

DEVELOPMENT AND VALIDATION OF SELF-PERCEIVED EMPLOYABILITY INSTRUMENT FOR UNDERGRADUATE STUDENTS IN PRIVATE HIGHER EDUCATION INSTITUTIONS

WONG SIEW PING



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Ву

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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WONG SIEW PING

February 2020

Chair : Samsilah Roslan, PhD Faculty : Educational Studies

The unemployment issue among university graduates in Malaysia remains unresolved. Universities play a vital role in dealing with this problem as one of the main functions of tertiary education is to produce graduates with employability to join the competing job market. It is necessary to study undergraduate students' perceived employability as it portrays students' willingness to change and adapt to possible working environments. However, there is a lack of psychometrically tested students' self-perceived employability instrument in Malaysian context. This study aims to identify students' conceptualization of employability, and develop a valid and reliable instrument to measure undergraduate students' selfperceived employability. A mixed method research design and purposive sampling involving two private universities in Selangor were applied. With a qualitative approach, randomly selected final-year undergraduate students in a private university were interviewed to explore students' conceptualization of employability and their employability attributes. Employability models were reviewed and a theoretical model of five-factor was proposed. A total of 113 items were written for Self-Perceived Employability Instrument based on the literature and the qualitative findings. Through content validation, items were amended based on the experts' feedback, resulted in 112 items. A quantitative approach was conducted in another private university. Random sampling was applied and two groups of sample were determined for factor analyses. In exploratory factor analysis. 112 items were reduced to 33 items in seven factors. namely career resilience. human and social capital, teamwork, conscientiousness, critical thinking, academic, and leadership. Confirmatory factor analysis confirmed the seven-factor model. Construct validity provided more psychometric properties of the instrument. The reliability of the instrument was also proven. Self-perceived Employability Instrument is useful to reflect finalyear undergraduate students' job readiness and the effectiveness of the higher education institutions in producing graduates with high employability. However, the usage of the instrument might be limited to private university students.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

PEMBINAAN DAN PENGESAHAN INSTRUMEN KEBOLEHKERJAAN BERDASARKAN PERSEPSI KENDIRI UNTUK PELAJAR SARJANA MUDA INSTITUSI PENGAJIAN TINGGI SWASTA

Oleh

WONG SIEW PING

Februari 2020

Pengerusi : Samsilah Roslan, PhD Fakulti : Pengajian Pendidikan

Isu pengangguran di kalangan graduan di Malaysia masih belum dapat diselesaikan. Institusi pengajian tinggi memainkan peranan penting dalam menangani masalah ini memandangkan salah satu fungsi utama pendidikan tinggi adalah untuk meghasilkan graduan yang mempunyai kemampuan kebolehkerjaan untuk bersaing dalam pasaran pekerjaan. Kebolehkerjaan persepsi diri pelajar sarjana muda perlu dikaji kerana ia menggambarkan kesanggupan pelajar untuk berubah dan menyesuaikan diri dengan perselitaran kerja. Namun, ia adalah mencabar untuk mendapat instrumen kebolehkerjaan yang sahih dalam konteks Malaysia. Kajian ini bertujuan untuk mengenalpasti konsep kebolehkerjaan daripada persepsi pelajar, dan membina instrumen kebolehkerjaan persepsi diri yang sah dan boleh dipercayai untuk mengukur kebolehkerjaan pelajar sarjana muda tahun terakhir. Reka bentuk penyelidikan kaedah campuran dan persampelan bertujuan yang melibatkan dua universiti swasta di Selangor digunakan. Pendekatan kualitatif dilakukan dengan menemubual pelajar sarjana muda tahun terakhir untuk mengenalpasti konsep pelajar mengenai kebolehkerjaan dan atribut kebolehkerjaan mereka. Modelmodel kebolehkerjaan dikaji dan model teori dengan lima faktor dicadangkan. Sebanyak 113 item ditulis untuk Instrumen Kebolehkerjaan Persepsi Diri berdasarkan literatur dan dapatan kualitatif. Melalui pengesahan kandungan, item dibetulkan berdasarkan maklum balas pakar dan dikurangkan menjadi 112 item. Pendekatan kuantitatif digunakan di sebuah university swasta yang lain. Persampelan rawak diaplikasikan dan dua kumpulan sampel ditentukan untul analisis faktor. Dalam analisis faktor eksploratori, 112 item dikurangkan menjadi 33 item dalam tujuh faktor, iaitu daya kebingkasan kerja, modal insan dan sosial, kerjasama, kesungguhan, pemikiran kritis, akademik dan kepemimpinan. Analisis faktor pengesahan mengesahkan model kebolehkerjaan ini. Pengesahan konstruk melanjutkan sifat psikometrik instrument. Kebolehpercayaan instrument juga terbukti. Instrumen Kebolehkerjaan Persepsi Diri berguna untuk menunjukkan kesediaan bekerja pelajar sarjana muda tahun terakhir dan keberkesanan institusi pengajian tinggi dalam menghasilkan graduan yang berkemampuan kebolehkerjaan tinggi. Namun, penggunaan instrument tersebut mungkin terhad kepada pelajar university swasta.



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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Samsilah Roslan, PhD

Professor Faculty of Educational Studies Universiti Putra Malaysia (Chairman)

Tajularipin Sulaiman, PhD

Associate Professor Faculty of Educational Studies Universiti Putra Malaysia (Member)

Habibah Ab. Jalil, PhD

Associate Professor Faculty of Educational Studies Universiti Putra Malaysia (Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean School of Graduate Studies Universiti Putra Malaysia

Date: 08 October 2020

Declaration by graduate student

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Signature:	Date:	

Name and Matric No.: Wong Siew Ping (GS30225)

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LIST OF ABBREVIATIONS

AVE Average Variance Extracted
CFA Confirmatory Factor Analysis

CFI Comparative Fit Index

CGPA Cumulative Grade Point Average

CR Construct Reliability

EFA Exploratory Factor Analysis
GFI Goodness-of-Fit Index
KMO Kaiser-Meyer-Olkin

MOHE Ministry of Higher Education

RMSEA Root Means Square Error of Approximation

SD Standard Deviation

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter discusses the background of the study which focuses on university students' employability. This is followed by the research objectives and research questions. Moreover, significance of the study was discussed. Scope and limitations of the study were then described. Lastly, operational definition of term was given.

1.2 Background of the Study

The most significant function of higher education institutions is to establish a quality human resource that contributes in-country development. Hence, the employability of the graduates will as well represent the effectiveness of higher education institutions. MOHE had aimed 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 (Ministry of Higher Education, 2011c). To assess this objective, Graduate Tracer Study had been conducted since the year 2006 (Ministry of Higher Education, 2012a). This study 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. The study aims to reveal the status of fresh graduates in careers within six months after they graduate. According to the latest reports from Graduate Tracer Study (Ministry of Higher Education, 2018), the aim of producing 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 is already achieved.

In the latest Malaysia Education Blueprint 2015-2025 (Higher Education) (Ministry of Higher Education, 2015), the Ministry is aspired to increase graduate employability to greater than 80 percent by the year 2025. MOHE had examined the factors that influence fresh graduates' employability which contribute to their employment and it was revealed in the National Graduate Employability Blueprint 2012-2017 (Ministry of Higher Education, 2012b) that graduates' poor attributes have been identified as one of the challenges of graduates' employability.

Employers currently are more inclined to employ graduates who have employability skills and qualities in addition to expertise in their field (DEST,

2002). Employees are expected to not only possess basic academic skills such as reading, writing, counting, speaking and listening, but also higher-order thinking skills like reasoning, analyzing, evaluating, critical thinking, creative thinking, decision making and problem-solving. In addition, personal attributes of graduates such as responsibility, social skills, cooperative, confidence, self-management and self-directedness play a vital role in the process of selecting employees.

