The Employability of Undergraduate Students in a Malaysian Higher Educational Institution
Kebolehpasaran Siswazah di sebuah Institusi Pendidikan Tinggi Malaysia

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Abstract

Employability is perceived to be the capability to perform oneself adequately within the labour market. However, graduate's unemployment has always been highlighted as a critical issue in Malaysia. Therefore, this study aims to explore the employability level of potential Malaysian undergraduate students from Higher Educational Institution in Malaysia. This study used quantitative research approach where a questionnaire was used for data collection. A total of 425 final year undergraduate students from Faculty of Management and Faculty of Computing and Informatics participated in this study. Seven employability attributes namely academic, conscientiousness, leadership, critical thinking, teamwork, human and social capital, work and career resilience attributes were examined. Findings indicated that majority of the respondents obtained higher scores in teamwork, work and career resilience and conscientiousness attributes. On the other hand, the respondents were less confident in academic, leadership as well as human and social capital attributes. Findings also indicated that employability among undergraduate students are significantly different by students' academic achievement and student's disciplinary area but not gender. Therefore, curriculum review is important to ensure that the subjects offered in the higher educational institute are preparing the students with employability attributes. The study outcomes contribute to policy makers and academicians to understand the quality and the readiness of the potential undergraduate student who is soon going to enter the labor market for improvement purpose.

Keyword: *Employability, attribute, higher educational institution, undergraduate student*

Introduction

Having a tertiary degree will no longer guarantee an employment in competitive labor market nowadays. Nevertheless, higher education institutions (HEIs) still play the main role in producing quality graduates to fulfill the demands of labor market. Meanwhile, the Ministry of Higher Education (MOHE) has always been concerned about the quality of graduates produced in tertiary education. University graduates' employability has been one of the critical agenda projects highlighted in National Education Action Plan since year 2007 and it is still one of the

on-going critical agenda projects in Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015).

Malaysia education aims to produce graduates who are competent to fulfill the national as well as international demand of workforce with 75 percent of the graduates getting jobs related to their fields of study within six months after they graduated. To assess this objective, Graduate Tracer Study (GTS) had been conducted since year 2006. GTS was carried out through an online interview where graduates who were eligible to attend their convocation employment rate answered the questionnaire online. The system was opened for the graduates three months before the convocation until a week after the convocation. Ministry objective of having 75 percent of the graduates getting jobs related to their fields of study within six months after they graduated has been achieved according to the latest reports from Graduate Tracer Study (MOHE, 2018a). In the latest Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015), the Ministry is aspired to increase graduate employability to greater than 80 percent by year 2025.

Hillage and Polland (1998) stated that employability is related to being able to obtain and maintain employment. Employability is perceived to be the capability to perform oneself adequately within the labour market to recognize potential by maintaining a job. Employability can be defined as the ability to get and develop a fulfilling career through continuous improvement of attributes and skills, either through the employer or self-initiative, which are applicable on different employers in the industry. It is also related to implementing the concept of life-long learning. Meanwhile, being employed based on one's qualification, functional competencies and being rewarded accordingly is also known as employability.

It was suggested that graduates' inadequate employability can be due to the failure of existing undergraduate programmes in producing graduates with skills needed for career success (de la Harpe, Radloff & Wyber, 2000). Graduates are claimed to leave universities without adequate soft skills and knowledge needed for career success (Dass, 2018; Nik Hairi, Azmi, Rusyda, Arena, & Khairani, 2012). Making the situation worse, graduate unemployment could be due to the "last-in first-out (LIFO)" practice which claims that mature adults would be the preference of labour market compare to the youth during difficult economic times (Dass, 2018). This is because the adults have more exposure and working experience. Thus, it is more challenging for graduates who enter the labour force for the first time to get employed as compared to adults with working experience. With a limited number of jobs offered, graduates will be the "last in". Dass (2018) added that the mismatch between the job requirements and youth quality is one of the main factors that lead to unemployment. There is a worldwide concern of the effectiveness of higher education institutions in preparing university students with professional skills as well as soft skills which are also necessary and demanded by employers.

Employers currently are looking forward to hire graduates with expertise in their field as well as employability skills (DEST, 2002). They are expecting graduates to possess the basic academic skills such as reading, writing, counting, speaking and listening. Inadequate skill knowledge

has been identified as one of the weaknesses in fresh graduates according to National Graduate Employability Blueprint 2012-2017 (MOHE, 2012). Lim, Teck, Ching and Chui (2016) also found that university students are lack of technical knowledge difficulties in applying knowledge. MOHE is aware of this issue. National Education Action Plan (MOHE, 2007) had developed a profile of the desired human capital with first-class mentality and included knowledge as one of the three principles. Knowledge attributes involve a student mastering and apply knowledge of core subjects, mastering languages, being passion for knowledge, knowing general knowledge, appreciating arts, culture and sports, having analysis and problem solving skills, and being aware of business and management principles and technology. Later, National Graduate Employability Blueprint 2012-2017 (MOHE, 2012) decided to have academic as one of the employability dimensions so that HEIs can continue to improve students' academic performance. The dimension is related to good academic achievement, joined co-curricular activities and being exposed to one's diciplinary area in reality. In the latest Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015), knowledge continues to a graduate attribute emphasized by HEI. This attribute is focusing on mastery of core subjects and general knowledge about the world which includes graduates mastering own filed, being able to harness, connect and apply knowledge learnt and appreciating culture, arts and Science, Technology, Engineering and Mathematics (STEM).

