Employability Forecast Among Construction Management from The Employer's Perspective in Malaysia Construction Industry

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ABSTRACT

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The tertiary education institutions in Malaysia are facing increasing demands from employers and stakeholders to ensure the graduates to be equipped with relevant skillset needed to secure a placement in the industry. The question arises, what are the skillsets required by employers contribute to the research gap which led to a comprehensive understanding on the expectation of employers towards the graduate's employability. This study determined the employers' perspective skills by referring to five (5) field of employment consist of Developer, Contractor, Consultant, Supplier and Entrepreneur which consume of 57 (38%) respondents from 150 questionnaires distributed both on-site and on-line survey using random sampling technique. The content was referred on the program offered by Bachelor of Science in Construction Management, Universiti Teknologi MARA (UiTM). An exploratory factor analysis (EFA) was conducted using six (6) main categories of courses on hard skill to achieve the objective one and seven (7) soft skills to accomplish objective two. The finding indicates Project Management, Measurement and Estimating and Legal Study knowledge of hard skill critically required, whilst, interpersonal and communication soft skill is crucially needed. Those skills reveal as the fundamental knowledge in handling a construction works. In summary, this study able to facilitate the gap between graduates' skills and employers' expectation by providing a sufficient guidance platform referring to the respective field of employment as well as provides a significance implication to the educational institutions to align the program outcome toward the needs of the industry.

Keywords: *employability, forecast, graduates, employer*

INTRODUCTION

The Construction Industry sector is known to be fundamentally uncertain and structurally complex (Hasan, Ahamad, & Mohamed, 2011) influence on the economy of a country. The important roles of construction industry are developing socioeconomic, improving life quality, and helping a country to be successful in a globally competitive market (P.G & M, 2019). It indicates that the construction industry can give people, including fresh students, more opportunities for work in the sector. University graduates are the most important human resource to contribute to organizations. It aligned with the role of higher education institutions to produce eligible graduates to meet domestic development and employer needs. The ability for graduates to be absorbed by the industrial world after graduated is a critical component reflects to the accomplishment of the program commences attended by the graduates with the specific duration. Hence, in Malaysia, more universities at higher education system is offering similar programs related to construction industry to satisfy the market workforce demand (Alastair, 2016) with highly trained and skills for graduate's marketability (Hasan et al, 2011). The aims of this study explore the hard skill and soft skill to assist the future graduates

forecast on the employability based on the perspective of the employer reflected from the five (5) main field of employment which consist of Developer, Contractor, Consultant, Supplier and Entrepreneur using the Bsc. Construction Management program as the content of the study.

LITERATURE REVIEW

Bernama by Rosman (2019) wrote in one article mention that Construction Industry Development Board Malaysia (CIDB) stated construction sector in Malaysia remains economic driving force. It was highlighted in the budget 2020 on the allocation for infrastructure and social services construction and maintenance grants. Hence, in Malaysia, higher education system is offering more courses which is related to construction industry to satisfy the market workforce demand (Alastair, 2016). However, the economic growth is not providing enough number of jobs as number of graduates keep increasing which contribute to the increase rate of unemployment among fresh graduates (Clevelanda, L, & R, 2013). Issues of unemployment graduates is varied globally including Malaysia. In 2020, it is estimated that 300,000 graduates are due to complete their respective education. By considering the impact of Covid-19, the ministry estimates that 25 per cent or 75,000 potential graduates will have their employment opportunities disrupted, six months after they graduated (Dzulkifly, 2020). Align to such issue, being a university graduate no longer guarantees to be employed as the number of graduates keep increasing each year since students are facing tough competition to be employed.

Therefore, university should be able to formulate a competitive future graduate to increase higher possibility of employability referring to the expectation of the working industry. Employability seems to refer to ‘work readiness’, that is, possession of the skills, knowledge, attitudes, and commercial understanding that will enable new graduates to make productive contributions to organizational objectives soon after commencing employment (Mason , William, & Crammer, 2009). It also mentioned by (Crowley et al 2013) to have the realistic approach of the placement of the graduates, connection with employers while at school through work experience, career days, mentoring, as well as other activities improves the job prospects and earning potential of the young people once they leave their education. It is strongly aligned with the academic valuing of good learning (Yorke,2006).