Literature has clearly shown that skills and attitude may enhance an individual's chance to obtain employment or remain in employment (Fugate, Kinicki and Ashford, 2004; van der Heijde and van der Heijden, 2006). A number of researches have agreed that employability depends on a list of attributes (Bezuidenhout, 2011; Bridgstock, 2009; Fugate, et al., 2004; Fugate and Kinicki, 2008; Hillage and Pollard, 1998; Pool and Sewell, 2007; van der Heijde and van der Heijden, 2006). These attributes include knowledge and skills (Bridgstock, 2009; Hillage and Pollard, 1998; Pool and Sewell, 2007; van der Heijde and van der Heijden, 2006), adaptability (Fugate, et al., 2004; Fugate and Kinicki, 2008), resilience (Bezuidenhout, 2011; Fugate and Kinicki, 2008; van der Heijde and van der Heijden, 2006) career management (Bridgstock, 2009; Hillage and Pollard, 1998), and social capital (Fugate, et al., 2004; van der Heijde and van der Heijden, 2006).

In an increasingly competitive workplace nowadays, the assumption of having a tertiary degree will guarantee employment is no longer applicable. The Ministry of Higher Education (MOHE) has always been very concerned about the quality of the graduates produced. Thus, university graduates' employability has been one of the critical agenda projects highlighted in National Education Action Plan since the year 2007 (Ministry of Higher Education, 2007) and it is still one of the ongoing critical agenda projects in Malaysia Education Blueprint 2015-2025 (Higher Education) (Ministry of Higher Education, 2015).

To improve university students' employability, National Education Action Plan (MOHE, 2007) has developed a profile of the desired human capital with the first-class mentality which consists of three principles: knowledge, personal, and interpersonal attributes. Knowledge attributes involve a student mastering and apply knowledge of core subjects, mastering languages, being passionate 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. As for personal attributes, it includes being goal-oriented, intellectually engaging, quick in learning, entrepreneurial, ethically and morally upright, spiritually grounded, and compassionate and caring. The third principle, interpersonal attributes is related to communication skills, relatedness, professional networks, leadership and teamwork. To ensure that university students are instilled with these three types of attributes, higher education institutions play a very vital role.

National Graduate Employability Blueprint 2012-2017 (MOHE, 2012b) suggested an employability attributes framework (EAF). There were four generic attributes suggested based on employers' perspective: academic, personality management, exploration and connectivity. Academic dimension is related to good academic achievement, joined co-curricular activities and being exposed to their field in reality while personal management includes positive attitudes and leadership skills. The exploration dimension requires students to be critical and creative while connectivity is similar to interpersonal attribute mentioned in National Education Action Plan (MOHE, 2007).

In relation to this, a number of researches were carried out in Malaysia to explore graduates' employability. The studies used self-administered questionnaires and required the graduates to measure their own employability (Ismail, 2011; Mahazan, Siti Nubailah, Ummi Salwa & Wan Mohd Fazril Azdi, 2015; Rahmat, Ayub & Buntat, 2016). Some researchers referred to this as perceived employability (Rothwell, Herbert and Rothwell, 2008). Rothwell, et al. defined perceived employability as "the perceived ability to obtain sustainable employment appropriate to one's qualification level (p.2)." Graduates access their chances of success to get a particular form of job and examine the factors that affect their perceptions. Perceived employability was consistently used and accepted as representing employability levels in the samples.

Some researchers developed their employability instruments based on past studies or literature (Mahazan, Siti Nubailah, Ummi Salwa & Wan Mohd Fazril Azdi, 2015; Rahmat, Ayub & Buntat, 2016) while others did not specify the origin of the instrument used (Gurcharan Singh & Garib Singh, 2008; Ismail, 2011). According to these instruments, the constructs of employability include interpersonal (Gurcharan Singh & Garib Singh, 2008; Ismail, 2011), leadership (Gurcharan Singh & Garib Singh, 2008; Ismail, 2011; Mahazan, et al., 2015), intrapersonal, technical (Ismail, 2011), communication, ICT, teamwork (Gurcharan Singh & Garib Singh, 2008; Mahazan, et al., 2015; Rahmat, Ayub & Buntat, 2016), critical thinking (Mahazan, et al., 2015; Rahmat, et al., 2016), problem-solving (Gurcharan Singh & Garib Singh, 2008; Rahmat, Ayub & Buntat, 2016), religiosity, entrepreneurship, ethics (Mahazan, et al., 2015), English language proficiency, adaptability, risk-taking, creativity, time management (Gurcharan Singh & Garib Singh, 2008), personal qualities, organizational and continuously learning skills (Rahmat, et al., 2016). According to the subconstructs included, these instruments were found to mostly consist of skills related to employability, rather than personal attributes and strengths.

Based on the growing body of knowledge in this area, the conceptualization of employability has been broadened to include personal attributes besides a set of skills to gain employability (Bridgstock, 2009; Clarke, 2017). Employability attributes involve psychological components such as self-exploratory, guidance seeking, proactivity and career management in forming the character of a person towards career success. Many employers will usually invest in talents who have the right characters and attitudes as these are considered as valuable asset to an organization or a company (Bridgstock, 2009). That is why it is important to

have the right psychological components imbued in an employability scale to ensure that it has good predictive capability. Moreover, a good employability scale can also be used by education institutions for early interventions towards developing the right attitude and characters that will increase their "value" in the workplace.

Literature has shown that there is scarce research on instrument development for undergraduate students' perceived employability (Mohd Yusof, Ramlee, Syed A. Malik & Seri Bunian, 2012). Most researchers adopted or adapted a scale from the past studies to examine undergraduate students' perceived employability (Azmi, Hasim & Yusoff, 2018; Bakar & Hanafi, 2007; Chow et al. 2019; Kazilan, Hamzah, Bakar, 2009; Tanius & Susah, 2013).

1.3 Problem Statement

In facing future careers, undergraduate students face many challenges and inquiries; as to whether they will fit in the local and global job markets (Tomlinson 2008). The undergraduate students are in the phase of constructing their identities and examining their career prospects, hence it is important to find out their perceived employability (Al-Harthi, 2011). However, there is little recent empirical research in Malaysia to explore how university students identify and manage their employability in higher educational institutions and workforce dynamics (Tomlinson, 2008). Most researches in Malaysia focus on the perspectives of employers (Abd Rahman, Mat Jusoh, Muhammad Serji and Salleh, 2015; Ismail, 2012), employees (Juhdi, Pa'Wan, Othman and Moksin, 2010) and graduates (Mahazan, Siti Nubailah, Ummi Salwa, Wan Mohd Fazrul Azdi, 2015; Nik Hairi, Azmi, Rusyda, Arena, & Khairani, 2012; Ismail, 2011). Students' self-perceived employability is also worth to be explored as it may influence their willingness to change and adapt to possible working environments (Hillage and Pollard, 1998). There is a need to address the limited empirical research on undergraduate students' perceived employability.

Among the limited number of past researches of Malaysian undergraduate students' employability, some employability instruments were adopted or adapted, such as the questionnaire by SCANS (1991) (Bakar & Hanafi, 2007; Kazilan, Hamzah and Bakar, 2009; Omar, Bakar and Mat Rashid, 2012), Rothwell, et al. (2008) (Chow et al., 2008) and Robinson (2006) (Ali, Long, Zainol and Mansor, 2012). There were also some employability instruments developed (Mohd Yusof, et al., 2012; Seri Bunian, et al., 2012; Tanius and Susah, 2013). All these mentioned instruments emphasize generic skills and pay little attention on students' employability attributes although one's attribution has been an arising component in the recent conceptualization of employability (Bridgstock, 2009; Clarke, 2017). Since the scales do not measure students' self-perceived employability attributes in detail, it does not provide a comprehensive pattern of attributes that assist the students and those relevant to identify and work on areas that can be improved in order to increase and enhance the overall employability.

