Employment As Construction Manager: Construction Company Perception on Fresh Graduates

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Abstract: Construction manager is a career in the construction industry that coordinate and supervise construction projects which is a tough approach for fresh graduates due to the tough competition in Malaysia. The objective of this study is to determine the requirement of fresh graduates to be employed as construction manager and to study the perception of construction industry on fresh graduates, and lastly to identify the improvement of university education system in preparing fresh graduates for employment in Kuching, Sarawak. This study adopts quantitative method to collect data by survey through Google form. The respondents are construction managers in Kuching, Sarawak. There are 82 responses collected out of 150 respondents have been approached which have responses rate of 55%. The data collected were analyzed using descriptive analysis method through Statistical Package for the Social Sciences (SPSS) version 26. The results reveal that possessing a construction bachelor's degree, working experience, analytical thinking, organizational abilities, budget management, great effort in learning and industrious, and conflict management skills are required. Fresh graduates are perceived as reliable and capable performers by employers but lack required work experience and lack confidence in their skills. The Malaysian Higher Education can be improved by providing innovative infrastructure and technology, introducing real-world projects to students, and offering work experience to students as an outreach to local businesses.

Keywords: Construction Company; Fresh Graduate; Employment; Perception

1. Introduction

Construction Management is a professional service that uses specialized, project management techniques to oversee the planning, design, and construction of a project, from its beginning to its end (Lientz, 2002). However, this career is not easy. A successful construction manager need to have knowledge of technology, business objectives, and project management techniques. They also must have some crucial soft skills. Finding a profession is never easy, but it's even more difficult when looking for work in a competitive industry. Construction jobs entail more than what we see on a construction site. The industry offers a diverse range of professional opportunities. Such as involving designing, planning, and project management, as well as doing the hands on, practical work. That is why, it is tough for fresh graduates with construction background to be employed in the construction industry.

Most of employers only willing to employ candidate with experience. A recent survey showed two thirds of employers look for graduates with relevant work experience because it helps them prepare for work and develop general business awareness, and one third of employers felt that applicants did not have a satisfactory level of knowledge about their chosen career or job (UCAS, 2019). There is a need for constructed related fresh graduates to step up their games in order to successfully employed as a project manager. If the issue persist, construction industry will experience difficulties in employing excellent project manager candidates. Also, there are no known studies that deal with this issue here in Kuching, Sarawak. Hence, it is precisely in this context that this study aims to determine the requirement that construction company need from fresh graduates in becoming a project manager in Kuching, Sarawak.

2. Literature Review

2.1 Skill of Construction Project Manager

Construction project manager require vast amount of knowledge in the industry in order to be able to carry out their task. As a manager, it is up to them to supervise small or large teams, while at the same time maintaining a safe and productive work environment. They also have to manage project budget, develop task strategies, and collaborate between other involved parties (Netscher, 2014).

2.2 Construction Software Skills

As a project manager, uniting the team and preparing them to work as a unit is crucial for a project success. To achieve project goal effectively and efficiently, a project manager must knowledge in using construction software. With the right tools, a project manager can be more strategic with the resources (Netscher, 2014). A project manager must familiar with work management tools and personal productivity tools. Project management tools can vary, most are computer programs that help them plan, execute, and manage projects in one centralized virtual location.

2.3 General Management Skill

Interpersonal skills refer to the ability to communicate or interact well with other people (Scullion, 2011). The human or the interpersonal skills are the skills that present the managers' ability to interact, work or relate effectively with people (Scullion, 2011). These abilities assist managers to maximize the company's human capital and motivate people to perform better. Decision making is an integral part of modern management (Netscher, 2014). Managers make numerous decisions, whether knowingly or not, and making decisions is a key component in a manager's success (Kerzner, 2017). Making proper and right decisions results in the success of the organization, while poor or bad decisions may lead to failure or poor decisions (Skitmoore, 2014).

2.4 Project Management Skill

When assigning project managers to specific projects, their leadership competencies should be taken in consideration (Turner, 2010). This result in some project managers may adopt a particular leadership style driven by the different goals of a project (Yang, 2011). An engaging leadership style is the most suitable for projects different from those of engineering and construction, where and involving style is preferred (Tuner, 2010). From a study of project manager's leadership competencies (Ahmed, 2020) traditional project management approaches support delivery of the project in accordance with schedule, budget, scope, and quality requirement (Kerzner, 2017).