Beside academic, employers also expect fresh graduates to have higher order thinking skills such as reasoning, analyzing, evaluating, critical thinking, creative thinking, decision making and problem solving (DEST, 2002). Hanapi and Nordin (2014) as well reported that university students are lack of problem solving skill. Moreover, lacking of problem-solving skills (Mohamad Sattar, Md Yusof, Napsiah, Rashid and Rose Amnah, 2009; MOHE, 2012) and critical thinking skills (MOHE, 2015; Aziz, 2018) are the problems among fresh graduates which decrease their possibility of being employed. To resolve this issue, National Education Action Plan (MOHE, 2007) had placed the focus on critical thinking skills among university students. Later, National Graduate Employability Blueprint 2012-2017 (MOHE, 2012) highlighted exploration as a dimension in employability. Exploration dimension requires students to be critical and creative. Thinking skills is also an attribute emphasized in students in Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015). Students are expected to appreciate diverse views, think critically and innovatively, have problem-solving initiative and an entrepreneurial mindset.

In addition, DEST (2002) suggested that personal attributes of graduates such as responsibility, social skills, cooperative, confidence, self-management and self-directedness play a vital role in the process of employment. However, university students might not be aware of this situation whereby they might not see how their studies or classroom activities are related to the real job world. Lacking communication skills (Mohamad Sattar, et al., 2009; MOHE, 2015; Aziz, 2018) and proficiency in English language (MOHE, 2012, 2015; Aziz, 2018) are common problems among graduates which decrease their chance of employment. Hanapi and Nordin (2014) as well reported that university students are lack of communication skills while Lim, Teck, Ching and Chui (2016) found that university students are having difficulties in English

communication. Hesketh (2000) mentioned that good communication skills during hiring process would add credit to the candidate while Bennet (2002) summarized that communication skills is among the top required skills listed in job advertisements. Furthermore, Nik Hairi and his colleagues (2012) found that having good communication or interpersonal skills is expected on graduates by employers. They specify the skills to be the ability to communicate horizontally or vertically, within and outside company. Communication skills was also found to be one of the most desirable employability skills by employers (Aziz, 2018). To enhance students' communication skills, National Education Action Plan (MOHE, 2007) has placed the focus on the often-cited poor command of language and emphasized on a principle called interpersonal attributes. Interpersonal attributes included communication skills, relatedness and professional networks. National Graduate Employability Blueprint 2012-2017 (MOHE, 2012) continued the effort by enforcing the connectivity attribute among students which was similar to National Education Action Plan. In the latest Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015), the Ministry decided to set language proficiency as one of the primary graduate attributes. University students are expected to be proficient in Bahasa Melayu and English, and are encouraged to learn one additional global language.

Besides good communication or interpersonal skills, Nik Hairi and his colleagues (2012) also found that employers expect graduates to have capability in negotiation and teamwork. However, employers were unsatisfied with graduates' teamwork skills (Hesketh, 2000). Teamwork skills was found to be one of the three most desirable employability skills (Aziz, 2018). Teamwork skills was included in interpersonal attributes in National Education Action Plan (MOHE, 2007). Later, MOHE (2012) supported Mohamad and Hamzah (2009)'s Graduate Employability Model APEC where teamwork was one of the elements under the connectivity construct.Regarding the capability of graduates' self-management and self-directedness mentioned by DEST (2002), poor character, attitude or personality was identified as a factor which lead to unemployment among graduates (MOHE, 2012). To address this problem, the National Education Action Plan (MOHE, 2007) has emphasized on personal attributes of university students which includes being goal-oriented, intellectually engaging, quick in learning, entrepreneurial, ethically and morally upright, spiritually grounded, and compassionate and caring. Personal management is also one of the employability dimensions by MOHE (2012) and it aims to cultivate positive attitudes in students. Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015) suggested ethics and morality domain to be balance with knowledge and skills. One attribute under ethics and morality domain is ethics and spirituality. Students in HEIs are expected to be ethically and morally upright, spiritually grounded, compassionate and caring. Efforts would also be put in to help students appreciate sustainable development and a healthy lifestyle.

In addition to DEST's (2002) suggestion, employers are also expecting graduates to have good personal management attributes which include positive attitude, being responsible, great leadership skill and role awareness, and strong adaptability (Ministry of Higher Education, 2012; Mohamed & Hamzah, 2009). MOHE has been continuously putting in effort to enhance students' leadership skills. The third principle, interpersonal attributes in National Education

Action Plan (MOHE, 2007), personal management dimension in National Graduate Employability Blueprint 2012-2017 (MOHE, 2012) and ethics and morality domain in Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015) had included leadership skills as a focus.

