala Lumpur, November 200, 23-25.
- Hayes, J.L. (1979). A new look at managerial performance: the AMA model of worthy performance. *Management Review*, 2-3.
- Healey, M.J & Rawlinson, M.B. (1994). *Principle and Practice in Business and Management Research*. Aldershot: Dartmouth.
- Hillage, J. and Pollard, E. (1999). *Employability: developing a framework for policy analysis*. London, Department for Education and Employment.
- Holmes, L & Joyce, P. (1993). Rescuring the useful concept of managerial competencies: from outcomes back to process. *Personnel review*, 22, 37-52.
- Howarth, T. & P. Watson. (2009). *Construction Safety Management*. United Kingdom, UK: Blackwell Publishing.
- ILO. (2011). *Global Employment Trends, 2011. The Challenge of a Jobs Recovery*. ILO, Geneva; ILO. 2012. *Global Employment Trends, 2012. Preventing a Deeper Jobs Crisis*. ILO, Geneva
- Jang, S. & Kim, N. (2004). Transition from high school to higher education and work in Korea, from the competency-based education perspective. *International Journal of Educational Development*, 24, 691-703
- John, W. (2002). Challenges for the quantity surveying profession in the light of new development. *The Surveyor*, 4, 19-23.
- Khaled Nordin. (2010). Enhancing graduates employability: issues, concerns and the ways forward. Retrieved from http://www.alumni.upm.edu.my/employability/papers/007_res_closing.pdf
- Khairuddin Abdul Rashid. (2002). A study on the curricula for the bachelor of quantity surveying courses in Malaysia. *The Surveyor*, 3, 17-22.
- Knight, P.T. & Yorke, M. (2002). Employability through the curriculum. *Tertiary Education and Management*, 8(4), 3-16.
- Kothari, C.R. (1990). *Research Methodology – Methods and Techniques*. New Age Publication (Academic), India.
- Krogt, F. van der & Warmerdam, J. (1997). Training in different types of organization. *The International journal of human Resource Management*, 8(1), 87-106.
- Lim, Mansor Fadzil, Latifah Abdol Latif, Norlia T, & Norziati Mansor. (2011). *Producing graduates who meet employer expectations: open and distance learning is a viable option*.
- Lorenz, K. (2009). Top 10 soft skills for job hunters. Retrieved from <http://employabilityexporesources.wikispaces.com/file/view/Top+10+Soft+Skills+for+Job+Hunters.pdf>
- McQuaid, R.W. and Lindsay, C. (2005). The concept of employability. *Urban Studies*, 42(2), 197-219
- Malaysia Qualification Framework. (2005). Malaysia Qualification Framework (MGF). Retrieved from <http://www.mqa.gov.my/mqr/english/ePengenalanMQF.cfm>
- Male, S. (1990). Professional authority, power and emerging forms of 'profession' in quantity surveying. *Construction Management and Economics*, 8, 191-204.
- Mark, H. (2001). Skills and competency management. *Industrial and Commercial Training*, 28(4), 59-62.
- Matzdorf, F, Green, M, Megginson, D, Dale, M & Kennie, T. (1997). *Learning to succeed ... or how firms in the surveying profession can learn to stay ahead*. London: Royal Institution of Chartered Surveyors.
- Mayer, T. & Semark, P. (1996). A framework for the use of competencies for archiving competitive advantages. *South Africa Journal of Business Management*, 27 (4), 96-103.
- Mazlan. (2002). *Value Management Principle and Application*, Prentice Hall, Kretif Kembara, Kuala Lumpur.
- Merriam-Webster. (2012). An Encyclopedia Britannica Company Merriam-Webster. Retrieved from <http://www.merriam-webster.com/>
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative Data Analysis*. Sage: Thousand Oaks.
- MOHE (Ministry of Higher Education Malaysia). (2006). *Modul pembangunan kemahiran Insaniah (Soft Skills) untuk Institut Pengajian Tinggi Malaysia*, Universiti Putra Malaysia, Serdang.