Furthermore, it ca also derives from complex learning, and is a concept of wider range than those of ‘core’ and ‘key’ skills” and states that employability is as a collection of capacities or achievements which constitute a necessary but not sufficient condition for the gaining of employment (which is dependent, inter alia, on the contemporary state of the economy) and considerably more complex than some proponents of ‘core’, ‘key’ and ‘transferable’ skills have suggested, and is strongly aligned with the academic valuing of good learning (Yorke,2006). For that reason, future graduate should be equipped with three (3) types of skills to be successful in the job occupational skills, employability skills and basic academic skills (Bailey, 2003). It is supported by Chhinzer & Russo, (2018) which indicates employers expect graduates to have professional maturity and soft skills (problem solving, continuous learning and academic achievement) as well as sufficient generic skills.

BSc. Construction Management program offered by Universiti Teknologi MARA (UiTM) is among 11 others public universities that provide similar programs which contributes graduates to the construction industry. For that reason, the programme was used as the reference to evaluate the expectation from the perspective views of employers. The two (2) years program consist of 33 courses segregated precisely within 6 (six) main area consist of Management, Construction Technology, Building Science and Services, Quantities and Estimating, Legal Study and Research in addition each of the courses integrate excellently with related seven (7) soft skills as listed by Ministry of Higher Education (MoHE) in order to reflects the outcome of the program. Moreover, the program created by incorporating the feedback from employers of construction industry to ensure the future graduate a competitive to suit the required expectation for the employment fields. This will minimize the effects future graduates on the understanding that lead to differences expectation based on skills, and qualities required from the perspective of employer (Baharun and Suleiman, 2009).

For that reason, this study is significant to facilitate in closing the gap between graduates' skills and employers' requirements, by presenting the forecast employability of construction management students through promoting student learning and development on both hard and soft skills related. Besides, it provides a significance implication to educational institutions to enhance the program aligned with the needs of the industry as well as having an appropriate guidance platform to the future graduates to forecast on the respective field of construction employment based on their personal preference.

METHODOLOGY

This research focuses on the employability forecast among construction management graduates from the perspective of employer. To achieve this, a quantitative approach to the data collection process. The study consisted of a series of well-structured questionnaires on the hard skill and soft skill that is required for a construction management student to be employed based on the five (5) field of construction employment which are Developer, Contractor, Consultant, Supplier and Entrepreneur related to constructions. The questionnaires shall consist of two (2) sections,

1) Part A: Demographic Specifications
2) Part B: Analyzing the Specific Hard Skills and Soft Skills

Expected by Employers Components of questionnaires structured based on previous literature review theories and secondary source data. Åkerblad (2020) pointed out, theories are essential in the development of questionnaires to guide data collection and analysis of findings to address the research objective. In fact, each section of the questionnaires has been structured and classified to respond to each study objective. Part A deals with demographic data identified on the Work Experience, Qualifications, Achievements and Skills. Part B, respondents were asked the criteria required at the initial stage of employability to achieved second objective. Part C was structured to determine the hard skill and soft skills order to achieve the third objective.

The site study focuses the five different (5) filed of employability among Construction management graduates which are Developer, Contractor, Consultant, Supplier and Entrepreneur related to constructions. This study will use both on-site and on-line surveys for the distribution of questionnaires. An online survey is one of the most popular sources of data collection, where a set of survey questions are sent to the target sample and members of this sample can answer questions worldwide. Respondents receive online surveys through various media such as email, embedded websites, social media and other related social media platforms. The online survey will make it possible to create and manage survey tools online. As a result, this study used the Google Form survey as the main survey tools to collect data that helps to generate questions and any subscales so that they can be easily analyzed and answered by question research.

RESULTS AND DISCUSSION

The first section (Part A) of this questionnaire gives information about the demographic profiles of the participants. The second section which is (Part B) is the hard skill required to be employed to addresses first objective. The third section (Part C) is the soft skill required to addresses second objective. For each part and section of the questionnaires, the data collected by the distribution questionnaires both on-site and on-line surveys using random sampling technique. The skills were ranked according to the level of priority as perceived by the respondents.