Meanwhile, there is a lacking in the reporting of the psychometric properties of the employability instrument used or developed (Bakar & Hanafi, 2007; Kazilan, Hamzah and Bakar, 2009; Omar, Bakar and Mat Rashid, 2012; Shafie and Nayan, 2010; Tanius and Susah, 2013; Wye et al., 2012). All of the questionnaires adapted and adopted were not developed according to Malaysian context. Although the researchers adapted the questionnaire to fit in Malaysian context, the validity of the questionnaire was uncertain as it was not reported. With the lacking in the evidence of psychometric validity for all these instruments, the adequacy of the questionnaires in measuring undergraduate students' perceived employability could be impugned. In addition, some employability instruments was customized to students of certain fields of study (Bakri and Mohd Puad, 2019; Mohd Yusof, et al., 2012; Seri Bunian, et al., 2012; Tanius and Susah, 2013; Wye et al., 2012). The scales may not be suitable to measure the perceived employability of students in other disciplinary areas. Hence, there is a need to develop an employability scale that suits students regardless of their background.

Despite the proliferation of employability models, a holistic view of employability from a psychological perspective remains underdeveloped. Malaysia higher education institutions were urged to incorporate the core generic competencies listed in Employability Attributes Framework (EAF) (MOHE, 2012b) in the curriculums. The framework was developed from an employers' perspective through a competence-based approach. A competence-based approach that focuses on an individual's specific and generic skills (Van der Heijde and Van der Heijde, 2006) is one of the well-known approaches to employability in psychology literature. However, based on a prominent conceptualization of employability by Yorke (2006), achievement in skills has to be added with achievement of understandings and personal attributes to gain employment and career success. Hence, there is a need to integrate another famous approach to employability, dispositional approach, which focuses on an individual's proactive attitudes towards career (Fugate and Kinicki, 2008). In addition, comparing the framework with some well-known employability models, some attributes were left out. There was also no instrument constructed based on the framework to assess university students' employability. Therefore, this study aims to expand the EAF, and develop and validate a scale based on the integrated model of employability that can perhaps provide better insights regarding undergraduate students' perceived employability.

1.4 Research Objectives

The main objective of the research is to develop item pools for the constructs of a measure of self-perceived employability for final-year undergraduate students. The specific objectives of the research are

- 1. to determine the concept of employability based on final-year undergraduate students' perspective.
- 2. to determine the construct and subconstructs of final-year undergraduate students' self-perceived employability attributes
- 3. to develop items for Self-Perceived Employability Instrument to measure final-year undergraduate students' employability

- to determine the content validity of Self-Perceived Employability Instrument to measure final-year undergraduate students' employability
- to determine the construct validity of Self-Perceived Employability Instrument to measure final-year undergraduate students' employability
- 6. to determine the reliability of Self-Perceived Employability Instrument to measure final-year undergraduate students' employability, and
- 7. to identify final-year undergraduate students' self-perceived employability based on their demographic profile.

1.5 Research Questions

This study endeavors to answer the questions below:

- 1. What is the concept of employability from final-year undergraduate students' perspective?
- 2. What are the constructs and subconstructs of self-perceived employability attributes from final-year undergraduate students' perspective?
- 3. Is the Self-Perceived Employability Instrument for final-year undergraduate students valid?
- 4. Is the Self-Perceived Employability Instrument for final-year undergraduate students reliable?
- Based on the demographic profile, how is final-year undergraduate students' self-perceived employability?

1.6 Significance of the Study

This research is expected to contribute to education field in psychology and career development areas. The concept of employability is complex as there are many stakeholders of the educational process involved, such as the students, educators, higher educational institutions, employee, employer and the policy maker. Besides being the beneficiaries of the educational process, students as well play the role of potential employees. However, students' perception of employability tends to be overlooked even though they are the recipients of employability attributes development. Hence, examining undergraduate students' perceptions would be fruitful to contribute to the conceptualization of employability from the students' perspectives. This would help educators to have a better understanding of students and plan effective teaching and learning activities.

Moreover, this study revealed undergraduate students' perceived employability which portrayed their self-perception about how ready they are to fit in the labour market after several years of university study. This is important as perception affects one's behavior, feelings, thoughts and physical conditions (Lazarus & Folkman, 1984). When an individual thinks that he/she is employable, he/she is likely to feel secure and independent towards environmental conditions (Rothwell

& Arnold, 2007). In other words, a person who perceives himself/herself to have a high level of employability is not fear of the external factors or the change of working environment as they know that they can perform well in whatever kind of condition. This contributes to the contemporary literature on undergraduate students' subjective employability. Educators and students can be informed of the importance of subjective employability besides actual employability.

Furthermore, this study expanded EAF and produced an integrated model of perceived employability from an individual perspective, in this case, from undergraduate students' point of view. It is significant to explore whether undergraduate students as potential employees are aware of employability attributes and their perception of their future employability. The dominant approaches to employability from the psychological perspective include competence-based and dispositional approaches. Hence, in the present study, both competence-based and dispositional approaches in exploring perceived employability of undergraduate students were applied. The integrated model is more holistic by including more possible constructs in understanding undergraduate students' perceived employability in Malaysian context and it adds value to the conceptualization of employability. The integrated model may be helpful for Malaysian higher education institutions and policy makers in producing a more effective employability framework and accompanying toolkit to embed employability skills and attributes in higher education learning.

Practically, the Self-Perceived Employability Instrument developed can be used in researches that aim to measure Malaysian undergraduate students' perceived employability. The instrument developed in accordance with Malaysian context is comprehensive with different attributes of perceived employability. Such research would expand the understanding of undergraduate students' perceived employability in Malaysian context. The findings would provide a glimpse into the internal psyche that will interact with external input in influencing students' behavioural landscape. Moreover, the detailed pattern of attributes will assist undergraduate students and those relevant to identify and work on the areas to enhance the overall employability.

Further, educators or higher education institutions could use the Self-Perceived Employability Instrument for an undergraduate students' perceived employability scan. The study reported students' attributes related to employability. The results as well reflect the responsiveness of higher education institutions in their main function, which is to prepare students with expertise as well as employability skills to fit in a competitive working environment. By knowing undergraduate students' perceived employability levels in different dimensions, the universities could be more effective in the design, implementation and evaluation of teaching and learning approaches as well as employability development interventions.

1.7 Scope of Study

This study focused only on local final-year undergraduate students as the sample. This group of students is mostly not working and exposed to the working world.

The other students did not take part in this research because they still need to undergo some or a lot of courses to improve their employability. The foreign students are excluded as there might be a difference in the background and culture with Malaysian students. As for postgraduate students, they are not participating in this research because most of them are part-time students with a full-time job, or full-time students with (a) part-time job(s), which means they are more exposed to the working environment.

Furthermore, the instrument was developed based on the individual perspective of employability. This viewpoint focuses on the quality of undergraduate students, such as skills to get employed a job, and then remain in the job, and develop their potential with the job towards their career success. The instrument did not include other perspectives of employability, such as economic-social and organizational perspectives.

1.8 Limitations of Study

There were a few limitations to this study. Firstly, there were sample characteristics limitations as the sample was homogenous with only Malaysian final-year undergraduate students from private higher education institutions. Without sample diversification, the research findings would not be appropriate to be generalized (Nunnally, 1967) on undergraduate students who are not in their final year, undergraduate students in public higher education institutions and postgraduate students as well as foreign students. Secondly, this study could not conclude whether undergraduate students' perceived employability matches employers' expectations or fulfill the economic-social needs. This was because the research intended to focus merely on the individual perspective of employability, which is also the psychological perspective of employability (Vanhercke, et al., 2014).

