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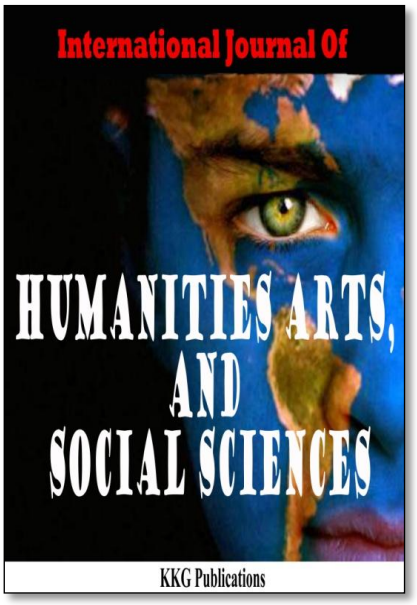

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SOFT SKILLS CONSTRUCT FOR ARCHITECTURE GRADUATE IN ACCORDANCE WITH INDUSTRY REQUIREMENTS

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Abstract. In line with the requirements of the job market, implementation of soft skills according to the field of study is important in order to help graduates understand and apply soft skills in the workplace. Construction industry is one of the major industries that affect the development of a country. The emphasis of soft skills aspect among architecture's graduates is one of key elements in producing graduates who are competitive, efficient, persistent and flexible when dealing with situations in the workplace. However, employers nowadays are dissatisfied with the performance of graduates who do not meet the requirements of the current job market thus becoming incompetent as a whole. This was proven by the number of unemployed graduates in Malaysia, especially the number of unemployed architecture's graduates that is still high despite of the increasing job vacancies. One of the main reasons for this issue is the mismatch between the elements of soft skills required by employers and soft skills possessed by graduates. This study aims to identify the constructs of soft skills for graduates of diploma in architecture in Malaysian polytechnics according to industry requirement based on literature review. Seven constructs of soft skills for architecture's graduates were listed including communication skills, negotiation skills, environment awareness, self management, problem solving, critical thinking and creative thinking. The importance and needs of soft skills in producing highly skilled architecture's graduates will also be discussed.

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INTRODUCTION

The increasing number of unemployed graduates is one of the challenges that is faced not only by educational institutions, but also by the industries. According to a report released by International Labour Office (ILO) in 2013, the average number of world unemployment is 202 million people and Southeast Asia was ranked second highest by employment-to-population ratio. According to Graduate Trace Study Report by Ministry of Education (MOE) in 2012, 63.7% of total unemployment in Malaysia can be seen in the polytechnic graduates in technical fields. The increasing level of unemployment is an issue that should not be taken for granted by all parties. Despite having excellent academic qualifications, graduates still fail to put themselves in the working sector. According to the ILO (2014), another challenge faced while addressing the unemployment issues is that employment opportunities are not expanding in parallel with the fast growth of labor force. The most obvious weakness can be detected when graduates can not keep pace with the rapid technology changes and industrial requirements (Farr, & Brazil, 2009; McIntosh, 2008 and Knight, & Elliot, 2008). Apart from graduate's attitude, lack of ethics and moral values, technological skills, lack of self-confidence and ability to adapt in the workplace also caused the increase in unemployment (MOE Graduate Trace Study Report, 2012 and Nair, Patil & Mertova, 2009) . This suggests that soft skills play an important role in addressing the issue of unemployment among graduates.Based on the increasing unemployment among youth especially, this study focuses on the soft skills requirements of the industry to make sure that the graduates are able to be competitive in the workplace.

Research Objective

This study aims to identify the constructs of soft skills for graduates of diploma in architecture in Malaysian polytechnics according to industry requirements based on literature review. This study also will evaluate the effect of soft skills in decreasing the unemployment among architecture graduates.