Table 1: The Objective of the Study

Research Question 1	What is the hard skill required to be employed?
Research Question 2	What is the soft skill required to be employed?

Source: (Author, 2019)

The respondents

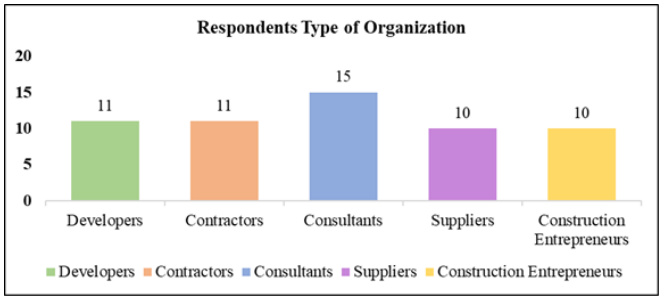

Figure 1: The information of the respondents.
(Source: Author, 2019)

57 (38%) respondents in total able to be capture after more than 150 questionnaires was distributed both on-site and on-line surveys on each of the five (5) main field of employment in the construction industry which include of Developer, Contractor, Consultant, Supplier and Entrepreneur related to constructions. Although the huge respondent was from the field of consultants, the different percentage of kept low making the percentage of respondent distribution was equally distributed. 56% (32 respondents) has more than 5 years of working experience in the construction industry and involved generally within 1-10 million of construction cost. Therefore, the information gain from the respondents is very much reliable to ensure the two (2) objectives of the study achieved.

The hard- skill and the soft skills required for employability.

Table 2: The significance of hard skill required among Construction Management graduates based on various field of employment.
(Source: Author, 2019)

			Developer	Contractor	Consultants	Supplier	Construction Entrepreneurs	RANKING
THE 5 MAIN AREA COURSES OFFERED IN THE PROGRAM. (HARDSKILLS)	**HS 1**	**Project Management**	**5.00**	**4.40**	**4.07**	**4.50**	**4.60**	**1**
		Construction System & Analysis	4.36	4.20	3.71	4.10	4.00	
		Project Planning & Control	4.36	4.00	4.21	3.90	4.20	
		Project Evaluation & Development	4.36	4.40	4.07	4.30	4.50	
	HS 2	Construction Technology	4.76	4.33	4.19	4.25	4.37	**3**
		Site Surveying	4.45	4.00	3.86	4.10	4.00	
		Structures	4.36	4.20	3.93	4.20	3.80	
	HS 3	Building Services	4.55	4.25	4.11	4.25	4.10	**5**
		Environmental Science & Engineering	4.55	3.85	3.54	3.70	3.45	
	HS 4	Measurement & Estimating	4.64	4.40	3.98	4.37	4.57	**2**
		Construction Economy	4.73	4.05	3.75	4.10	3.80	
	HS 5	Legal Study	4.73	4.30	3.96	4.35	4.50	**4**

The analyzation to hard skill is categorized into HS1, HS2, HS3, HS4 and HS5 in order to determinants the employability forecast among construction management graduates from the perspective of employer are based on varies field of work inclusive of Developer, Contractor, Consultant, Supplier and Entrepreneur related to constructions area.

Developer

As the data gained from 11 respondents from the Developers, three core area within HS1, HS2 And HS4 which consist of Project Management, Construction Technology and Construction Economy subjects. These courses are important as they are particularly important for the graduates to know in the fundamental view to work in developing a project. Furthermore, a good understanding of managing a project, able to capture the fundamental of construction knowledge as well as the ability to forecast on the pattern of economic construction are the fundamental expectation from the Developer's perspective.

Contractors

Based on the 11 respondents from Contractors, the hard skills that are most critical in their perspective views covered within the area of HS1 and HS4 which are Project Management, Project Evaluation & Development and Measurement & Estimating courses. This indicates that, good managing skills in a project, the ability to comprehend the process of evaluating and developing as well as estimating a project cost in tendering process are crucial in the employment in the Contractors field.

Consultants

Referring to major respondents of Consultant organizations (15), the core skill required are HS1, HS2 and HS3 they required the most by them are Project Planning & Control, Construction and Building Services subjects. Those subjects are important for this organization in order to plan a good consultation and designing related toa particular project. In addition, by having a basic fundamental of technology of construction and building services will be additional value in the consultants' field.