Moreover, there were methodological limitations as this study applied non-probability sampling method, or purposive sampling. The judgmental subjective component of purposive sampling can be its disadvantage as compared to probability sampling technique, hence the representativeness of the sample would be doubted (Sharma, 2017). This limitation was addressed by choosing the students from the universities with high graduate employability rates and university ranking. The achievements of the universities indicate their success in preparing the students for the working environment, hence the students are expected to provide insights regarding employability attributes they possess. Moreover, the qualitative findings would be assessed quantitatively and compared with the existing employability models.

Besides, the study used a self-report questionnaire. The self-reporting nature of quantitative studies is claimed to increase the possibility of response bias and social desirability bias (Rosenman, Tennekoon and Hill, 2011). Response bias happens when the respondent is unsure about the instrument. Social desirability bias occurs due to the desire to project a favourable image in the survey, even

though the respondent's identity is anonymous. To address response bias, simple instructions to answer the instrument was written in the questionnaire. The researcher also explained the instructions again verbally to the respondents during data collection. The respondents were allowed to ask for clarification from the researcher when they were uncertain about any of the items as the researcher was physically available throughout the data collection process. Besides, the researcher verbally emphasized to the respondents on the anonymity of their identity and the importance of sincerity in answering the questionnaire to avoid social desirability bias. To further confirm the confidence in the self-report data, this study adopted a mixed methods approach where qualitative data was collected to strengthen the analysis of the data.

1.9 Operational Definition of Terms

For this study, some specific terms are used and they will be defined in this part.

1.9.1 Employability

Employability, is referred as "the potential to secure, maintain, and grow in a particular job at the workplace" (Ministry of Higher Education, 2012b). For present study, employability is perceived from individual perspective. Employability is initially 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. Students' employability was measured by the Self-Perceived Employability Measurement developed by the researcher. The term was then redefined based on the current research findings.

1.9.2 Attributes

According to Bezuidenhout (2011), employability is a psycho-social construct which represents "a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhance an individual's suitability employment and the likelihood of obtaining career success" (p. 78). For this study, attributes in relation to employability refers to psychological qualities such as dispositions, values, attitudes and skills.

1.9.3 Undergraduate Students

Undergraduate students are college or university students who are pursuing their first bachelor's degree and aim to obtain their degree by completing a certain amount of credit hours required for the degree (Shu, 2009). For this research, undergraduate students are referred as students who are pursuing their first bachelor's degree. However, the population and the sample of this research include only the final-year undergraduate students.

REFERENCES

- Abd Majid, M.Z., Muhammad Hussin, Muhammad Helmi, N. & Kasavan, S. (2020). The employability skills among students of public higher education institution in Malaysia. *Malaysian Journal of Society and Space*, *16*(1), 36-45.
- Abdul Hamid, M.S., Islam, R. & Abd Manaf, N. H. (2014). Malaysian graduates' employability skills enhancement: An application of the importance performance analysis. *Journal of Global Business Advancement*, 7(3), 181-197.
- Acharya, A.S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it? *Indian Journal of Medical Specialities*, 4(2), 330-333.
- Ali, F.A., Long, Y., Zainol, F.A., & Mansor, M. (2012). Students' self-perceived importance of employability skills needed: A case study in university of Sultan Zainal Abidin (UniSZA), Malaysia. 2nd International Conference on Management (2nd ICM 2012) Proceeding.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
- Ang, S., Van Dyne, L., & Koh, C.K.S. (2006). Personality correlates of the four factor model of cultural intelligence. *Group and Organization Management,* 31, 100-123.
- Arthur, M.B., Khapova, S.N. & Wilderom, C.P.M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 26, 177-202.
- Ary, D., Jacobs, L. C., Razavieh, A., Sorensen, C. (2009). *Introduction to research in education* (8thed.). Canada: Nelson Education, Ltd.
- Ashforth, B. E., & Fugate, M. (2001). Role transitions and the life-span. In B. E. Ashforth, *Role transitions in organizational life: An identity-based perspective* (pp. 225–257). Mahwah,NJ: Erlbaum.
- Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology*, 63, 989–1003.
- Azmi, I. A. G., Hashim, R. C., & Yusoff, Y. M. (2018). The employability skills of Malaysian university students. *International Journal of Modern Trends in Social Sciences*, 1(3), 01–14.
- Bakar, A.R., & Hanafi, I. (2007). Assessing employability skills of technical-vocational students in Malaysia. *Journal of Social Sciences*, *3*(4), 202-207.
- Bakry, N.S., & Mohd Puad, M.H. (2019). Hubungan di antara konsep kendiri dengan kemahiran kebolehkerjaan dalam kalangan pelajar program kejuruteraan kolej vokasional di Selangor. In S. N. Alias, M. M. Muhamad, L. Ismail, S. Y. Tam & M. M. Arshad (Eds.), *Proceedings of Graduate Research in Education Seminar (GREduc)* (pp. 360-368). Malaysia: Faculty of Educational Studies Universiti Putra Malaysia.
- Bandura, A. (1986). Social foundations of thought and action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice-Hall.
- Barlett, M.S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of the Royal Statistical Society, 16* (Series B), 296-298.

- Berlyne, D.E. (1966). Curiosity and exploration. Science, 153(3731), 25-33.
- Best, J.W. & Kahn, J. (2006). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Bezuidenhout, M. (2011). The development and evaluation of a measure of graduate employability in the context of the new world of work, from MCom dissertation, University of Pretoria, Pretoria, viewed 11th march, 2014 < http://upetd.up.ac.za/thesis/available/etd-10082011-133535/ >
- Blackwell, L.S., Trzesniewski, K.H., & Dweck, C.S. (2007). Implicit theories of intelligence predict achievement across an adolescent tradition: A longitudinal study and an intervention. *Child Development, 78*, 246-263.
- Borneo Post Online. (2014). UCSI records high graduate employability rate. Retrieved 18th February, 2019 from https://www.theborneopost.com/2014/09/13/ucsi-records-high-graduate-employability-rate/.
- Bowden, J., Hart, G., King, B., Trigwell, K., & Watts, O. (2000). *Generic capabilities of ATN University graduates*. Canberra: Australian Government Department of Education, Training and Youth Affairs.
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31-44.
- Brock, S.E., McAliney, P.J., Chun, H.M., & Sen, A. (2017). Toward more practical measurement of teamwork skills. *Journal of Workplace Learning*, 29(2), 124-133.
- Brockner, J., & Chen, Y. (1996). The moderating roles of self-esteem and self-construal in reaction a threat to the self: Evidence from the People's Republic of China and the United States. *Journal of Personality and Social Psychology*, 71, 603–615.
- Brown, F. G. (1983). *Principles of education and psychological testing*. New York: Holt, Rinehart & Winston.
- Burke, R. J., & Ng, E. (2006). The changing nature of work and organizations: implications for human resource management. *Human Resource Management Review, 16,* 86-94.
- Butler, R. (1992). What young people want to know when: Effects of mastery and ability goals on interest in different kinds of social comparison. *Journal of Personality and Social Psychology*, 62, 934-943.
- Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision processes*, *67*, 26-48.
- Cattell, R. B. (1978). The scientific use of factor analysis. New York: Plenum.
- Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative analysis. London: Sage Publications.
- Chiu, C. Y., Hong, Y. Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, 73, 19–30.
- Chow, H. J., Wong, S. C., & Lim, C. S. (2019). Examining mediating role of self-efficacy on undergraduates' perceived employability. *International Journal of Academic Research Business and Social Sciences*, *9*(6), 135–158.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, New Jersey: Erlbaum.