- MOHE (Ministry of Higher Education Malaysia). (2008). Retrieved from <http://www.mohe.gov.my>
- Morsidi, S. (2006). Malaysia. In UNESCO/APEID and SEAMEO-RIHED, Higher Education in South-East Asia, Bangkok, UNESCO-APEID.
- Naoum, S.G. (1998). *Dissertation Research and Writing for Construction Students*. Oxford: Butterworth-Heinemann.
- New Strait Times. (1998). *Teach student business skills*, New Strait Time, August 5.
- New Strait Times. (2004). *Nation*, New Strait Times, May 25.
- Nerland, M. & Jensen, K. (2007). Insourcing the management of knowledge and occupational control: an analysis of computer engineers in Norway. *International Journal of Lifelong Learning*, 26(2), 263-78.
- Nikitina, L, & Furouko, F. (2010). Sharp focus on soft skills: a case study of Malaysian university students' educational expectations. *Educational Research for Policy and Practice*, 11.
- Nkado, R. N. & Meyer, T. (2001). Competencies of professional quantity surveyors; a South Africa perspective. *Construction Management and Economics*, 19, 481-491.
- Nkado, R.N. (1998). Competencies of professional quantity surveyors in a developing economy. Retrieved from http://buildnet.csir.co.za/cdcproc/docs/2nd_proceedings.html#key
- O'Brien, R. (2001). An Overview of the Methodology Approach of Action Research. Retrieved from <http://www.web.ca/~robrien/papers/arfinal.html>

- Odusami, K.T. & ASCE, M.A. (2000). Perceptions of construction professionals concerning important skills of effective project leaders. *Journal of Management in Engineering*, 18(2), 61-67.
- Pandian, A. (2010), *University curriculum and employability needs*, Higher Education Leadership Reserch Bulletin, 12(2), 55-62.
- Perera, S. , Pearson, J. , & Doodds, L. (2010). Alignment of professional, academic and industrial development needs for quantity surveyors. *COBRA*. London.
- Pralahad, C.K. & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-91.
- Quek, A. H. (2005). Learning for the workplace: a case study in graduate employees' generic competencies. *Journal of Workplace Learning*, 17(4), 231-242.
- Rahmah, I., Ishak, Y. & Lai, W.S. (2011). Employers' perceptions on graduates in Malaysian services sector. *International Business Management*, 5(3), 184-193.
- Ranjit. (2009). The hard truth about graduates employability and soft skills. National Conference on Teaching Learning at Tertiary Level In Bangladesh. December 2011, 30.
- Ram. (2006). 70% of Grads from Public Institutions Jobless, Sun2surf, Sun Media Corporation Sdn. Bhd. Retrieved from <http://sun2surf.com/article.cfm?id=14660>
- Ranjit, S.M. (2009). Make yourself employable: How graduates can hit the ground running!. Kuala Lumpur : TQM Consultant Sdn. Bhd.
- Reddy, J.N. (2005). *An Introduction to the Finite Element Method; 3rd edition*. McGraw-Hill Education.
- Rick, B.(2005). How much measurement is enough? Quantity Surveying Education in Australia. *The Journal of the Australia institute of QS. The Building Economist*, 16-20.
- RICS.(2009). Assessment of professional competencies, assessment of technical competencies requirement and competencies. Retrieved from http://www.rics.org/site/download_feed.aspx?fileID=3729&fileExtension=PDF
- Robson, C. (2002). *Real World Research; Second Edition*. Oxford: Blackwell.
- Roselina Shakir. (2009). Soft skills at the Malaysian institutes of higher learning. *Humanities, Social Sciences and Law*, 10(3), 309-315.
- Rohanna Mahbub. (2001, May, 8-9). Perception and expectation of employers on the quality of quantity surveying graduates entering the construction industry. Paper presented at the Quantity Surveyor National Conference.