Furthermore, Malaysia government has been developing human capital to sustain Malaysia's economic growth. Human capital refers to the personal variables that influence an individual's career advancement, such as age, education, training, skills, work experience and knowledge. It is related to expertise, capabilities, and tacit and explicit knowledge (Arthur, Khapova, & Wilderom, 2005). The tenth Malaysia Plan, 2011-2015 had increased enrolment across all levels, from preschool to tertiary. Malaysia Education Blueprints for all levels and the Talent Roadmap 2020 as well planned the development of Malaysia's human capital ecosystem. The Eleventh Malaysia Plan, 2016-2020 is continuing the effort to make Malaysia an advanced and inclusive nation by 2020. One of the employability dimensions in Fugate, Kinicki and Ashford's (2004) Model of Employability is human and social capital. It greatly influences one's ability to identify career opportunities. As for social capital, it refers to the size and quality of the support network (Gazier, 2001) or the relationships, either formal or informal, which a person forms in an organization network (Arthur et al., 2005). Social support through guidance, information, motivation and reassurance would enhance an individual's self-esteem during unemployment (Fugate et al., 2004).

Moreover, resilience in dealing with conflict is the skill that showed the biggest graduate skill gap (Aziz, 2018). This meant that the employers think that this skill is important among graduates, and it ranked the seventh most important skill according to the study. However, employers are not satisfied with resilience capability of the graduates they hired. Career resilience is one of the aspects in personal dispositions according to Bezuidenhout's (2011) Graduate Employability Model. Career resilience promotes adaptability, the ability to benefit from change, self-confidence, openness to new chances and contacts, self-reliance, and self-control over situations even in disappointment. In addition, Fugate and Kinicki's (2008) Dispositional Model of Employability has focused on work and career resilience as one of the dimensions. It includes being optimism at work and job opportunities, having the control towards career goal and contributing in work. Resilient individuals have optimistic attitude, positive self-evaluations (Aspinwall & Taylor, 1992), positive expectation for future and confidence in dealing with objective and affective challenges (Peterson, 2000).

In general, employers preferred males over females in labour market (Charles, 2011). The Sun Daily (2018) reported that female population faces higher unemployment rate as compared to male population. This situation may indicate that gender could be a factor considered by employers while hiring new workers. Employers preferred males over females because males have been showing higher commitment to long working hours. Based on the clocked in working hours, male workers were found to have stayed 2.6 hours longer than female employees at the workplace. In addition, females stand a higher chance of resigning and re-entering the labour force to fulfill family related needs as compared to males.

The Malaysian HEIs are using Grade Point Average (GPA) to measure students' academic achievement every semester or trimester. GPA will be accumulated throughout the completion of a programme as Cumulative Grade Point Average (CGPA) to indicate students' academic achievement. Academic achievement has been a focus in National Graduate Employability Blueprint 2012-2017 (MOHE, 2012). Academic attributes of employability include high capability in learning, reading, listening, writing, comprehending, reacting and presenting ideas effectively. These are the demands from employers towards interviewees (Nik Hairi, et al., 2012). However, Nik and colleagues added that having high Cumulative Grade Point Average (CGPA) was not the major contribution to graduates' employment. Employers only request for academic excellence when certain jobs need a lot of calculation, concentration, specific knowledge and expertise in the field, such as accounting or finance, computer and engineering industries.

According to Malaysia Higher Education Minister, graduates from certain university disciplines face more challenges in seeking jobs as compared to the graduates of other disciplinary areas, even after six months of graduation. The identified six university disciplines are business administration, applied science, human resource management, accounting, arts and social science disciplines (Anwar, 2017). Later, Leo (2018) added that fresh degree graduates in arts and social science courses faced the highest unemployment rate as compared to graduates of other courses. The high unemployment rate was followed by technical courses, science courses, information and communications technology courses, and lastly education courses. Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015) was expected to come out with programmes to help HEIs produce more holistic graduates.

To explore more about employability attributes among undergraduate student in higher educational institution, this study aims to explore the employability level of final-year undergraduate students in Malaysia. The results of this study could be used to elaborate if the potential fresh graduates are fulfilling the market's demand. For present study, employability is referred as undergraduate students' perception of attributes that they possess which enable them to obtain employment after they graduate and undergo continuous development in their career. It consists of seven dominant attributes, namely academic, conscientiousness, leadership, critical thinking, teamwork, human and social capital, work and career resilience attributes.

Present Study

The present study aims to explore the employability attributes among undergraduate students in a Malaysian HEI. Seven attributes are focused in this study namely, (i) academic, (ii) conscientiousness, (iii) leadership, (iv) critical thinking (v) teamwork, (vi) human and social capital, (vii) work and career resilience. There are two study objectives:

(1) To explore the employability attributes among Malaysian undergraduate students from Higher Educational Institution in Malaysia
(2) To compare the undergraduate students' employability from the aspect of gender, academic performance and disciplinary area

Methodology

Procedure

This study used a quantitative research design. The population for this research was all final-year undergraduate students in universities of Malaysia. There are 22, 770-degree graduates in year 2018 (MOHE, 2018b). Hence the population size for this study was 22, 000 undergraduate students pursuing their degree programmes. Multi-stage sampling was used to obtain the sample for both the pilot study and actual study. Cluster sampling was used for the first stage where states in Malaysia were clustered by their geographical location according to Department of Higher Education, Malaysia (2018). The central region of Peninsular Malaysia which included Selangor state, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya was chosen by random. For the second stage, random sampling was applied and a private HEI was chosen. Finally, two faculties were randomly selected for pilot study and the other faculties were used for the main study.