- Cohen, R. J., Swerdlik, M. E. & Sturman, E. D. (2013). *Psychological testing and assessment: An introduction to tests and measurement* (8th ed.). New York: McGraw-Hill.
- Collins, K., Onwuegbuzie, A., & Sutton, I. (2006). A model incorporating the rationale and purpose for conducting mixed-methods research in special education and beyond. *Learning Disabilities: A Contemporary Journal, 4*(1), 67–100.
- Combs, L. B., Cennamo, K. S., & Newbill, P. L. (2009). Developing Critical and Creative Thinkers: Toward a Conceptual Model of Creative and Critical Thinking Processes. *Educational Technology*, 49(5), 3-14.
- Comrey, A. L., & Lee, H. B. (1992). A first course in factor analysis. Hillsdale, NJ: Erlbaum.
- Costello, A.B., & Osborne, J.W. (2005). Best practices in exploratory factor analysis: Four recommendations forgetting the most from your analysis. *Practical Assessment, Research and Evaluation, 10*(7), 1-9.
- Creswell, J.W. (2018). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (6th ed.). London: Pearson Education Limited.
- Creswell, J.W., & Creswell, J.D. (2018). Research design: Qualitative, quantitative & mixed methods approaches (5th ed.). Los Angeles: SAGE.
- Cron, W. L., Slocum, J.W., Vandewalle, D., & Fu, Q. (2005). The role of goal orientation on negative emotions and goal setting when initial performance falls short of one's performance goal. *Human Performance*, 18, 55–80.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297-334.
- Cronbach, L., Rajaratnam, N., & Gleser, G. (1963). Theory of generalizability: A liberalization of reliable theory. *British Journal of Statistical Psychology*, 16(2), 137-163.
- Dasgupta, U., Mani, S., Sharma, S., Singhal, S. (2017). Can gender differences in distributional preferences explain gender gaps in competition? *WIDER Working Paper*, No. 2017/90. Helsinki: The United Nations University World Institute for Development Economics Research (UNU-WIDER).
- Dass, A. (2018, August 6). Young and jobless in Malaysia. *The Star.* Retrieved 11 January 2019 from https://www.thestar.com.my/business/business-news/2018/08/06/young-and-jobless-in-malaysia/.
- de la Harpe, B., Radloff, A., & Wyber, J. (2000). Quality and generic (professional) skills. *Quality in Higher Education, 6*(3), 231-243.
- Department of Education, Victoria, Australia. (2006). *Employment skills*. Retrieved 18 April, 2013 from http://www.eduweb.vic.gov.au/edulibrary/public/voced/program/resources/Op_awareness/employabilityskills1.pdf.
- Department of Higher Education, Malaysia. (2018a). *Direktori universiti awam*. Retrieved 7 April, 2018 from http://jpt.mohe.gov.my/index.php/ipta/institusi-pendidikan-tinggi-awam/direktori-universiti-awam.
- Department of Higher Education, Malaysia. (2018b). Statistik institusi pendidikan tinggi swasta (IPTS, termasuk kampus cawangan) sehingga 28 Februari 2018. Retrieved 7 April, 2018 from https://drive.google.com/drive/folders/18w0PWQnD7DV2W1Dspio3zHm5Up 5-AC3I
- Department of Higher Education, Malaysia. (2018c). Senarai IPTS bagi kelulusan pengambilan pelajar antarabangsa (sehingga 10 mac 2018). Retrieved 7

- April, 2018 from https://drive.google.com/drive/folders/1X2W2rwBqvx5hA4Hsn1F8uxj4kVxNG oXM.
- DEST. (2002). *Employability skills for the future*, a report by the Australian Chamer of Commerce and Industry and the Business Council of Australia for the Department of Education, Science and Training, Canberra.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual review of psychology*, (Vol. 41, pp. 417–440). Stanford, CA: Annual Reviews.
- Downe, A.G., Loke, S.P., Ho, J.S.Y. &Taiwo, A.A. (2012). Corporate talent needs and availability in Malaysian service industry. *International Journal of Business and Management, 7*(2), 224-235.
- Dweck, C. S., & Legget, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256-273.
- Elliot, A., & Church, M. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72, 218-232.
- Elliot, A., & Dweck C. S. (2005). *Handbook of Competence and Motivation*. New York: Guilford.
- Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, 70, 461-475.
- Engelhardt, C. (2017). Unemployment and personality: Are conscientiousness and agreeableness related to employability? *Discussion Paper No. 621*.
- Erez, M., (2005). Goal-Setting, Goal-Orientation. In N. Nicholson, P. Audia, & M. Pillutla (Eds). *Blackwell Encyclopedic Dictionary of Organizational Behavior*, 2nd Ed. (pp. 138-141). Oxford, UK: Blackwell.
- Facione, P. A. (2015). *Critical thinking: What it is and why it counts*. Hermosa Beach, CA: Measured Reasons LLC.
- Farrell, E., & Dweck, C. S. (1985). The role of motivational processes in transfer of learning. Unpublished manuscript.
- Field, A. (2013). Discovering statistics using IBM SPSS statistics: And sex and drugs and rock "N" roll (4th ed.). Los Angeles: Sage.
- Finn, D. (2000). From full employment to employability: A new deal for Britain's unemployed? *International Journal of Manpower*, *21*, 384-399.
- Fisher, S. L., & Ford, J. K. (1998). Differential effects of learner effort and goal orientation on two learning outcomes. *Personnel Psychology*, *51*, 397–420.
- Fisher, W. P. Jr. (2007). Rasch Measurement Transaction. *Transaction of the Rasch Measurement SIG American Education Research Association*, 21(1), p.1095.
- Florin, J., Karri, R., & Rossiter, N. (2007). Fostering entrepreneurial drive in business education: An attitudinal approach. *Journal of Management education*, 31(1), 17-42.
- Ford, J. K., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal-orientation, meta-cognitive activity, and practice strategies with learning outcomes and transfer. *Journal of Applied Psychology*, 83, 218–233.
- Forrier, A. & Sels, L. (2003). The concept employability: A complex mosaic. *International Journal of Human Resources Development and Management*, 3, 102-124.