Soft Skills versus Employment

Current Employment Scenario

The importance of soft skills has often been emphasized by

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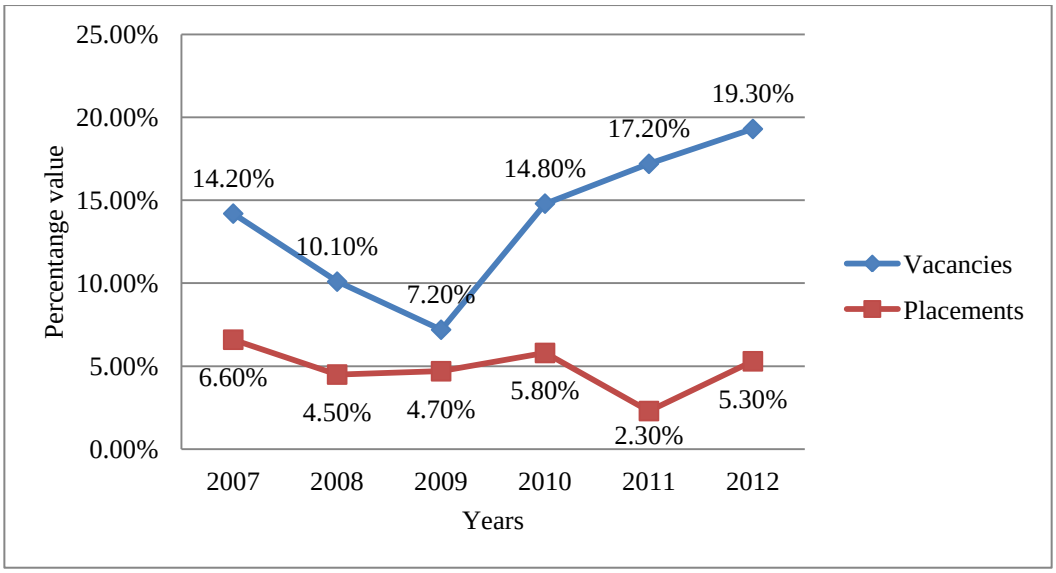
employers either in Malaysia or globally. Kapsos (2013) in his research about global employment trends for youth, listed skill mismatches, disproportionate economic downturns, job search barriers and business development & creation barriers as the four key barriers towards secure employment. Lack of appropriate soft skills in graduates affects the success of job application because most of the graduates are young and inexperienced.

In facing the economic boom in the globalization era, employers and industries require employees to have various additional skills (Hamzah, Bakar, & Kazilan, 2006; Nordin, Abd Hamid, & Jabor, 2005 and National Centre for Vocational Education Research (NCVER), 2003). According to Heimler (2010), Nair et al. (2009) and McQuaid and Linsay (2005), soft skills are essential to the job market in the world because the high competition in job market causes employers to hire employees that have the complete package of skills in order to increase national development. It's also discussed by Stevenson and Bell (2009) and Gibbs (2006), which explains the emphasis on soft skill aspects among students in producing graduates who are competitive, efficient, persistent and flexible when dealing with situations in the workplace.

However, the educational institutions still underestimate the issue of soft skills among students and are not ready to produce high quality graduates that causes the unemployment to rise among graduates (Farr, & Brazil, 2009; Stevenson & Bell, 2009 and David, Michael & John, 2008). This is clearly indicated in the Report of Labor Statistics and Human Resources in 2012 issued by the Ministry of Human Resources in 2013 that shows the number of unemployed graduates in Malaysia being still high despite of the increased job vacancies. Only about 5.3% of the graduates manage to be employed despite of the vacancies in construction industrys that are more than 300,000 as recorded by the Ministry of Human Resources. Graduate Trace Studies Report by MOE in 2013 also showed an increase in total number of unemployed graduates in architecture diploma in polytechnic by 1.8% compared to 2012.

FIGURE 1
Difference between Vacancies and Placements in Construction Industries



Based on figure 1, it clearly shows the gap between placements and vacancies in construction industries in Malaysia from years 2007 to 2012 as reported in Labor Statistics and Human Resources Report in 2012. The large gap between placements and vacancies proves that graduates are still having difficulties to put themselves into the workplace. This has been proven by Graduate Trace Studies Report by MOE in 2013 which stated that majority of unemployed graduates require additional training program to improve their soft skills including English language skills, ICT skills, career development, interpersonal skills and entrepreneurial skills. According to Shutt, Iles and Zhu (2010), Rasul, Ismail, Ismail, Rajuddin, and Rauf (2009) and Nair et al. (2009), mismatch between skills required by employers and the skills possessed by graduates is one of the causes of unemployment.

Previous studies showed that soft skills play an important role in addressing the issue of unemployment among graduates. According to Cox and King (2006), Gibbs (2006) and McQuaid and Lindsay (2005), employers nowadays are unsatisfied with the performance of graduates who lack skills to meet the requirements of the current job market. It can be concluded that soft skills are one of the skills needed in improving the performance of graduates. The level of unemployment could be reduced if graduates produced by HEI have additional skills which coincide with the job requirements.

Soft Skills Construct for Architecture

The existence of k-economy and globalization increase the needs of human resource development among professional and semi-professional fields that require knowledgeable and skilled personnel. Along with the rapid development of the country, graduates must contribute successfully through both academics and soft skills to compete in the workplaces. According to Curtis (2004), knowledge, innovation, expertise and soft skills are basic skills that must be possessed by employees to take part in the economic development. In order to achieve Vision 2020, Malaysia must be competitive to be at par with the other developed countries.

Soft skills possessed by graduates should be applied at higher institutions. According to the Malaysian Report of Labor Statistics and Human Resources in 2013, the highest unemployment rate involves graduates with tertiary education. In order to achieve the National Education Philosophy in producing knowledgeable and qualified human capital, various skills and education need to be implemented including spiritual, emotional, physical, intellectual and social elements. According to the Department of Polytechnic (2011), implementation of soft skills in the education programs is required parallel to the third and fourth transformation direction of polytechnic to empower students with knowledge and skills.