2.5 Requirement of Employment as Construction Project

According to CIDB's Certified Construction Project Manager (CCPM) Accreditation Program, their eligibility requirement of minimum academic requirements are; (1) registered professional; (2) degree in project management/construction related field; (3) recognized international certificate in project management; (4) Bachelor's Degree in construction related field; (5) Bachelor's Degree in non-construction related field; (6) diploma in construction related field; (7) diploma in non-construction related field; (8) certificate in construction related field; and (9) Malaysia Skills Certificate Construction Manager (Level 5). Employer today regard experience as a key element when selecting applicant (Gusdorf, 2017). According to CIDB's CCPM Accreditation Program (2018), every applicant with eligible academic requirement also need to have specific number of years of experience in the field. For fresh graduates with degree in project management/construction related field, they are required to have minimum 3 years of experience in the field (CIDB, 2018).

2.6 Perception to towards fresh graduates.

In a survey of employers conducted by Talentbank in 2020, it is found that most employers considered local fresh graduates to be not immediately ready to take on career challenges. 196 respondents gave Malaysian college students a career readiness score of between 5 to 7 points (Ho, 2020). It would seem that the general perception among employers is that the career-readiness of Malaysian fresh graduates is not very high. This phenomenon is not limited to just Malaysian fresh graduates. A study entitled "Graduate work-readiness in the Asia-Pacific region", which surveyed perceptions of employers and fresh graduates in Malaysia, Indonesia, and Australia, found that employers in all three countries generally perceived that fresh graduate were lacking in career readiness. They had difficulties hiring fresh graduates who had the expected combination of qualifications, skills and personal capabilities (Hashim, 2019). According to Malaysia's Ministry of Education (MOE), of the over 290,000 fresh graduates that enter the employment market every year, almost 20% can't find a job within six months after graduation.

3. Research Methodology

This study adopts quantitative methods to obtain data from selected respondent about the requirement of construction project manager employment and construction industry's perception on fresh graduates. Quantitative data type is numerical in nature (McLeod, 2019).

The overall strategy of this study is according to Figure 1. There are 5 phase mainly; preliminary study, literature review, data collection; analysis & discussion; and conclusion & recommendation. This study adopts quantitative method through survey using google forms, later analyzed using descriptive analysis method through SPSS.
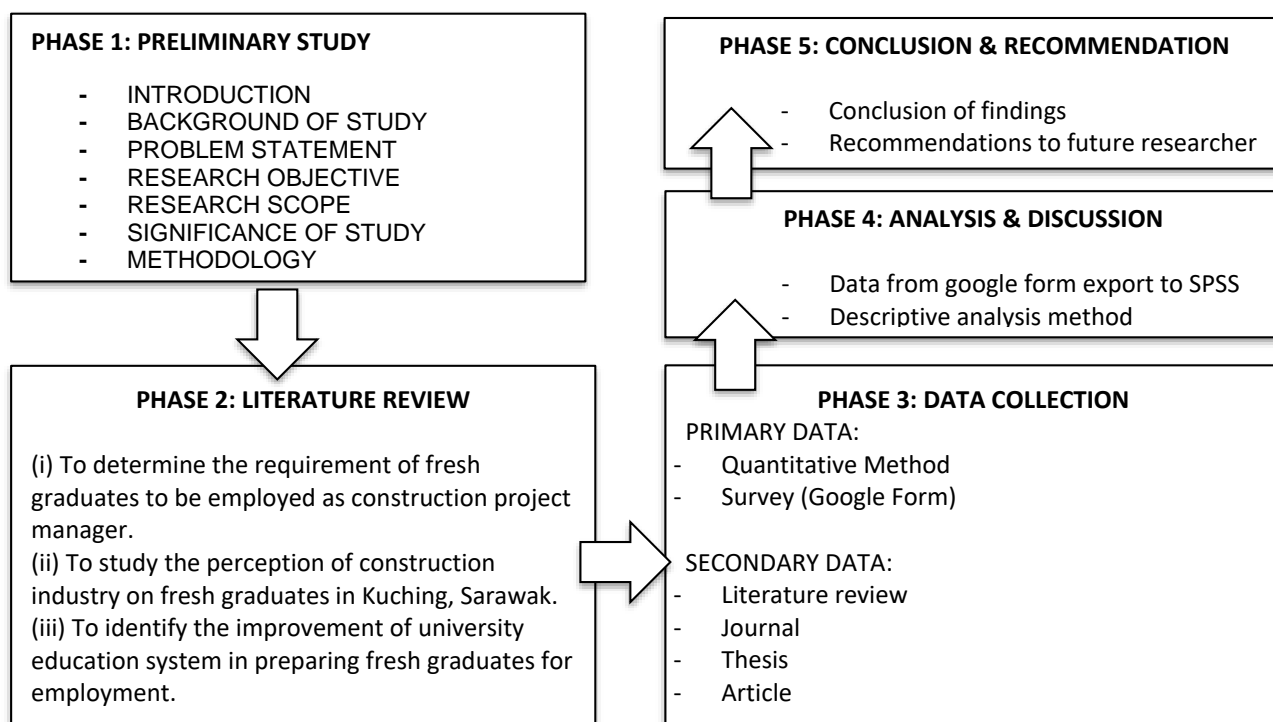
Figure 1: Research Methodology

3.1 Research Design

Table 1 shows the research design adopted in this study.