- Fraenkel, J. R., Wallen N. E., Hyun, H. H. (2015). *How to design and evaluate research in education*. New York: Mc Graw-Hill, Inc.
- Fugate, M. & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology*, 81, 503-527.
- Fugate, M., Kinicki, A. J., & Ashford, B. E. (2004). Employability: A psycho-social construct, its dimensions applications. *Journal of Vocational Behavior, 65*, 14-38.
- Gazier, B. (1998) Employability definitions and trends, in: B. GAZIER (Ed.) *Employability: Concepts and Policies*, pp. 37–71. Berlin: European Employment Observatory.
- Gazier, B. (2001). Employability the complexity of a policy notion. In Weinert, P., Baukens, M., Bollérot, P., Pineschi-Gapènne &Walwei, U. (eds.) *Employability: From theory to practice*. New Brunswick, NJ: Transaction Publishers.
- Goleman, D. (1998). Working with Emotional Intelligence. New York: Bantam.
- Gorsuch, R. L. (1983). Factor analysis (2nd ed.). Hillsdale, NJ: Erlbaum.
- Guilford, J. P. (1954). Psychometric methods (2nd ed.). New York: McGraw-Hill.
- Gurcharan Singh, G. K., & Garib Singh, S. K. (2008). Malaysian graduates' employability skills. *UNITAR E-Journal 4*(1), 14-44.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2018). *Multivariate Data Analysis* (8th ed.). United States: Cengage.
- Hays, R. D., Morales, L. S., & Reise, S. P. (2000). Item response theory and health outcomes measurement in the 21st century. *Medical Care*, *38*(Suppl), II-28–II-42.
- Hambleton R. K. (1994). Item response theory: A broad psychometric framework for measurement advances. *Psicothema*, *6*(3), 535–556.
- Hazer, J. T., & Jacobson, J. R. (2003). Effects of screener self-monitoring on the relationships among applicant positive self-presentation, objective credentials, and employability ratings. *Journal of Management*, 29, 119–139.
- Heale, R. & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evid Based Nurs*, *18*(3), 66-67.
- Hillage, J., & Polland, E. (1998). *Employability: Developing a framework for policy analysis*. United Kingdom: Research Brief 85, Department for Education and Employment.
- Hj. Sadak, S.K., Hussin, M., & Bunawan, H. (2017). Marketability and employability among institutions of higher learning (IPT) students in Malaysia. *Research Journal of Applied Sciences*, *12*(3-4), 288-294.
- Hooley, T., Watts, A. G., Sultana, R. G. and Neary, S. (2013). The 'blueprint' framework for career management skills: A critical exploration. *British Journal of Guidance & Counselling, 41*(2), 117-131.
- Ismail, N. A. (2011). Graduates' characteristics and unemployment: A study among Malaysian graduates. *International Journal of Business and Social Science*, 2(16), 94-102. Johns, R. (2010). Likert items and scales. *Survey Question Bank: Methods Fact Sheet 1 (March 2010)*. Retrieved 15 August, 2014
 - https://www.sheffield.ac.uk/polopoly_fs/1.597637!/file/likertfactsheet.pdf.
- Kaiser, H. (1974). An index of factorial simplicity. *Pscyhometrika*, 39, 31-36.

- Kanfer, R., & Heggestad, E. D. (1997). Motivation skills and traits: A person-centered approach to work motivation. *Research in Organizational Behaviour*, *19*, 1–56.
- Kaplan, A., & Maehr, M. L. (1999). Achievement goals and student well-being. *Contemporary Educational Psychology, 24,* 330–358.
- Kaplan, R. M. and Saccuzzo, D. P. (2018). *Psychological testing: Principles, applications and issues* (9th ed.). Belmont, United States: Wadsworth Cengage Learning.
- Kaufman, S. B., & Gregoire, C. (2015). Wired to Create: Unraveling the mysteries of the creative mind. New York: Penguin Random House LLC.
- Kazilan, F., Hamzah, R., & Bakar, A.R. (2009). Employability skills among the students of technical and vocational training centers in Malaysia. *European Journal of Social Sciences*, *9*(1), 147-160.
- Kementerian Pengajian Tinggi Malaysia (KPTM). (2006). Modul Pembangunan Kemahiran Insaniah (Soft Skills) untuk Institusi Pengajian Tinggi Malaysia. Universiti Putra Malaysia. Selangor.
- Kline, P. (1979). Psychometrics and psychology. London: Acaderric Press.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*, 607-610.
- Kuder, G. F., & Richardson, M. W. (1937). The theory of the estimation of reliability. *Pscychometrika*, 2, 151-160.
- Kumar, A. (2009). Engaging students in SOARing for employability. Graduate Market Trends, Autumn 2009, 8 -10.
- Lajqi, S., & Krasniqi, B. A. (2017). Entrepreneurial growth aspirations in challenging environment: The role of institutional quality, human and social capital. *Strategic Change*, 26(4), 385-401.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer Publishing Company.
- Lees, D. (2002). Graduate employability: Literature review. Retrieved December 28 2010 from http://www.palatine.ac.uk/files/emp/1233.pdf
- Ledrut, R. (1966) Sociologie du cho mage. Paris: PUF.
- Leech, N. L., Barrett, K. C., & Morgan, G. A. (2011). IBM SPSS for intermediate statistics: Use and interpretation (4th ed.). New York: Routledge Academic.Leroux, J.A., & Lafleur, S. (1995). Employability skills: The demands of the workplace. *The Vocational Aspect of Education, 47*(2), 189-196.
- Leo, M. (2018, June 29). What You Didn't Know About Fresh Graduate Unemployment in Malaysia [Infographic] (Updated). EduAdvisor.my. Retrieved 21 May, 2019 from https://eduadvisor.my/articles/what-didnt-know-fresh-graduate-unemployment-malaysia-infographic/.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, Number 140.
- Lord, F. M. (1952). A theory of test scores. Psychometrika, Monograph 7.
- Lord, F. M., & Novick, M.R. (1968). *Statistical theories of mental test scores*. Reading, MA: Addison-Wesley.
- Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). Resilience in the modern career. *Career Development International*, 20(4), 363-383.
- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychometric Methods*, *14*(1), 84-99.
- Mahazan, A.M., Siti Nubailah, M. Y., Ummi Salwa, A.B., and Wan Mohd Fazrul Azdi, W.R. (2015). Predictors of graduate employability: Mediating roles of

- leadership, ethics, and religiosity. *International Academic Research Journal of Business and Technology* 1(2), pp. 126-136.
- Manpower. (2008). *The agenda for the new service workforce*. Kuala Lumpur: Manpower Inc.
- Malaysian Qualifications Agency. (2011). 2011 Rating System for Malaysian Higher Education Institutions (SETARA'11). Retrieved 15 April, 2013 from http://www.mqa.gov.my/portal2012/SETARA11/SETARA%20'11%20ADVER TORIAL%20BI.pdf.
- Mason, G. W., Williams, G., & Cranmer, S. (2006). Employability skills initiatives in higher education: What effects do they have on graduate labour outcomes? Retrieved 12 July, 2013 from http://niesr.ac.uk/sites/default/files/publications/061006_91251.pdf.
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. Forum: *Qualitative Social Research*, 11(3) [Article No. 8].
- McArdle, S., Waters, L., Briscoe, J.P. & Hall, D.T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, 71, 247-264.
- McCartt, A. T., & Rohrbaugh, J. (1995). Managerial openness to change and the introduction of GDSS: Explaining initial success and failure in decision conferencing. *Organization Science*, *5*,569–584.
- McQuaid, R. W., & Lindsay, C. (2005). The concept of employability. *Urban Studies*, 42, 197-219.
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, *63*(2), 81-97.
- Miller, V. D., Johnson, J. R., & Grau, J. (1994). Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research*, 22, 59–80.
- Ministry of Higher Education. (2007). *National Education Action Plan*. Retrieved 15 April, 2013 from http://planipolis.iiep.unesco.org/upload/Malaysia/Malaysia%20Higher%20edu cation%20action%20plan%202007-2010.pdf.
- Ministry of Higher Education. (2009). *Laporan kajian pengesanan graduan 2009*. Putrajaya: Kementerian Pengajian Tinggi Malaysia.
- Ministry of Higher Education. (2010). *Statistics of higher education of Malaysia 2010*. Putrajaya: Kementerian Pengajian Tinggi Malaysia.
- Ministry of Higher Education. (2011a). *Laporan kajian pengesanan graduan 2010*. Putrajaya: Kementerian Pengajian Tinggi Malaysia.
- Ministry of Higher Education. (2011b). *National Higher Education Action Plan Phase 2 (2011-2015)*. Retrieved 15 April, 2013 from http://www.mohe.gov.my/portal/en/penerbitan-kpt-selanjutnya/176-pelantindakan-pengajian-tinggi-fasa2.html.
- Ministry of Higher Education. (2011c). *Yearly Report 2011*. Retrieved 14 May, 2013 from http://www.mohe.gov.my/portal/images/utama/penerbitan/laporan_tahunan_k pt 2011.pdf.
- Ministry of Higher Education. (2012a). *Laporan Kajian Pengesanan Graduan 2011*. Putrajaya: Kementerian Pengajian Tinggi Malaysia.
- Ministry of Higher Education. (2012b). *The National Graduate Employability Blueprint 2012-2017*. Selangor: Universiti Putra Malaysia Press.