A total of 50 final-year undergraduate students in engineering and creative multimedia disciplinary areas completed the questionnaire in the pilot study. For the main study, a total of 425 valid responses were collected among Malaysian undergraduate students from Faculty of Management and Faculty of Computing and Informatics. The respondents were given the information sheets that summarized the nature of this study in order to obtain their permission for participating in the study. Only participants who agreed to commit were requested to fill in the survey form. Paper-and-pen self-administered approach was used for data collection. The questionnaire consisted of 2 sections: (A) participants' profile; (B) employability attributes. Participation of the subjects was voluntary. All information obtained was meant for research purpose and was kept confidential.

Participant Profile

The participant was randomly selected from Malaysian undergraduate students in one of HEI in central region of Malaysia. Only final-year undergraduate students were included for this research because they were about to complete their undergraduate studies and contribute in the labour market soon. Hence, it was believed that the university had prepared them to be more employable as compared to the other undergraduate students. Out of the 425 valid responses, there are 51.5 percent (n=219) male students and 48.5 percent (n=206) female students. They were all the final-year students with the mean age of 22.49 years (SD=1.61). The students had mean Cumulative Grade Point Average (CGPA) of 3.22 (SD=.44) which indicated a second lower class of honour of degree. Among the 425 students, 15.53 percent (n=66) of them were in the first class of honour of degree, 27.29 percent (n=116) of them were in the second upper class, 48.71 percent (n=207) of them were in the second lower class while the other 8.47 percent (n=36) of students were in the third class of honour of degree. Additionally, 50.4 percent (n=214) of the sample were students of Faculty of Computing and Informatics while 49.6 percent (n=211) of the respondents were students of Faculty of Management.

Instrument

The Employability Measurement (EM) used for data collection to measure undergraduate students' employability by using a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. This instrument purposely developed by researcher to fulfill the Malaysia multicultural society. The questionnaire was supported by employability theories and models such as Model of Employability (Fugate, Kinicki and Ashford, 2004); Competence-Based Employability Model (Van der Heijde & Van der Heijden, 2006); Graduate Employability Model APEC (Mohamed and Hamzah, 2009); Employability Dimensions (Coopers & Lybrand, 1998). EM consisted of 33 items and it explored 7 attributes of employability, namely academic (4 items), conscientiousness (5 items), leadership (4 items), critical thinking (4 items), teamwork (4 items), human and social capital (5 items), work and career resilience (7 items). Table 1 presented the measurement of each attribute under the Employability Measurement. The instrument showed a good internal consistency reliability with Cronbach's Alpha of .952 for the pilot study and .954 for this study. The value showed that the instrument was reliable according to Pallant (2001) recommendation of greater than .70, and the reliability level of the test was excellent based on Fisher's (2007) rating. According to Table 2, all the constructs show good level of reliability ($.80<\alpha<.90$) by comparing the Cronbach's Alpha value of all the seven attributes of employability to Fisher's (2007) rating.

Table 1

Definition of Employability Attributes

Attribute	Definition
1. Academic	Refers to an individual's performance in university which include their job knowledge on discipline of study and co-curricular activities experience
2. Conscientiousness	Refers to an individual's tendency to follow norms and rules, make and follow a plan, delay gratification and be goal-oriented, self-disciplined, task focused and organized.
3. Leadership	Refers to the way an individual interacts with people in the surrounding and builds social network that helps in career development; includes skills in communication and technology integration, and cultural competence.
4. Critical Thinking	Refers to the way an individual explores the world, including being imaginative and innovative, and having critical and creative thinking, problem solving and learning skills and career development learning skills.
5. Teamwork	Refers to an individual's communication and collaboration skills in handling the work.
6. Human and Social Capital	Human capital refers to the personal variables that influence an individual's career advancement such as knowledge while social capital refers to social support network.
7. Work and Career Resilience	Including having optimistic attitude, proactive self-regulation such as self-monitoring and self-evaluating, positive expectation for future and confidence in dealing with objective and affective challenge.