Suppliers

As 10 numbers of respondents, the mean score shows that most of the respondents from Suppliers highlighted the core of HS1, HS4 and HS5 which consist of Project Management, Measurement & Estimating and Legal Study subjects are important for that organization. This might due to the nature of the working needs as purchasing material and quotation estimation regard to the Bill of Quantities for the project as well as having basic legal knowledge when dealing with project agreements.

Construction Entrepreneurs

Based on the 10 respondents of Entrepreneurs related to construction field. The Core area still remains within HS1 and HS4. They Project Management and Project Evaluation & Development was highlighted again as well as Measurement & Estimating course. It is important for a graduate to have basic knowledge in estimating the cost and the process involved aligning toward to nature of the business itself as it is based on profitable approach.

Table 3: The significance of soft skills required among Construction Management graduates based on the field of employment
(Source: Author, 2019)

Variables			Developer	Contractor	Consultants	Supplier	Construction Entrepreneurs	RANKING
THE SOFTSKILL OFFERED IN THE PROGRAM	Interpersonal & Communication Skills	Verbal/Oral (Malay)	4.64	4.70	4.57	4.40	4.70	1
		Verbal/Oral (English)	4.82	4.40	4.14	4.20	4.30	
		Writing (Malay)	4.73	4.80	4.21	4.40	4.60	
		Writing (English)	5.00	4.70	4.14	4.30	4.50	
		Listening (Malay)	4.73	4.70	4.36	4.40	4.70	
		Listening (English)	4.91	4.60	4.36	4.30	4.70	
	Critical Thinking & Problem-Solving Skills	Non-Verbal	4.64	4.20	4.14	3.70	4.20	
		Rationality	4.91	4.50	4.21	4.30	4.50	3
		Self-awareness	4.82	4.30	4.14	4.00	4.40	
		Open Mind Set	4.64	4.10	4.36	4.40	4.40	
		Discipline	4.91	4.60	4.36	4.30	4.80	
		Judgement	4.82	4.50	4.21	4.20	4.70	
	Life-long Learning & Information Skills	Enthusiastic	4.91	4.60	4.00	4.20	4.50	4
		Maturity	4.82	4.40	4.14	4.00	4.50	
		Resourceful	4.91	4.20	4.43	4.10	4.40	
		Work Culture	4.82	4.50	4.14	4.00	4.60	
		Effort	4.27	4.30	4.36	4.40	4.50	
		Initiative	4.27	4.10	4.00	3.90	4.30	
	Entreprene urial Skills	Idea Integration	4.91	4.50	4.07	4.30	4.60	2
		Co-operation	4.82	4.40	4.36	4.40	4.70	
		Networking	4.91	4.60	4.36	4.60	4.80	
		Work Values	4.82	4.50	4.50	4.50	4.80	
		Delegation	4.91	4.60	4.43	4.20	4.60	5
		Convincing	4.82	4.40	4.07	3.90	4.50	
		Risk Taker	4.91	4.30	4.07	3.90	4.50	
		Competitive	4.82	4.30	4.07	4.10	4.60	
	Team-work Skills	Innovative	4.64	4.20	4.36	4.20	4.60	6
		Predictive	4.64	4.20	4.21	4.10	4.50	
	Ethics & Professional Moral Skills	Integrity	4.91	4.40	4.43	4.20	4.60	
		Confidentiality	4.82	4.40	4.21	4.20	4.60	
		Objective	5.00	4.40	4.36	4.30	4.70	
		Good Ethics	4.45	4.10	4.21	4.00	4.60	
	Leadership Skills	Collaborate	4.91	4.40	4.21	4.20	4.60	7
		Inspire	4.82	4.50	4.14	4.20	4.50	
		Accountability	4.64	4.60	4.29	4.40	4.70	
		Transformative	4.64	4.60	4.21	4.40	4.70	
		Networking	4.64	4.50	4.29	4.30	4.60	

The analyzation to soft skill required for employability forecast among construction management graduates from the perspective of employer are based on varies field of work. All the soft skills suggested by Ministry of Higher Education Malaysia (MoHE) which consist of Interpersonal & Communication Skills, Critical Thinking and Problem-Solving Skills, Lifelong Learning & Information Management, Teamwork Skills, Entrepreneurship Skills, Ethics & Professional Moral and Leadership Skills.