- Ministry of Higher Education. (2013). *Public Institutions of Higher Education* (*PIHE*). Retrieved 15th April, 2013 from http://www.mohe.gov.my/portal/en/institusi/ipta.html.
- Ministry of Higher Education. (2015). *Malaysia Education Blueprint 2015-2025* (*Higher Education*). Putrajaya, Malaysia: Kementerian Pendidikan Malaysia.
- Ministry of Higher Education. (2018a). Chapter 7 Graduates Tracer Study. Retrieved 11 January, 2019 from http://www.mohe.gov.my/en/download/awam/statistik/2014/175-bab-7-kajian-pengesanan-graduan/file.
- Ministry of Higher Education. (2018b). Chapter 7 Graduates Tracer Study. Retrieved 11 January, 2019 from http://www.mohe.gov.my/en/download/awam/statistik/2016-statistik/408-bab-7-kajian-pengesanan-graduan-1/file.
- Ministry of Higher Education. (2018c). Chapter 7 Graduates Tracer Study. Retrieved 11 January, 2019 from http://www.mohe.gov.my/en/download/awam/statistik/2015/223-bab-7-kajian-pengesanan-graduan-2015/file.
- Ministry of Higher Education. (2018d). Chapter 7 Graduates Tracer Study. Retrieved 11 January, 2019 from http://www.mohe.gov.my/en/download/awam/statistik/2017-3/475-statistik-pendidikan-tinggi-2017-bab-7-kajian-pengesanan-graduan/file.
- Mohamad Sattar, R. MdYusof, I., Napsiah, I, Rashid R., & Rose Amnah, A. R. (2009). Aspek kemahiran 'employability' yang dikehendaki majikan industry pembuatan masa kini. *Jurnal Pendidikan Malaysia*, 34(2), 67-69.
- Mohamed, H., & Hamzah, M. S. G. (2009). Employability profiles of graduates: The Malaysian scenario of an employer perspective. *The 5th QS-Apple Conference*, Kuala Lumpur. Retrieved 12th June, 2013 from http://www.qsapple.org/GEM5b_Hapidah.pdf.
- Mohd Yusof, H., Ramlee, M., Syed A. Malik, S.M., & Seri Bunian, M. (2012). Measurement model of employability skills using confirmatory factor analysis. *Procedia Social and Behavioral Sciences*, *56*, 348-356.
- Morse, J.M., Niehaus, L. (2009). *Mixed method design: Principles and procedures*. CA: Left Coast Press; Walnut Creek.
- Multimedia University. (2015). *Faculties*. Retrieved 10th January, 2019 from https://www.mmu.edu.my/index.php?req=36.
- Multimedia University. (2019). *Awards*. Retrieved 10th January, 2019 from https://www.mmu.edu.my/awards/.
- Nik Hairi, O., Azmi, A.M., Rusyda, H. M., Arena, C. K., & Khairani, A. A. (2012). Graduates' employability skills based on current job demand through electronic advertisement. *Asian Social Science*, 8(9), 103-110.
- Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hill.
- Omar, M. M., Bakar, A. R., & Mat Rashid, A. (2012). Employability skill acquisition among Malaysian community college students. *Journal of Social Sciences* 8(3), 472-478.
- Oaster, T. R. F. (1989). Number of alternatives per choice point and stability of Likert-type scales. *Perceptual and Motor Skills, 68*, 549-550.
- Oppenheim, A. N. (2005). Questionnaire design, interviewing and attitude measurement (New ed.). London, New York: Continuum.
- Pallant, J. (2001). SPSS Survival Manual. A step-by-step Guide to Data Analysis Using SPSS for Windows. New South Wales, Australia: Allen & Unwin.

- Panneerselvam, R. (2004). *Research methodology*. New Delhi: Parentice-Hall of India Private Limited.
- Patton, M. Q. (2014). Qualitative research and evaluation methods (4th ed.). Thousand Oaks, CA: Sage.
- Peterson, C. (2000). The future of optimism. American Psychologist, 55, 44-55.
- Pintrich, P. R. (2000a). An achievement goal theory perspective on issues in motivation terminology, theory and research. *Contemporary Educational Psychology*, 25, 92-104.
- Pintrich, P. R. (2000b). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner, (Eds.), *Handbook of self-regulation: Theory, research and applications* (pp. 451-502). San Diego, CA: Academic Press.
- Pool, L. D., Qualter, P., & Sewell, P. J. (2014). Exploring the factor structure of the CareerEDGE employability development profile. *Education and Training*, 56, 303–313.
- Pool, L. D., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49(4), 277-289.
- Poon, J., & Brownlow, M. (2014). Students' views on the incorporation of commercial awareness in real estate education. *Property Management*, 32(4), 326-351.
- Preston, C. C. & Colman, A. M. (2000). Optimal number of response categories in rating scales: Reliability validity, discriminating power, and respondent preferences. *Acta Psychologia*, 104, 1-15.
- Quek, A. H. (2005). Learning for workplace: A case study in graduate employees' generic competencies. *Journal of Workplace Learning*, 17(4), 231-242.
- Rahmat, Ayub & Buntat, (2016). Employability skills constructs as job performance predictors for Malaysian polytechnic graduates: A qualitative study. Malaysian Journal of Society and Space, 12(3), 154-167.
- Ramli, M.A., Mustapha, R., & Abd Rahman, R. (2018). Hubungan kemahiran kebolehkerjaan pelajar kolej vokasional pertanian dengan kesediaan menghadapi revolusi industry 4.0. *Politeknik & Kolej Komuniti Journal of Life Long Learning*, 2, 1-15.
- Ramsay, J. O. (1973). The effect of number of categories in rating scales on precision of estimation of scale values. *Psychometrika*, *38*, 513-533.
- Rethinasamy, S., & Chuah, K. M. (2011). The Malaysian University English Test (MUET) and its use for placement purposes: A predictive validity study. *Electronic Journal of Foreign Language Teaching*, 8(2), 234-245.
- Reynolds, C. R., & Livingston, R. B. (2012). *Mastering modern psychological testing: Theory & Methods*. New Jersey: Pearson Education, Inc.
- Roberts, B. W., Jackson, J. J., Fayard, J. V., Edmonds, G., & Meints, J. (2009). Conscientiousness. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 369-381). New York, NY, US: Guilford Press.
- Robins, R. W., & Pals, J. (2002). Implicit self-theories of ability in the academic domain: A test of Dweck's model. *Self and Identity, 1*, 313-336.
- Rosenman, R., Tennekoon, V., & Hill, L. G. (2011). Measuring bias in self-reported data. *International Journal of Behavioral amd Healthcare Research*, 2(4), 320-332.
- Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel Review, 46*(1), 23–41.