Table 2

Cronbach's Alpha of Employability Measurement

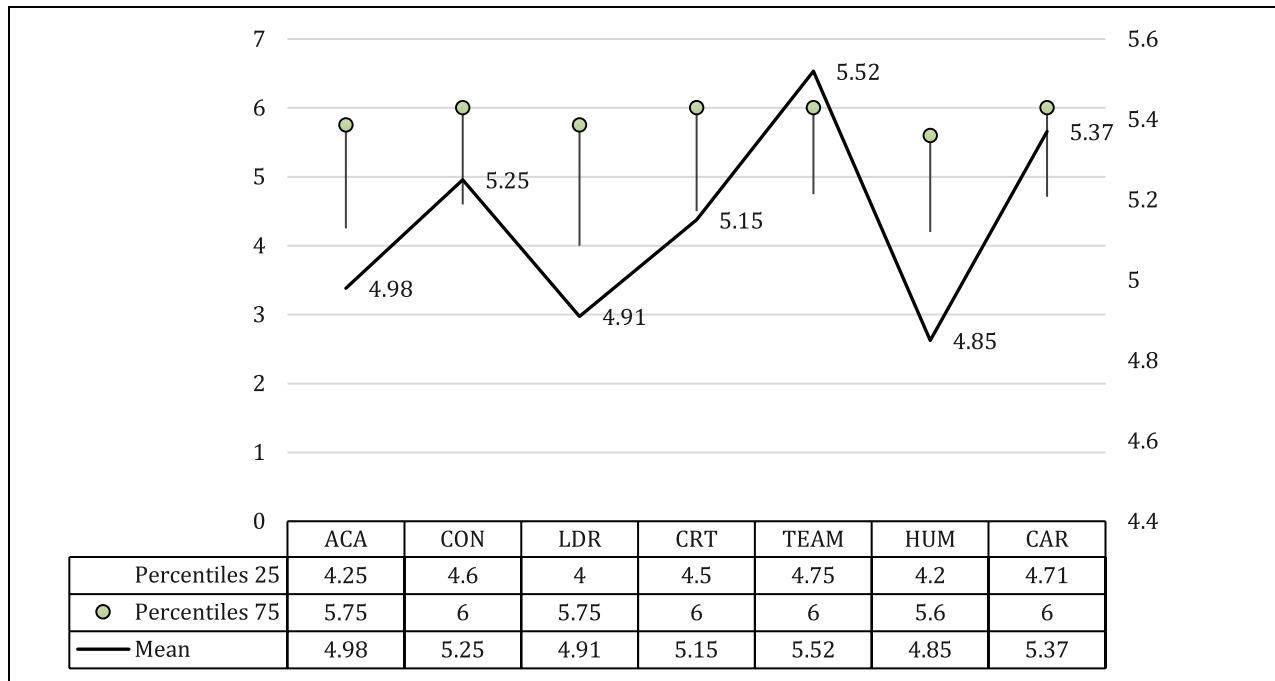| Attribute	Cronbach's Alpha (α)
1. Academic	.857
2. Conscientiousness	.840
3. Leadership	.823
4. Critical Thinking	.863
5. Teamwork	.881
6. Human and Social Capital	.840
7. Work and Career Resilience	.897

Data Analysis and Preliminary

SPSS 22.0 was used to analyse the research data. Descriptive analysis was used to report the findings of the study based on the research objectives and it involved mean, percentage, frequency and percentile. In addition, inferential analysis was also conducted, and it involved independent-samples t-test and one-way ANOVA. The overall mean and standard deviation for each dimension of employability was computed using SPSS referring to the points specific labelled from range one to seven according to the instrument's Likert scale. Normality test was done for this present study to ensure that the data collected was normally distributed. The two types of normality used for this study were skewness values and kurtosis values. According to Chua (2013), the skewness and kurtosis values for the normal distribution should be in the range of ±1.96. The skewness values and kurtosis values for each attribute are reported to be between the range of -.069 to -.468 for skewness and -.002 to .277 for kurtosis, which in the range of acceptance value. Therefore, the data collected was considered to be normally distributed.

Findings

Understand the Attributes of Employability among Malaysian Undergraduate Students from Higher Educational Institution in Malaysia

A total of 425 final-year undergraduate students (51.5 percent male and 48.5 percent female) with mean age of 22.5 years old from a HEI participated in this research. Overall, the 425 respondents have high level of employability with the mean score of 5.16 (SD = .78). This result was consistent with Bakar and Hanafi (2007)'s finding which stated that students at institute in Malaysia has quite high level of employability skills in overall. Referring to Figure 1, most respondents perceived themselves to perform the best in teamwork attribute (M = .5.52, SD = .95), followed by work and career resilience (M = 5.37, SD = .92), and conscientiousness attributes (M= 5.25, SD = 1.02). The respondents scored higher mean score in these three attributes as compared to the overall employability. Mean score for critical thinking attribute of the respondents was the same as the overall employability (M = 5.16, SD = .99). As for academic

(M = 4.98, SD = .98), leadership (M = 4.91, SD = 1.06) as well as human and social capital attributes (M = 4.85, SD = 1.06), the mean scores were lower than the overall employability.

	ACA	CON	LDR	CRT	TEAM	HUM	CAR
Percentiles 25	4.25	4.6	4	4.5	4.75	4.2	4.71
○ Percentiles 75	5.75	6	5.75	6	6	5.6	6
—— Mean	4.98	5.25	4.91	5.15	5.52	4.85	5.37

Note: ACA=academic; CON=conscientiousness; LDR=leadership; CRT=critical thinking; TEAM=teamwork; HUM=human and social capital; CAR=work and career resilience

Figure 1. Percentile and mean for the attributes of employability

The findings also explored the undergraduate student's attributes according to the item as reported in Table 3. From Table 3, it was found that overall, the respondents tend to agree with all the items in the questionnaire. More specifically, the students agreed that they have teamwork knowledge (39.1 percent) and they know how to contribute in a team (39.1 percent). They also agreed that they can work in a team to achieve a goal (38.6 percent), they are willing to accept challenge (36.9 percent) and persistent in pursuing their goals (35.5 percent). Meanwhile the students agreed that they listen to others (35.3 percent), carry their responsibilities well (35.1 percent), complete their assignments (34.8 percent), complete their tasks on time (34.4 percent) and handle problems with positive attitude (33.4 percent). These were the top ten characteristics with higher percentage.