Table 1: Research Design Method

No	Research Objectives	Method
1	To determine the requirement of fresh graduates to be employed as construction project manager.	• Literature Review • Quantitative (Survey)
2	To study the perception of construction industry on fresh graduates in Kuching, Sarawak.	• Literature Review • Quantitative (Survey)
3	To identify the improvement of university education system in preparing fresh graduates for	• Literature Review • Quantitative (Survey)

3.2 Data Collection

Survey method has been used obtain primary data. Survey is a quantitative research technique of collecting information from a sample of individuals through their responses to questions (Scofield, 2017). Online survey (Google Form) was chosen to collect data due to the restriction of Covid-19 pandemic. The survey consists of a few sets of closed and open-ended questions related to this study's

research objective. Targeted respondents are among 150 out of 513 construction company in Kuching Sarawak.

3.3 Data Analysis

Primary and secondary data that is obtained from selected methodologies is carried out to the next chapter for analysis and discussion in regards to the topic and research aims. Data collected from survey is exported into Statistical Package for the Social Sciences (SPSS). Data from SPSS interpreted using descriptive analysis method where the mean value were used to determine the ranking of given statements in the survey.

4. Results and Discussion

This section will present the data that has been collected that has been analyzed through descriptive analysis method in Statistical Package for the Social Sciences (SPSS). The analyzed data will be discussed further in the direction to achieve this study's objective.

4.1 Results

The results that have been collected are 82 out of 150 respondents. This shows a response rate of 55%. The respondents are construction managers in Kuching, Sarawak. These results were analyzed through Statistical Package for the Social Sciences (SPSS) version 26 and then interpreted using descriptive analysis method. There are 4 sections mainly: (a) background information of respondents; (b) requirements of fresh graduates; (c) perception of fresh graduates; and (d) improvement on Malaysian Higher Education System.

(a) Background Information of Respondents.

This section ponders respondent's biographical information such as gender, age, ethnicity, highest educational qualification, construction industry type, sector, and their service period as shown in Table 2. This is important to know what characteristic of the respondents that are filling the survey and to relate it with their other answers for analyze.

Table 2: Background Information

Background Criteria	Frequency	Percentage (%)
Male	62	75.6
Female	20	24.4
Malay	16	19.6
Chinese	39	47.6
Indian	0	0
Bumiputera Sarawak	27	32.8
SPM/STPM	1	1.2
Technical Certificate	12	14.6
Diploma	14	17.1
Bachelor's Degree	55	67.1
Master's Degree	0	0

Most responds are by male with a frequency of 62 (75.6%) while female are 20 (24.4%). the highest number of respondents who responded are Chinese, with the frequency of 39 (47.6%) out of 82 total respondents. The second highest are by the bumiputera Sarawak and Sabah (Iban, Bidayuh, Melanau, Kenyah, Kelabit, and Dusun) at frequency of 27 (32.8%). The third highest are responded by Malay, with frequency of 16 (19.6%). However, there are no respond from Indian ethnicity. Most of the respondents has bachelor's degree with the highest frequency of 55 (67.1%). Diploma education is the second highest education of the respondents with the frequency of 14 (17.1%). Technical certificate is the third highest education with the frequency of 12 (14.6%) respondents. SPM and Master's degree has the lowest frequency, with each frequency of 1 (1.2) and 0 respectively. These data show that most construction manager has bachelor's degree.

Table 3: Respondents' company's information.

Construction Company Type	Frequency	Percentage (%)
Commercial building	20	24.4
Specialized industrial construction	3	3.7
Residential building	49	59.8
Infrastructure and heavy construction	10	12.2
Sector		
Building construction	28	34.1
Structural engineering	2	2.4
Civil engineering	21	25.6
Electrical	12	14.6
Architecture	9	11
Quantity surveying	8	9.8
Water/Plumbing	2	2.4
Service period in the industry		
Less than 5 years	31	37.8
5 – 10 years	27	32.9
More than 10 years	24	29.3

Table 3 above shows the respondents' company information. Most respondent's company are involved in residential building project with the frequency of 49 (59.8%). 20 respondents (24.4%) are involved in commercial building projects. The third highest frequency of 10 (12.2%) are respondents who are involved in infrastructure and heavy construction project. However, only 3 (3.7%) respondents are involved in specialized industrial construction project. The highest number of respondents who are from building construction sector with frequency of 28 (34.1%). Respondents who are from civil engineering sector are the second highest with the frequency of 21 (25.6%). Respondents who are from electrical sector are the third highest with a frequency of 12 (14.6%). Architecture, quantity surveying, plumbing and structural engineering has the lowest frequency of 9 (11%), 8 (9.8%), 2 (2.4%) and 2 (2.4%) respectively.