- Ruggiero, C. (2012). Soft Skills: What Every Graduates Needs. Retrieved from http://www.arbitragemagazine.com/general/soft_skills_employment/
- Said Ilias, Mohd Wira Mohd Shafiei, & Omran, A. (2008). The competency requirement for quantity surveyors: enhancing continuous professional development. *Sri Lankan Journal of Human Resource Management*, 2(1), 17-27.
- Sanchez, A. (2006). The Difference Between Qualitative and Quantitative Research. Retrieved from <http://e-articles.info/e/a/title/THE-DIFFERENCE-BETWEEN-QUALITATIVE-AND-QUANTITATIVE-RESEARCH/>
- Saterfield, T.H. & McLarty, J.R. (1995). *Graduateness*. Report to the University of York Teaching Committee. March
- Saunders, M., Thornhill, A., & Lewis, P. (2007). *Research Methods for Business Students: fourth edition*. Harlow: FT Prentice Hall.
- Schulz, B. (2008). The importance of soft skills: education beyond academic knowledge. *Journal of Language and Communication*, 146 154.
- Seely, I.H. (1984). *Building Economics*, 3rd Edition, Macmillan, London.
- Shaharuddin, Noriah, Khaidzir & Jumali. (2010) Generic competency profile among students in institute of higher learning: a case of Universiti kebangsaan Malaysia (UKM), Malaysia. *College Student Journal*, 44(3), 811 – 820.
- Sirat, M., Chan, L.H., Shuib, M., Rahman, A., Rahayu, S. & Singh, N.K.J. (2012). Employability of graduates in Malaysia. UNESCO: Bangkok.
- Stewart, J. & Hamlin, B. (1992). Competency-based qualification: the case for established methodology. *Journal of European industrial Training*. 16(10), 9-16.
- Sykes, J.B. (1987). *The Concise Oxford Dictionary of Current English*, Oxford University Press: Oxford
- Yassin. S., Hassan, F., Amin, W. & Amiruddin, N. (2008, November, 19-21). Implementation of generic skills in the curriculum. Paper presented at the Proceedings of the EDU-COM 2008 International Conference, Sustainability in Higher Education: Direction for Change, Edith Cowan University, Perth Western Australia.
- Tan, C.T & French-Arnold, E. (2012). Employability of graduates in Malaysia. UNESCO: Bangkok.
- Tengku Sri Mahaleel Tengku Ariff.(2002, August). Qualities of students required for work in the private sector. Paper presented at the Seminar between Industrial Sector and Institute of Higher Learning, Bangi, Kuala Lumpur.
- Training Agency. (1990). *Enterprise in Higher Education: key features of Enterprise in Higher Education proposals*. Training Agency, Sheffield.
- UNESCO-UIS. (2009). *Global Education Digest 2009. Comparing Education Statistics Across the World*. UIS, Montreal
- United Nations. (2005). *World youth report*. New York, United Nations Publications.
- Vathsala, W. ,& Lasantha, P. (2010). Graduates', university lecturers' and employers' perceptions towards employability skills. *Education + Training*, 52 (3), 226-244.
- Wisher, V. (1994). Competencies: the precious seeds of growth. *Personnel Management*, 26, 36-39.
- Woodruffe, C. (1991). Competent by any other name. *Personnel Management*, 38 -43.
- Woodruffe, C. (1993). What is meant by a competency? *Leadership and Organization Development Journal*, 14(1), 29-36.
- Zakaria, N., M.E. Che Munaaim. & S. Iqbal Khan. (2006). Malaysian Quantity Surveying Education Framework. Paper presented at the Built Environment Education Annual Conference. London, UK.
- Zul.(2008). 5 reasons why graduates are unemployed. Retrieved from <http://skorcareer.com.my/blog/malaysia-unemployment-issue-why-fresh-graduates-are-unemployed/2008/04/17/>