On the other hand, 10.1 percent of students mildly disagreed, and 9.9 percent of students disagreed to volunteer themselves to be a group leader. Moreover, 9.4 percent of students mildly disagreed that they manage their time wisely while 8.2 percent of student mildly disagreed that they know the job scope of all the positions in their field of study. These findings indicated that students perceive themselves to be better in teamwork, work and career resilience and conscientiousness aspects but not in academic, leadership, critical thinking as well as

human and social capital. This may suggest that the HEI has been designing curriculum and co-curriculum which develop and enhance students' teamwork, work and career resilience and conscientiousness but lack of emphasize in the other aspects measured. Hence, HEIs are suggested to put in more effort in enhancing undergraduate students' academic, leadership, critical thinking as well as human and social capital attributes.

Compare the Undergraduate Students' Employability from the aspect of Academic Performance, Gender and Disciplinary Area

Two analysis were conducted to compare the undergraduate students' employability from the aspect of academic performance (CGPA), gender and disciplinary area (faculty): independent sample t-test (gender and courses) and one-way ANOVA (CGPA). According to Table 4, the One-Way ANOVA test results revealed a significance level of $p < 0.05$ which indicated that there is a statistically significant difference in final-year undergraduate students' self-perceived employability by academic achievement, $F(6,418) = 2.227$. In addition, there is also a significant difference in the mean of employability score for final-year undergraduate students' self-perceived employability by disciplinary area ($t(423)=-3.190$, $p<0.05$). Students in computing and informatics disciplinary area (M = 174.37; SD = 26.78) perceived themselves to be more employable as compared to students who studied management (M = 166.44; SD = 24.42). No gender difference is identified in self-perceived employability of final-year undergraduate students.

Table 3

The mean, frequency and percentage for the attributes of employability

Attribute	Items (mean)	Frequency (%)						
		Strongly Agree	Agree	Mildly agree	Neutral	Mildly disagree	Disagree	Strongly Disagree
Academic	1. Knowledge (M=4.95)	24 (5.6%)	128 (30.1%)	133 (31.3%)	99 (23.3%)	26 (6.1%)	13 (3.1%)	2 (.5%)
	2. Skills (M=4.89)	29 (6.8%)	113 (26.6%)	125 (29.4%)	119 (28.0%)	18 (4.2%)	20 (4.7%)	1 (.2%)
	3. Skills application (M=5.08)	33 (7.8%)	126 (29.6%)	145 (34.1%)	95 (22.4%)	13 (3.1%)	13 (3.1%)	0 (0%)
	4. Job Scope (M=5.02)	35 (8.2%)	128 (30.1%)	137 (32.2%)	76 (17.9%)	35 (8.2%)	12 (2.8%)	2 (.5%)
Conscientiousness	1. Punctual (M=5.09)	70 (16.5%)	111 (26.1%)	112 (26.4%)	83 (19.5%)	26 (6.1%)	14 (3.3%)	9 (2.1%)
	2. Timely task completion (M=5.35)	81 (19.1%)	146 (34.4%)	101 (23.8%)	59 (13.9%)	20 (4.7%)	13 (3.1%)	5 (1.2%)
	3. Responsible (M=5.57)	96 (22.6%)	149 (35.1%)	103 (24.2%)	62 (14.6%)	9 (2.1%)	6 (1.4%)	0 (0%)
	4. Time management (M=4.77)	43 (10.1%)	110 (25.9%)	112 (26.4%)	79 (18.6%)	40 (9.4%)	31 (7.3%)	10 (2.4%)
	5. Task completion (M=5.47)	83 (19.5%)	148 (34.8%)	105 (24.7%)	71 (16.7%)	12 (2.8%)	5 (1.2%)	1 (.2%)
Leadership	1. Leadership skills (M=5.25)	60 (14.1%)	123 (28.9%)	138 (32.5%)	78 (18.4%)	18 (4.2%)	8 (1.9%)	0 (0%)
	2. Volunteer leadership (M=4.33)	41 (9.6%)	61 (14.4%)	94 (22.1%)	120 (28.2%)	43 (10.1%)	42 (9.9%)	24 (5.6%)
	3. Goal setting (M=5.14)	50 (11.8%)	128 (30.1%)	116 (27.3%)	104 (24.5%)	17 (4.0%)	9 (2.1%)	1 (.2%)
	4. Persuasion (M=4.92)	42 (9.9%)	103 (24.2%)	132 (31.1%)	102 (24.0%)	24 (5.6%)	19 (4.5%)	3 (.7%)
Critical Thinking	1. Interpretation (M=4.95)	33 (7.8%)	113 (26.6%)	147 (34.6%)	95 (22.4%)	12 (2.8%)	17 (4.0%)	8 (1.9%)
	2. Evaluation (M=5.27)	61 (14.4%)	126 (29.6%)	131 (30.8%)	89 (20.9%)	9 (2.1%)	8 (1.9%)	1 (.2%)
	3. Differentiation (M=5.27)	59 (13.9%)	136 (32.0%)	124 (29.2%)	85 (20.0%)	9 (2.1%)	10 (2.4%)	2 (.5%)
	4. Identification (M=5.15)	43 (10.1%)	129 (30.4%)	139 (32.7%)	91 (21.4%)	10 (2.4%)	12 (2.8%)	1 (.2%)
Teamwork	1. Listening skills (M=5.48)	81 (19.1%)	150 (35.3%)	109 (25.6%)	69 (16.2%)	11 (2.6%)	5 (1.2%)	0 (0%)
	2. Teamwork knowledge (M=5.60)	86 (20.2%)	166 (39.1%)	106 (24.9%)	56 (13.2%)	6 (1.4%)	4 (.9%)	1 (.2%)
	3. Teamwork skills (M=5.54)	80 (18.8%)	164 (38.6%)	107 (25.2%)	62 (14.6%)	5 (1.2%)	5 (1.2%)	2 (.5%)
	4. Contribution (M=5.47)	69 (16.2%)	166 (39.1%)	110 (25.9%)	63 (14.8%)	9 (2.1%)	7 (1.6%)	1 (.2%)