Respondents who serve in the industry for less than 5 years are the highest with the frequency of 31 (37.8%). Respondents who serve in the industry for 5 – 10 years period are the second highest with

frequency of 27 (32.9%). Respondents who serve the industry for more than 10 years are the least with the frequency of 24 (29.3%). This shows that respondents who have work for less than 5 years gave the most responds to the study.

(b) Requirements of Fresh Graduates Analysis

This section investigates respondents' confidence and perspective in the requirement of employing fresh graduates as construction manager as shown in Table 4. This section adopts five Likert scale (Likert, 1932), which is a type of psychometric response scale in which responders can specify their level of agreement to a statement in five points: (1) Strongly disagree; (2) Disagree); (3) Neutral; (4) Agree; and (5) Strongly agree.

Table 4: Requirement of Education Descriptive Analysis

Code	Statement	Mean	Level of Agreement	Rank
E1	Fresh graduate with construction related Bachelor's degree is sufficient to be employed as construction manager.	4.73	Strongly Agree	1
E2	Fresh graduate with construction related Master's degree is a bonus to be employed.	4.68	Strongly Agree	2
E3	Any fresh graduate with unrelated to construction Bachelor's/Master's degree is applicable to be hired as construction manager.	3.17	Neutral	4
E4	Fresh graduate with extra construction technical certificate is more likely to be hired as construction manager.	4.65	Strongly Agree	3

Statement E1 is "fresh graduate with construction related Bachelor's degree is sufficient to be employed as construction manager". Statement E1 valued a mean of 4.73 which is considered as strongly agreed by respondents. It is strongly agreed that bachelor's degree is preferred by employer in hiring construction manager. Statement E2 which is "fresh graduate with construction related Master's degree is a bonus to be employed". Statement E2 valued a mean of 4.68 which is considered as strongly agreed. It is strongly agreed that bachelor's degree is preferred by employer in hiring construction manager.

Statement E3 which is "any fresh graduate with unrelated to construction Bachelor's/Master's degree is applicable to be hired as construction manager". Statement E3 valued a mean of 3.17 which is considered neutral. Lastly, statement E4 which is "fresh graduate with extra construction technical certificate is more likely to be hired as construction manager". This statement valued a mean of 4.65 which is considered as strongly agreed.

Table 5: Requirement of Experience Descriptive Analysis

Code	Statement	Mean	Level of Agreement	Rank
EX1	Fresh graduate with no experience working in construction is not likely to be hired.	4.34	Strongly Agree	2
EX2	Hands-on and internship program during university is enough.	3.80	Agree	5
EX3	Fresh graduate must have at least a few years work experience working in construction before working with your company.	4.35	Strongly Agree	3

Code	Statement	Mean	Level of Agreement	Rank
EX4	Experience is more important aspect than education to become construction manager.	4.63	Strongly Agree	1
EX5	Fresh graduate with no working experience can work in our company to gain experience as construction manager.	4.16	Agree	4

Table 5 shows the findings related to requirement of experience. Statement EX1 states that "fresh graduate with no experience working in construction is not likely to be hired". It valued a mean of 4.34 which is considered as strongly agreed. Statement EX2 states that "hands-on and internship program during university is enough". It valued a mean of 3.80 which is considered as agree. Next, statement EX3 states that "fresh graduate must have at least a few years work experience working in construction before working with your company". This statement valued a mean of 4.35 which is considered strongly agreed.

Statement EX4 states that "experience is more important aspect than education to become construction manager". It valued a mean of 4.63 which is considered as strongly agreed. Lastly, statement EX5 states that "fresh graduate with no working experience can work in our company to gain experience as construction manager". This statement valued a mean of 4.16 which is considered as agreed. This shows that most employers allow hiring fresh graduates to gain experience.