- Rothwell, A., Herbert, I., and Rothwell, F. (2008). Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behavior*, doi:10.1016/j.jvb.2007.12.001.
- Rottinghaus, P. J. (2004). Assessing career optimism and adaptability: Toward the construct validation of the Career Futures Inventory. *Retrospective Theses and Dissertations*. 1120.
- Sanders, J., & De Grip, A. (2004). Training, task flexibility and the employability of low-skilled workers. *International Journal of Manpower*, *25*(1), 73-89.
- Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *The Career Development Quarterly*, *45*(3), 247-259.
- Schermerhorn, J. (2008). *Management* (9th ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Seri Bunian, M., Saemah, R., & Mohd Yusof, H. (2012). Pengesahan instrument kemahiran generik: Analisis factor pengesahan. *Journal of Quality Measurement and Analysis*, 1-11.
- Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research*, 3(7), 749-752.
- Subramonian, H. (2008). Competencies gap between education and employability stakes. *TEAM Journal of Hospitality & Tourism*, *5*(1), 45-60.
- The Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). What work requires of schools: A SCANS report for America 2000. United States: Department of Labor.
- Thijssen, J. (2000) 'Employability in het brandpunt. Aanzet tot verheldering van een diffuus fenomeen'. *Tijdschrift HRM, Vol. 1*, 7–34.
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. Journal of *Education and Training*, *59*(4), 338-352.
- Shafie, L.A., & Nayan, S. (2010). Employability awareness among Malaysian Undergraduates. *International Journal of Business and Management, 5*(8), 119-123.
- Shu, H. (2009). Sojourners in transition: Chinese women undergraduate students at an American university. Ann Arbor, MI: ProQuest LLC.
- Singh, G. K. G., & Singh, S. K. G. (2008). Malaysian graduates' employability skills. *UniTAR e-Journal*, 4(1), 15-45.
- Sparks, K., Faragher, B., & Cooper, C. L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational and Organizational Psychology, 74*, 489-509.
- Streiner, D. L. (2003). Starting at the beginning: An introduction to coefficient alpha and internal consistency. *Journal of Personality Assessment*, 80, 99-103.
- Stone, J. (1998). *Theories of intelligence and the meaning of achievement goals.*Doctoral dissertation, New York University.
- Symonds, P. M. (1924). On the loss of reliability in ratings due to coarseness of the scale. *Journal of Experimental Psychology*, 7, 456-461.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.
- Tabernero, C., & Wood, R. E. (1999). Implicit theories versus the social construal of ability in self-regulation and performance on a complex task. *Organizational Behavior and Human Decision Processes*, 78, 104-127.
- Tanius, E. & Susah, S. (2015). Employability skill readiness among business students. *International Journal of Science and Research*, *4*(8), 511-516.

- Topuniversities. (2020). QS Graduate employability rankings. Retrieved from https://www.topuniversities.com/university-rankings/employability-rankings/2020.
- Trochim, W. M. K. (2006). Introduction to validity. *Social Research Methods*. Retrieved 15 May, 2014 from http://www.socialresearchmethods.net/kb/introval.php.
- Tsang, K. K. (2012). The use of midpoint on Likert scale: The implications for educational research. *Hong Kong Teachers Centre Journal*, *11*, 121-130.
- UCSI University. (2018, June 9). *UCSI University is Malaysia's best private university in the QS World University Rankings 2019*. Retrieved from https://www.ucsiuniversity.edu.my/ucsi-university-malaysia%E2%80%99s-best-private-university-the-qs-world-university-rankings-2019#:~:text=UCSI%20University%20is%20ranked%20as,all%20universities%20in%20the%20world.&text=Apart%20from%20UCSI%20and%20the,it%20to%20the%20top%20500.
- Vagias, W. M. (2006). Likert-type scale response anchors. Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management. Clemson University.
- Van Dam, K., Van der Heijden, B. I. J. M., & Schyns, B. (2006). Employability and employee development at work [in Dutch]. *Gegrag and Organisatie, 19*, 53-68.
- Van der Heijde, C. M., &Van der Heijden, B. I. J. M. (2000).The development and psychometric evaluation of a multi-dimensional instrument for measuring employability. Retrieved 18 April, 2013 from http://web2.msm.nl/news/articles/050707papers/0213_Van_der_Heijden.PDF
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2005). The development and psychometric evaluation of a multi-dimensional instrument of employability and the impact of aging . *International Congress Series*, 1280, 142-147.
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multi-dimentional operationalization and measurement of employability. Human Resource Management, 45, 449-476.
- VandeWalle, D., Brown, S. P., Cron, W. L., & Slocum, J. R. (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. *Journal of Applied Psychology*, *84*, 249-259.
- VandeWalle, D., Cron, W. L., & Slocum, J. W., Jr. (2001). The role of goal orientation following performance feedback. *Journal of Applied Psychology*, 86, 629–640.
- Vanhercke, D., De Cuyper, N., Peeters, E., & De Witte, H. (2014). Defining perceived employability: A psychological approach. Personnel Review, 43(4), 592-605.
- Visser, C. (2012). A growth mindset is associated with effort and thriving. Retrieved 4th July, 2013 fromhttp://solutionfocusedchange.blogspot.com/2012/10/a-growth-mindset-is-associated-with.html.
- Watts, A. G. (2006). *Career development learning and employability*. Learning and Employability Series Two. York: The Higher Education Academy.
- Weller, J., Ceschi, A., Hirsch, L., Sartori, R., & Costantini, A. (2018). Accounting for individual differences in decision-making competence: Personality and gender differences. *Frontiers in Psychology*, 9: 2258.

- Wilson, S., & McLean, R. (2011). *Research method and data analysis*. Maidenhead: Mcgraw-Hill Education.
- Winterbotham, M., Adams, L., & Kuechel, A. (2001). Evaluation of the work based learning for Adults Programme since April 2001: Qualitative interviews with ES Staff, Providers and Employers. Sheffield: DWP.
- Wye, C.K., & Lim, Y.M. (2009). Perception differential between employers and undergraduates on the importance of employability skills. *International Education Studies*, *2*(1), 95-105.
- Wye, C.K., Lim, Y.M., & Lee, T.H. (2012). *International Journal of Advances in Management and Economic, 1*(6), 149-156.
- Yoong, D., Mohd Don, Z., & Foroutan, M. (2017), "Prescribing roles in the employability of Malaysian graduates", Journal of Education and Work, Vol. 30 No. 4, pp. 432-444.
- Yorke, M. (2006). *Employability in higher education: What it is what it is not.*Learning and Employability Series One. York: The Higher Education Academy.
- Yorke, M. and Knight, P. (2007). Evidence-informed pedagogy and the enhancement of student employability. *Teaching in Higher Education*, 12(2), 157-170
- Yusof, N., Jamaluddin, Z., & Mat Lazim, N. (2013). Persepsi pelajar prasiswazah terhadap kebolehpasaran graduan dan persaingan dalam pasaran pekerjaan. *Jurnal Personalia Pelajar*, 16, 77-92.

BIODATA OF STUDENT

The student, Wong Siew Ping, was born on 22nd October 1985 in Sibu, Sarawak. She had her primary and secondary education in her hometown and furthered her studies in Selangor. She obtained a Bachelor of Education, majoring in Informational Technology, in Universiti Putra Malaysia (UPM). She then continued her study in the same university and earned a Master of Education in Educational Psychology. She is at present a student of Doctor of Philosophy in Educational Psychology in UPM. Besides being a postgraduate student, she is a lecturer in Multimedia University. She teaches social science subjects. She has passion in teaching and knowledge sharing. Other than these roles, she is a mother of one. She enjoys exploring psychological theories and applying them on her daughter. She is looking forward to graduate soon with a Doctor of Philosophy and contribute more in tertiary education.

LIST OF PUBLICATIONS

- Roslan, Samsilah and Ping, Wong Siew and Sulaiman, Tajularipin and Jalil, Habibah Ab and Siaw, Yan Li (2020) *Psychometric Properties of Graduate Employability Instrument among Malaysian Higher Education Institution Students*. Universal Journal of Educational Research, 8 (1A). pp. 164-178. ISSN 2332-3205
- Wong, Siew Ping, Roslan, Samsilah, Siaw, Yan Li, Sulaiman, Tajularipin and Jalil, Habibah Ab. The Employability of Undergraduate Students in a Malaysian Higher Educational Institution. **Educational Leader (PEMIMPIN PENDIDIKAN)**, [S.I.], v. 6, p. 165-182, apr. 2018. ISSN 2601-0011.