Human and Social Capital	1. Latest technology (M=5.09)	60 (14.1%)	107 (25.2%)	123 (28.9%)	99 (23.3%)	22 (5.2%)	10 (2.4%)	4 (.9%)
	2. History of disciplinary area (M=4.62)	30 (7.0%)	87 (20.5%)	119 (28.0%)	118 (27.8%)	31 (7.3%)	32 (7.5%)	8 (1.9%)
	3. Future trend (M=4.72)	36 (8.5%)	92 (21.6%)	123 (28.9%)	111 (26.1%)	25 (5.9%)	29 (6.8%)	9 (2.1%)
	4. Consultation (M=4.84)	52 (12.2%)	97 (22.8%)	112 (26.4%)	104 (24.5%)	26 (6.1%)	25 (5.9%)	9 (2.1%)
	5. Social network (M=4.98)	54 (12.7%)	101 (23.8%)	117 (27.5%)	112 (26.4%)	20 (4.7%)	17 (4.0%)	4 (.9%)
Work and Career Resilience	1. Goal achievement (M=5.46)	81 (19.1%)	140 (32.9%)	123 (28.9%)	63 (14.8%)	9 (2.1%)	9 (2.1%)	0 (0%)
	2. Positive attitude (M=5.38)	74 (17.4%)	142 (33.4%)	116 (27.3%)	67 (15.8%)	17 (4.0%)	7 (1.6%)	2 (.5%)
	3. Persistent (M=5.37)	67 (15.8%)	151 (35.5%)	115 (27.1%)	68 (16.0%)	15 (3.5%)	7 (1.6%)	2 (.5%)
	4. Self-evaluation (M=5.25)	60 (14.1%)	128 (30.1%)	131 (30.8%)	84 (19.8%)	12 (2.8%)	7 (1.6%)	3 (.7%)
	5. Self-motivation (M=5.26)	64 (15.1%)	130 (30.6%)	132 (31.1%)	67 (15.8%)	18 (4.2%)	10 (2.4%)	4 (.9%)
	6. Performance evaluation (M=5.29)	59 (13.9%)	137 (32.2%)	127 (29.9%)	82 (19.3%)	14 (3.3%)	4 (.9%)	2 (.5%)
	7. Challenge acceptance (M=5.58)	91 (21.4%)	157 (36.9%)	110 (25.9%)	50 (11.8%)	10 (2.4%)	6 (1.4%)	1 (.2%)

Table 4

Employability with academic achievement, gender and disciplinary area

One-Way ANOVA: Academic Achievement

Source	df	SS	MS	F	p
Between Group	6	8809.961	1468.327	2.227	.040
Within Group	418	275568.288	659.254		
Total	424	284378.249			

Independent sample t-test: Gender and Disciplinary Area

Variables	n	Mean	SD	t	p
Gender					
Male	219	168.53	24.35	-1.517	.130
Female	206	172.35	27.37		
Disciplinary Area					
Management	214	166.44	24.42	-3.190	.002
Computing and Informatics	211	174.37	26.78		

Discussion and Conclusion

In the year 2012, Ministry of Education Malaysia has agreed to perceive employability attributes in four dimensions, namely academic, personal management, exploration and connectivity according to Graduate Employability Model APEC suggested by Mohamed and Hamzah (2009). Employers are expecting all these four attributes from graduates, but potential graduates nowadays are lacking these qualities. Although having high CGPA was not the major contribution to graduates' employment (Nik Hairi, et al., 2012; Winterbotham, Adams, & Kuechel, 2001), graduates were still expected to have academic attributes such as having good grades in academic achievement, experiencing co-curricular activities, being exposed to their disciplinary area, and possessing adequate job knowledge about real world working environment. These attributes are very much related to hard skills. Additionally, academic attribute of employability is supported by high capability in learning, reading, listening, writing, comprehending, reacting and presenting ideas effectively. However, the present study reported that majority of the undergraduate students in this study feel lack of readiness in knowledge and skills in their disciplinary area. These are the basic demands from employers towards interviewees. The current Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015) has included knowledge as a focus and students in HEI are expected to master core subjects and general knowledge about the world, able to harness, connect and apply knowledge learnt and appreciate culture, arts and Science, Technology, Engineering and Mathematics (STEM). HEIs are suggested to revise the curriculum from time-to-time to ensure the students feel more knowledgeable, well-prepared and confident to enter the labour market.