Table 6: Requirement of Hard Skills Descriptive Analysis

Code	Statement	Mean	Level of Agreement	Rank
HS1	Analytical thinking. (able to identify & define problems, develop solution to problem)	4.85	Strongly Agree	1
HS2	Computer software expertise. (familar and able to utililize computer software such as; spreadsheet; revit; scheduling tools; etc)	4.83	Strongly Agree	3
HS3	Organizational awareness (understands your company goals and objective).	4.79	Strongly Agree	5
HS4	Personal planning and organizational skills. (able to create and keeping deadlines effective and efficiently)	4.85	Strongly Agree	1
HS5	Technical expertise. (able to accomplish complex action/task related to computational and physical technology)	4.82	Strongly Agree	4
HS6	Negotiation skills. (able to communicate and discuss with authorities/client/partners/etc to reach a beneficial outcome over any issue)	4.84	Strongly Agree	2
HS7	Budget Management. (able to estimate, manage and track the cost and expenses of a project)	4.85	Strongly Agree	1
HS8	Delegating (able to assign task to other employees efficiently)	4.82	Strongly Agree	4

Table 6 shows the findings related to requirement of hard skills. There are 3 most preferred hard skills by respondents with equal mean value of 4.85 (considered as strongly agreed) which are HS1, HS4, and HS7. HS1 is analytical thinking (able to identify & define problems, develop solution to problem), HS4 is personal planning and organizational skills (able to create and keeping deadlines effective and efficiently), while HS7 is budget management (able to estimate, manage and track the cost and expenses of a project).

Next, the second highest mean value of 4.84 for statement HS6. Statement HS6 is negotiation skills (able to communicate and discuss with authorities/client/partners/etc to reach a beneficial outcome over any issue). Mean value of 4.84 is considered strongly agreed. The third highest mean value of 4.83 is HS2. HS2 is computer software expertise (familar and able to utililize computer software such as; spreadsheet; revit; scheduling tools; etc) Mean value of 4.83 is considered as strongly agreed.

Two fourth highest similar mean value of 4.82 which are HS5 and HS8. HS5 is technical expertise (able to accomplish complex action/task related to computational and physical technology) and HS8 is delegating (able to assign task to other employees efficiently). Mean value of 4.82 is considered strongly agreed. Lastly, the lowest mean value of 4.79 which is HS3. HS3 is organizational awareness (understands company goals and objective). Mean value of 4.79 is considered as strongly agreed.

Table 7: Requirement of Soft Skills Descriptive Analysis

Code	Statement	Mean	Level of Agreement	Rank
SS1	Ability and willingness to learn. (actively sincere to seek/question superiors on learning in becoming a better employee)	4.85	Strongly Agree	1
SS2	Hardworking (willingness to take extra work)	4.85	Strongly Agree	1
SS3	Self-confidence (trust him/herself in having control in their work)	4.84	Strongly Agree	2
SS4	Leadership (able to lead and guide team in getting work done)	4.84	Strongly Agree	2
SS5	Language proficiencty (Commnication skills & multi-lingual)	4.83	Strongly Agree	3
SS6	Teamwork (able to collaborate and work as a team in completing a task)	4.84	Strongly Agree	2
SS7	Conflict Management (able to control an issue by outcoming more positive impact than negative impact)	4.85	Strongly Agree	1
SS8	Adaptability (able to cope and adjust self to different/new conditions or technology)	4.84	Strongly Agree	2

Table 7 shows the findings related to requirement of soft skills. There are 3 most preferred soft skills with similar mean value of 4.85 which is considered strongly agreed. They are SS1, SS2 and SS7. SS1 is ability and willingness to learn (actively sincere to seek/question superiors on learning in becoming a better employee), SS2 is hardworking (willingness to take extra work), and SS7 is conflict management (able to control an issue by outcoming more positive impact than negative impact). Four soft skills value the second highest mean value of 4.84 each which are considered strongly agreed. They are SS3, SS4, SS6, and SS8. SS3 is self-confidence (trust him/herself in having control in their work), SS4 is leadership (able to lead and guide team in getting work done), SS6 is teamwork (able to collaborate and work as a team in completing a task), and SS8 is adaptability (able to cope and adjust self to different/new conditions or technology). Lastly, from Table 4.3.5, language proficiencty (commnication skills & multi-lingual) has the lowest mean value of 4.83 but is still considered as strongly agreed.

(c) Perception on Fresh Graduates

This section will analyse employers' perception on fresh graduates in terms of their education, experience and skills. By adopting the Likert scale, each statement will be interpreted with help of their mean value that was calculated using SPSS.