The need of producing graduates with education, skills, creativity and innovation, progressive attitude and critical thinking caused issues of soft skills to be often discussed globally (Hinchliffe & Jolly, 2011 and Shakir, 2009). The application of these skills should be ensured in education institutes to reduce the gap between the industry and graduates and also to meet the requirements of industries. According to Kapsos (2013), decisions that can be taken to reduce skill mismatches are by facilitating access to vocational training, providing entrepreneurship training programs, providing soft and life skills training programs and linking employers with educational institutions.

In line with the requirements of the job market, MOE has developed the Soft Skills Modules for Higher Education Institutions in 2006. The module produced a basic guideline for HEI for implementing soft skills elements in the curriculum and to produce competitive graduates. Studies on soft skills have also been initiated in other developed countries such as Australia and the United Kingdom (Curtis, 2004). Table 1 shows the terms and elements of soft skills used by some countries.

TABLE 1
Terms and Elements of Soft Skills Used by Some Countries

Soft Skills (MOE, 2006)	Employability Skills (Cleary, Flynn, & Thomasson, 2006)	21st Century Skills (P21 framework, 2009)
Communication skills	Communication skills	Communication & collaboration
Critical thinking & problem solving	Problem solving skills	Critical thinking & problem solving
-	-	Creativity & innovation
Life long learning & information management	Planning & organising skills	Information literacy
-	Technology skills	Media literacy
-	Life long learning skills	ICT literacy
Morale & professional ethics	-	Social & cross cultural skills
Entrepreneur skills	Initiative & enterprise skills	Productivity & accountability
-	Self-management skills	Flexible & adaptability
-	-	Initiative & self direction
Teamwork skills	Teamwork skills	-
Leadership skills	-	Leadership & responsibility

Several studies have been conducted in exploring soft skills among architecture graduates at different educational levels. Shannon (2012) in her research on employability attributes of architecture graduates in Australia states that the employability skills prioritized in hired architecture graduates are self-management, communication skills, creativity, initiative and enterprise, planning and organization, problem solving, lifelong learning and technology. According to Savage, Davis and Miller (2009), Building Environment and Design (BED) stakeholders listed sixteen soft skills element that should be possessed by graduates in universities including research skills, critical and conceptual thinking, analysis and problem solving, information literacy and computing, ability to work well in team, ability to learn new things, technically capable, skills and knowledge in their field, tolerance for others, ability to present well, ethics and corporate responsibility, articulate, ability to work autonomously, flexible to a variety of work situations and prepared to work hard.

As noted by previous researchers, the need of soft skills in graduates is important to be met for securing employment after graduation. To determine the elements of soft skills required by architecture graduates in accordance with construction industries, researchers have listed seven atributes of soft skills including communication skills, negotiation skills, environment awareness, self management, problem solving, critical thinking and creative

thinking. These skills are selected based on job specification for graduates of architecture as stated by selected agencies. Table 2 shows the elements of soft skills needed by architecture graduates.

TABLE 2
Elements of Soft Skills Needed by Architecture Graduates

Council for Industry and Higher Education (CIHE)	Board of Architect Malaysia (LAM)	United States Occupational Information Network (O*Net)	Australian Institute Of Architects (AIA)
Collaboration with others	Management practice and law	-	Negotiation skills
Self management		Self management	-
Respond to social & ethical concerns	Environment	-	Environmental concern
Effective communication skills	Communication	Speaking skills	Communicate effectively
-	-	Reading comprehension	-
Lifelong learning	-	Active learning	-
Time management	-	Time management	-
Computer skills	Technology	-	-
Problem solving skills		Complexs problem solving	Analyse & critically assess
-	Cultural contact	Critical thinking	problem
-		Decision making	-
flexible	-	-	-
adaptable	-	-	-
Design skills	design	-	Creative thinking

Based on table 2, it clearly shows that communication skills, negotiation skills, environment awareness, problem solving, critical thinking and creative thinking are soft skills that are often listed as the skills required for architecture graduates. These skills must be applied by graduates to ensure that the skills possessed by them are in accordance with the requirements of construction industries in Malaysia in particular.

CONCLUSION

The emphasis on soft skills that coincide with education programs helps graduates to understand and apply the soft skills in the workplace. In addition, mismatches between the soft skills possessed by graduates and soft skills required by the industry affect the quality of graduates. Soft skills elements required by architecture graduates differ with other professions and are based on market needs in construction industries. Researchers hope that the construct of soft skills for architecture graduates will help graduates to improve their additional skills, thus reducing unemployment among architecture graduates.

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