Employers are also expecting graduates to have good personal management attributes which include positive attitude, being responsible, great leadership skill and role awareness, and strong adaptability (Ministry of Higher Education, 2012; Mohamed & Hamzah, 2009). However, in this study, undergraduate students are reported to be lack of leadership attribute. They are less likely to volunteer themselves to be a leader even though they have the leadership skills. Malaysia Education Blueprint 2015-2025 (Higher Education) (MOHE, 2015) had included leadership skills as one of a student's primary attributes. University students are expected to be effective communicators who are emotionally intelligent and socially responsible, competitive, resilient and confident. Students' ability to work across cultures is also a focus in enhancing students' leadership skills. Educators in HEIs are encouraged to design coursework or curriculum which further develop and polish students' leadership skills.

From the findings, undergraduate students in this study perceived themselves to be a critical thinker. It is a credit for graduates to think critically (Ministry of Higher Education, 2012; Mohamed & Hamzah, 2009). This is related to traditional intellectual skills as suggested by Coopers and Lybrand (1998). Nevertheless, undergraduate students are expected to be well-prepared with connectivity attributes, such as good group dynamics and interpersonal relationships, as well as being aware of technology integration and commercial in the industry (Mohamed & Hamzah, 2009). Related to connectivity attributes, Nik Hairi and his colleagues (2012) found that having good communication or interpersonal skills, and capability in

negotiation and teamwork is expected on graduates by employers. They specify the skills to be the ability to communicate horizontally or vertically, within and outside company. Having high spirit of teamwork will contribute to a graduate's employability. Most of the respondents in this study are confident with their teamwork attributes. They also responded that they are aware of the latest technology in their field. Technology has changed the nature of work. Hence graduates are expected to be aware of the technological advances now.

It provides more convenient ways of communicating, meeting and working, especially for workers or individuals that are physically separated by long distances (Burke & Ng, 2006). A worker can use emails, web conferencing or social network sites to interact with their colleagues or clients, both formally or informally, anytime and anywhere. Moreover, technology causes the job scope to become multi-faceted and this requires graduates to possess multiple skills, such as basic computer and clerical skills, to ensure that they handle their tasks efficiently. With these positive findings, educators in HEIs are recommended to continue with teaching and learning approaches which involve higher order thinking, group interaction and technology integration.

A lot of effort has been made to identify the requirements of employee by employers. Being skillful in communicating and able to convey information to others, self-motivated, capable to work independently, and consistently offering high standards and commitment to quality service are the highly demanded qualities among Malaysian firms (Manpower, 2008) as well as the hardest attributes to be found among employees (Downe, Loke, Ho, & Taiwo, 2012).

The other most demanded characteristics of employees are passionate in ensuring client satisfaction, and being honest (Manpower, 2008). Meanwhile, being loyal and willing to be career committed to the firm as well as able to reason, think critically and solve problems are identified as the hardest attributes to be found among employees (Downe, et al., 2012). Comparing to the list of qualities above, Department of Education, Victoria, Australia (2006) also agreed that loyalty, commitment, motivation, honesty and integrity are attributes of employee a employer seeks, adding some other characteristics such as enthusiasm, reliability, personal presentation, commonsense, positive self-esteem, sense of humour, balanced attitude to work and home life, ability to deal with pressure, and adaptability. This study included most of the characteristics mentioned and most of the students gave positive responses to these items. HEIs should continue to cultivate all these good characteristics and values in the curriculum as well as co-curriculum.

Despite research findings showing that undergraduate students are lack of technical skills and soft skills, this study found that most final-year Malaysian undergraduate students perceive themselves to be moderately employable. They also perceive themselves to be well-equipped with employability attributes especially teamwork, work and career resilience, as well as conscientiousness attributes. However, they perceive themselves to be weaker in academic, leadership, and human and capital attributes. Findings also reported that self-perceived employability among final-year undergraduate students is significantly different by academic achievement and disciplinary area but not gender.

Students in computing and informatics disciplinary area perceived themselves to stand a higher chance of being employed as compared to students who studied management. This finding is consistent with Leo's (2018) report which suggested that graduates of social science field face more challenges than graduates of information and communications technology courses when it comes to employment.

Limitation and Suggestion

The present study only involved a HEI or university in the central region of Malaysia. In addition, only final-year undergraduate students were the targeted sample and the study included only 425 final-year undergraduate students. Moreover, there were only two disciplinary areas participated: Faculty of Management and Faculty of Computing and Informatics. Therefore, the results could not be generated to represent all HEIs and the undergraduate student population in Malaysia.

However, the researchers would suggest more future research to further explore the employability of undergraduate student in Malaysia. HEIs are encouraged to review their curriculum timely and plan more employability-related programmes to ensure that Malaysian undergraduate students are well-prepared to enter the challenging 21st century workplace. Furthermore, interview sessions are proposed for future research to understand the problem faced by undergraduate students and the educational institutions in improving the employability attributes among HEIs' students in Malaysia.

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