Table 8: Perception in Education

Code	Statement	Mean	Level of Agreement	Rank
EP1	Fresh graduate with higher education is more reliable than lower education as an employee.	4.40	Strongly Agree	4
EP2	Fresh graduate with excellent CGPA (cumulative grade point average) in education will perform better as an employee in your company.	4.65	Strongly Agree	1
EP3	Fresh graduates are able to apply their knowledge from their education into real work.	4.60	Strongly Agree	2
EP4	Fresh graduates are fresh-minded and they can bring new perspective into your company.	4.54	Strongly Agree	3
EP5	Fresh graduates lack required construction knowledge.	3.63	Agree	5

Table 8 shows the findings related to perception of education among respondents. Statement EP2 which state "fresh graduate with excellent CGPA (cumulative grade point average) in education will perform better as an employee in your company" has the highest mean value of 4.65. Mean value of 4.65 is considered as strongly agreed. Statement EP3 has the second highest mean value of 4.60 which state "fresh graduates are able to apply their knowledge from their education into real work". It is considered as strongly agreed.

Statement EP4 has the third highest mean value of 4.54. It is considered as strongly agreed. Statement EP4 states that "Fresh graduates are fresh-minded and they can bring new perspective into your company". Statement EP1 has the fourth highest mean value of 4.40. Is states that "fresh graduate with higher education is more reliable than lower education as an employee". Mean value of 4.40 is considered as strongly agreed. Lastly, the statement EP5 has the lowest mean value of 3.63 which state "fresh graduates lack required construction knowledge". Mean value of 3.63 is considered as agreed.

Table 9: Perception in Experience

Code	Statement	Mean	Level of Agreement	Rank
EXP 1	Fresh graduates lack required work experience.	3.76	Agree	1
EXP 2	Fresh graduate with no work experience cannot perform according to the required expectation.	3.33	Neutral	2
EXP 3	Fresh graduates have no effort in gaining work experience.	2.54	Disagree	3
EXP 4	Fresh graduates always lie about their work experience.	2.33	Disagree	4

Table 9 shows the findings related to perception in experience among respondents. Statement EXP1 has the highest mean value of 3.76 which states "fresh graduates lack required work experience". Mean value of 3.76 is considered as agreed. Statement EXP2 has the second highest mean score of 3.33. It states that 'fresh graduate with no work experience cannot perform according to the required

expectation". Mean score 3.33 is considered as neutral. Statement EXP2 has the second lowest mean value of 2.54 which state "fresh graduates has no effort in gaining work experience". Mean value of 2.54 is considered as disagree. Lastly, from Table 4.4.2, statement EXP4 has the lowest mean value of 2.33 which states "fresh graduates always lie about their work experience". Mean value of 2.33 is considered as disagree.

Table 10: Perception on Skills

Code	Statement	Mean	Level of Agreement	Rank
SP1	Fresh graduates lack the required hard skills to work as construction manager.	3.48	Agree	1
SP2	Fresh graduates lack the required soft skills to work as construction manager.	3.38	Neutral	2
SP3	Fresh graduates cannot communicate well on work.	2.87	Neutral	3
SP4	Fresh graduates cannot speak English fluently.	2.46	Disagree	1
SP5	Fresh graduates do not have sufficient technical ability.	2.85	Neutral	4
SP6	Fresh graduates cannot handle extra hardwork.	2.50	Disagree	8
SP7	Fresh graduates are incompetent in having management responsibility.	2.59	Disagree	7
SP8	Fresh graduates are not capable of leading a team on work.	2.63	Neutral	5
SP9	Fresh graduates are not capable of solving an issue/problem.	2.61	Neutral	6

Table 10 shows the findings related to perception on skills among respondents. Statement SP1 has the highest mean value of 3.48 which state "fresh graduates lack the required hard skills to work as construction manager". Mean value of 3.48 is considered as agree. Respondents are unsure of 5 statements mainly statement SP2, SP3, SP5, SP8 and SP9. Four of the statements has the mean value of 3.38, 2.87, 2.85, 2.63, and 2.61 which are considered as neutral. Statement SP2 3.38 states that "fresh graduates lack the required soft skills to work as construction manager". Statement SP3 states that "fresh graduates cannot communicate well on work". Statement SP5 states that "fresh graduates do not have sufficient technical ability". Statement SP8 states that "fresh graduates are not capable of leading a team on work". Statement SP9 states that "fresh graduates are not capable of solving an issue/problem".

Respondents disagree to 3 statement mainly statement SP4, SP6, and SP7. Three of the statements has the mean value of 2.46, 2.59 and 2.50 respectively with is considered as disagree. Statement SP4 states that fresh graduates cannot speak English fluently". Statement SP6 states that "fresh graduates cannot handle extra hardwork". Statement SP7 states that 'fresh graduates are incompetent in having management responsibility".