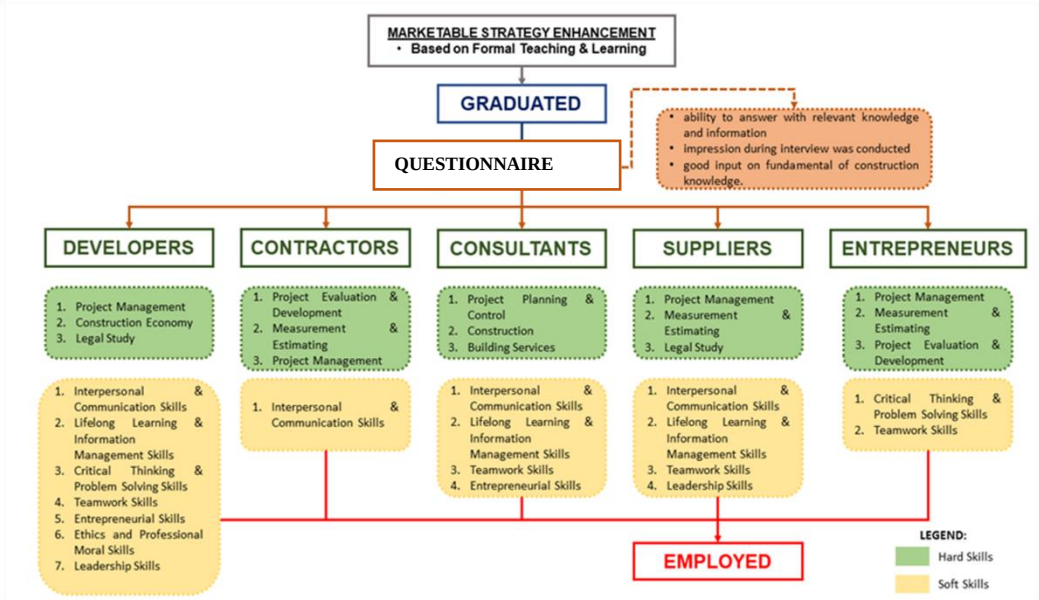

Figure 1: The significance of hard skill and soft skill required on various field of employment on Construction Management graduates' employment.
(Source: Author, 2019)

Base of the finding, it shows that all the field of employment in the construction field except for Construction Entrepreneurs, stated the Interpersonal & Communication Skills as it crucial to be inculcate among graduates due to the nature of work is dealing with effective delivery of information within the circle of the team players. Other than that, Teamwork skill is mostly selected by all the field of employment except for Contractors. Align with that, it also mentions by Abosede et al (2020), teamwork is very much positively correlated with organizational performance to In construction project, the graduates should understand the key success of any projects is integration and coordinating of people in a team. Furthermore, Life-long Learning & Information Skills has been identified as import on all the field of employment except for Contractors and Construction Entrepreneurs.

CONCLUSION

This study summarized the significant criteria on both hard skill and soft skill of employability among construction management graduates from the perspective of construction industry was projected on Figure 1. The aim of the study is to understand the components of skills required from the five (5) different field of employment within the construction industry. Based on the information collected, although all the courses learned in the program are important for a construction management graduates to prepared themselves with the working construction life, the most critical hard skill that need to be obtained by any construction management graduates is Project Management and Interpersonal & Communication Skills as both was considered the most critical to undertakes themselves on any field of construction industry employment. By having the employment forecast, the graduates will have a good understanding toward the nature of expectations based on employment field required from the day upon registration occurred. It can be accomplished by having appropriate exposure through applicable industrial linkages between university and the related field of employment. It is important to ensure the program is currently aligned with the needs of the construction industry. Eventually it helps the graduate to forecast by having proper guidance on which field of employment they intend to pursue upon graduation based on their interest and preference. Graduates without a proper guidance is far from achieving employment.

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