(d) Improvement on Malaysia Higher Education System

This section investigates what can be improved on Malaysia higher education system. There are two parts mainly improvement on learning and improvement on career readiness. Respondents are given statements and using Likert scale to record their level of agreement to each statement. Their level of agreement will be interpreted using mean value calculated using SPSS.

Table 11: Improvement in Delivering Education

Improvement on Malaysian Higher Education System Delivering Education

Code	Statement	Mean	Level of Agreement	Rank
L1	The Malaysian higher education system is too academic focus and need to implement more practical subjects and approaches.	4.85	Strongly Agree	3
L2	The quality standard of lecturer needs to be increased.	4.87	Strongly Agree	2
L3	Redesign the syllabus.	4.85	Strongly Agree	3
L4	Improve teaching method.	4.85	Strongly Agree	3
L5	Introduce innovative infrastructure and technology.	4.90	Strongly Agree	1
L6	Less written assignments, more to hands on work.	4.83	Strongly Agree	4

Table 11 shows the suggestion in improvement on Malaysian Higher Education system delivering education. Statement L5 has the highest mean score of 4.90 which states "introduce innovative infrastructure and technology". Mean value of 4.90 is considered as strongly agree. Statement L2 had the second highest mean value of 4.87 which states "the quality standard of lecturer needs to be increased". Mean value of 4.87 is considered as strongly agree. There are 3 statements with equal third highest mean value of 4.85 mainly statement L1, L3, and L4. Mean value of 4.85 is considered as strongly agreed. Statement L1 states that "the Malaysian higher education system is too academic focus and need to implement more practical subjects and approaches". Statement L3 states that "redesign the syllabus". Statement L4 states that "improve teaching method. Lastly, statement L6 has the lowest mean value of 4.83 which states that "less written assignments, more to hands on work". Mean value of 4.83 is considered as strongly agreed.

Table 12: Improvement on Delivering Career Readiness

Improvement on Malaysian Higher Education System in Delivering Career Readiness

Code	Statement	Mean	Level of Agreement	Rank
CR1	The Malaysian higher education need to update and improve, and deliver the skills gap to make fresh graduate more employable.	4.88	Strongly Agree	2
CR2	Reduce mismatch between skill/talent demand and supply.	4.85	Strongly Agree	4
CR3	Increase career communication proficiency in English in students.	4.85	Strongly Agree	4
CR4	Introduce real-world projects to students.	4.89	Strongly Agree	1
CR5	The Malaysian higher education system need to offer work experience to students as an outreach to businesses in the local community.	4.89	Strongly Agree	1
CR6	Involve students with collaboration and communications with real stakeholders.	4.87	Strongly Agree	3

Table 12 shows the improvement on delivering career readiness. Statement CR4 and CR5 has the highest mean value of 4.89 which is considered strongly agreed. Statement CR4 states "introduce real-world projects to students". Statement CR5 states "the Malaysian higher education system need to offer work experience to students as an outreach to businesses in the local community". Statement CR1 has the second highest mean value of 4.88 which is considered as strongly agreed. Statement CR1 states "the Malaysian higher education need to update and improve, and deliver the skills gap to make fresh graduate more employable". Statement CR6 has the third highest mean value of 4.87 which is considered as strongly agreed. Statement CR6 states "involve students with collaboration and communications with real stakeholders". Lastly, statement CR2 and CR3 has the equal lowest mean value of 4.85 which is considered as strongly agreed. Statement CR2 states "reduce mismatch between skill/talent demand and supply". Statement CR3 states "increase career communication proficiency in English in students".

4.2 Discussions

(a) Research Objective 1: To Determine the Requirement of Fresh Graduates to be Employed as Construction Manager in Kuching, Sarawak

In terms of education, it is compulsory for fresh graduates to have construction related bachelor's degree as a requirement to become construction manager. This is supported by statement E1 having the highest mean value which interprets to highest level of agreement. Fresh graduates who has bachelor's degree other than construction related may has low chance of recruitment as construction manager as respondents are unsure or neutral on statement E3. On top of that, fresh graduates are highly encouraged to obtain extra construction related technical certificate as it may help promote fresh graduates to employers. In terms of requirement in fresh graduates' experience, employers highly emphasize on experience is more important than education to become construction manager. Employer today regard experience as a key element when selecting applicant (Gusdorf, 2017). Fresh graduates are highly advised to obtain a few years of working experience before becoming a construction manager. This is supported by the highest mean value of statement EX4. Plus, internship program during university may not be enough to impress employers as they were slightly agreed to statement EX2.

Next, in terms of requirement in fresh graduates' hard skills, fresh graduates are highly encouraged to master analytical thinking, organizational skills and budget management skills are the most agreed by respondents. Construction manager must have to manage project budget, develop task strategies, and collaborate between other involved parties (Netscher, 2014). Organizational skills are important as it helps construction manager to be well-organized and developing effective plans to achieve company's goal. Budget management is important to construction manager as it helps to ensure a project in on budget by identify the specific priorities for the project at the same time determine what is affordable. Lastly, in terms of requirement in fresh graduates' soft skills, fresh graduates are highly encouraged to have high effort in learning and hardworking as well as adopt conflict management skill. "Through hard work we gain experience; it helps us discover many new things" (Bipasha, 2018). This is supported by statement SS1, SS2, and SS7 were the most agreed by respondents. Employers are very pleased to have hardworking employee who also willing to learn new things. Conflict management is important for construction managers as they are responsible for any conflict that happens on and off site. Therefore, objective 1 has been achieved.

(b) Research Objective 2: To Study the Perception of Construction Industry on Fresh Graduates in Kuching, Sarawak

In terms of perception in fresh graduates' education, respondents have the perception that fresh graduates are reliable and can perform if they have excellent CGPA in education as well as can apply their knowledge in work because they are fresh minded. This is supported by statement EP1, EP2, EP3, and EP4 are strongly agreed by respondents. Regarding employers' perception of fresh graduates in

terms of experience, respondents did agree that fresh graduates lack required work experience. But, respondents also have good perception on fresh graduates as they did not agree that fresh graduates have no effort in gaining work experience and lying about their work experience. This is supported by statement EXP3 and EXP4 were valued as disagree in terms of mean value. Lastly, regarding employer's perception of fresh graduates in terms of skills, respondents does agree that fresh graduates lack hard skills as hard skills takes experience and time to develop. But respondents are unsure of fresh graduates' soft skills, this could be that fresh graduates do have individual soft skills that can benefit the company. Respondents were also unsure of fresh graduates' communication skills, leading skills, problem solving skills, and technical skills. Therefore, objective 2 is achieved.

(c) Research Objective 3: To Identify the Improvement of Malaysia Higher Education System in Preparing Fresh Graduates for Employment

In terms of improvement in delivering education, all statements were strongly agreed by respondents. Respondents believe that introducing innovative infrastructure and technology can help improve education delivery in increasing quality of students. The Malaysian higher education system is too academic focus and need to implement more practical subjects and approaches. Respondents strongly agree to less written assignments, more to hands on work. More hands-on work by students may help them to be more confident in their future career. Next, in terms of improvement on delivering career readiness to fresh graduates, respondents were strongly agreed to all statements. Respondents strongly agreed that introducing real-world projects to students and offering work experience to students as an outreach to businesses in the local community can help fresh graduates to be more marketable and career ready. This is supported by statement CR4 and CR5 both has the highest mean value. As for other improvements, skill gaps between students and the real-world situation must be identified to make sure fresh graduates are updated with the latest skills requirements. Every university must have programs that collaborates and communicate students with real stakeholders so that students can be familiar and able to co-operate with the real situations

5. Conclusion

In conclusion, all 3 objectives of this study has successfully been achieved. From the findings, researcher has determined that having a construction related bachelor's degree with added technical certificate can boost fresh graduates market to employer. Fresh graduates must have effort in obtaining work experiences so that employer can easily trust and recruit. Fresh graduates need to adopt analytical thinking skill, organizational skill, and budget management skill. As for soft skills, fresh graduates need to willing to learn and hardworking as well as have conflict management skills. Overall, despite of fresh graduates' lacking skills and knowledge, employers still has good perception on fresh graduates' education and effort in finding experience. In terms of improvement on Malaysian higher education system, it has been concluded that employers believe introducing innovative infrastructure and technology can help deliver better education as well as introducing real world projects and business outreach to students can help them be more marketable and ready for career

In this study, it was found out that there are two limitations that limits data collection. Firstly, cooperation from respondents to be involved are quite poor where the received response rate were only 55%. Out of 150 survey invitations that were sent to respondents, only 82 responded. Low response rate can reduce survey's accuracy. Secondly, time constraint also became a limitation for this study. There are only a few months given to collect and analyze the data. Time constraints given limits data collection period from respondents. However, this study is considered a success as all of this study's objective has been achieved and done on time.

For recommendation, this study is more focused on the employers' requirement and perception on fresh graduates in becoming construction manager. There are some parts that were not discussed in this study, hence it is considered as recommendations for future researcher to study including to investigate

construction management fresh graduates' career readiness in becoming construction manager and to identify management style used in construction company.

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