Conceptual Study on the Enhancement of Employability among Undergraduates in Work-based Learning Settings

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Abstract
The ubiquity of employability issues is becoming crucial in human resource development perspectives worldwide. The 2u2i program is designed to fulfill the needs of the graduate by offering flexible education in higher education as well as employability enhancement. This paper proposes a conceptual model of factors that could enhance employability in work-based learning (WBL) settings. The conceptual model is based on an extensive review of past research on WBL and employability using the CareerEDGE model. To conduct the literature review, we used keywords such as employability, work-based learning, employability skills, and internship. From the literature reviewed, six elements of employability have been identified which are career development learning, experience, degree subject knowledge, emotional intelligence, generic skills, and social support. The framework offers a number of propositions, which explain the proposed model of employability. The paper has adopted 5 elements from the CareerEDGE model and 1 element has been derived from literature review added to the model. Further research is suggested to test and validate the framework to provide empirical evidence. Upon model validation, the paper could offer practical interventions for HRD practitioners and academicians.

Keywords: Employability, Undergraduates, Work-Based Learning, Higher Education, Careeredge Model.

Introduction
This study focuses on factors that could enhance employability among undergraduates in work-based learning settings. The ubiquity of employability issues is becoming crucial in human resource development perspectives worldwide. Similar to other developing countries, education in Malaysia has shifted from policy concerns to the economy and employment (Grapragasem, Krishnan, & Mansor, 2014; Organisation for Economic Co-operation and Development (OECD), 2013; Azman & Ahmad, 2006). Realizing that higher education institutions (HEI) play the key role in producing a knowledgeable and skilled workforce, the government has designed and introduced the Malaysia Education Blueprint 2015-2025 (Higher Education) as part of the country’s strategic plan towards becoming a developed nation. In the
blueprint, the government has outlined 10 shifts in Malaysia’s higher education system. Below are the shifts to address key performance issues in the system:

- **Shift 1** - producing holistic, entrepreneurial and balanced graduates
- **Shift 2** - talent excellence
- **Shift 3** - focusing on a nation of life-long learners
- **Shift 4** - focusing on quality TVET graduates
- **Shift 5** - financial sustainability
- **Shift 6** - empowered governance
- **Shift 7** - innovation ecosystem
- **Shift 8** - global prominence
- **Shift 9** - globalized online learning
- **Shift 10** - transformed HEI delivery

Shift 1 is focusing on producing holistic, entrepreneurial and balanced graduates due to a mismatch in supply and demand of graduates (Ministry of Higher Education, 2015). It is hoped that the graduates will have relevant skills and knowledge, attitudes, morals and ethics to contribute to the community by enhancing learning experiences, integrated CGPA and creating opportunities to acquire entrepreneurial skills.

Recently, the Malaysian government designed the 2u2i program (introduced in September 2016) which is an acronym for two (2) years in university and two (2) years in industry. It is a work-based learning (WBL) program i.e. internship that is expected to enhance students’ experience through experiential learning based on program courses in which the actual experience can be provided by the respective industry upon graduation. Previously, an internship program included experiential learning for only 1 semester (4-8 months duration). The timeframe may not engage a student with adequate exposure to real experiences in the career world. With the longer timeframe (4 semesters) offered in the 2u2i program, students may learn more during the course. Therefore, the 2u2i program is designed to fulfill the needs of the graduate by offering flexible education in higher education as well as employability enhancement. This objective was prioritised in order to explore and determine the significant factors contributing to employability. There are a few selected universities with selected courses that will adopt the 2u2i program as pioneers, such as:

1. Universiti Putra Malaysia (BSc. in Plantation Management)
2. Universiti Teknologi Malaysia (BSc. in Computer Science – Data Engineering)
3. Universiti Malaysia Kelantan (Bac. of Entrepreneurship with Honours)
4. Universiti Kebangsaan Malaysia (BSc. (Hon) in Food Science with Business Administration)
5. Universiti Malaysia Terengganu (Bac. of Accountancy)
6. Universiti Sultan Zainal Abidin (BSc. (Hon) in Animal Production and Health)
First of all, it is imperative to understand what ‘employability’ means? Unfortunately, some people, or even researchers, might confuse the term ‘employability’ (Williams, Dodd, Steele, & Randall, 2015; Nilsson & Ellström, 2012) with ‘entrepreneurship’ (Dacre Pool & Sewell, 2007) and ‘employment’ (Yorke, 2004). In layman’s terms, employability simply means getting hired by employers. Employability is conceptualized as having a set of skills, knowledge and personal attributes that makes a person choose and secure occupations which allow them to be satisfied and successful (Dacre Pool & Sewell, 2007). Hence, this study adopts this concept of employability in the context of undergraduates for further understanding.

The greater part of the literature on employability focuses on employability skills (Tran, 2016; Feldmann, 2015; Jackson, 2015; Rateau, Broyles, Fowler, & Robinson, 2011; Pillai, 2009; Dacre Pool & Sewell, 2007; Knight & Yorke, 2003), self-efficacy (Jain & Jain, 2013; Nauta, Vianen, Heijden, Dam, & Willemesen, 2009; Brown, Cober, Kane, Levy, & Shalhoop, 2006) and emotional intelligence (Finch, Peacock, Lazdowski, & Hwang, 2015; Dacre Pool & Qualter, 2012; Kirk, Schutte, & Hine, 2008). However, there are studies on employers’ perspective that still highlighting the same issues of skills deficiencies and personal attributes among graduates (Zwane, du Plessis, & Slabbert, 2014; Cai, 2013; Kleeman, 2011; Wickramasinghe & Perera, 2010). Previous studies have proposed a few employability models towards defining the concept of employability. However, there is limited empirical research to test the available models (Dacre Pool, Qualter, & Sewell, 2014). We found that not all models conceptualize broad perspectives on employability. For example, Hillage & Pollard (1998) corroborate that personal circumstances and external factors depend on employability skills development; but the model is only limited to job readiness or preparedness to work. Therefore, Dacre Pool & Sewell (2007) had infused some of the theme into their model.

HEI are being placed under pressure as they play the key role in producing graduates with necessary skills and knowledge. The intention of designing the new curriculum by putting employability into university programs or courses is expected to enhance employability (Yorke, 2004). There has been significant growth in the engagement of higher education with human resource development, especially in the area of WBL (Lester & Costley, 2010). Work-based learning (WBL); also referred to as experiential learning, work-related learning, cooperative education and work-integrated learning, intertwines practical work experience with classroom learning (Jackson, 2016a). It is used to describe a program courses that brings together HEI and industries, to create new learning opportunities in a work environment (Garnett, 2016; Boud, Solomon & Symes, 2001). According to Smith et al., 2009, WBL not only for developing skills but it can be as transformative pedagogy that can build personal development as well as learning experience. How could this WBL program potentially be a medium to enhance employability among undergraduates? Therefore, the objective of this study is to determine the extent to which HEI use the WBL program (setting) to equip undergraduates with necessary skills, knowledge and personal attributes that will enhance employability in the context of human resource development among Malaysian undergraduates. The result of this conceptual analysis could serve as a guidance for other researchers to explore antecedents that contribute to
employability in WBL settings. It is hoped that this article contributes to the body of knowledge in the context of employability.

**In Context of Employability**

Due to misunderstandings of the term employability, scholars have made an attempt to clarify the concept and come up with range of meanings (Boden & Nedeva, 2010; Dacre Pool & Sewell, 2007; McQuaid & Lindsay, 2005; Knight & Yorke, 2003; McGrath, 2000). Hillage & Pollard (1998) has developed a broad concept of employability in which it refers to individuals having a capability to gain initial employment, maintain employment and obtain new employment if required. They concurred that employability depends on the knowledge, skills and aptitudes they possess, the way they use those assets and present them to employers and the context of personal circumstances and labour market environment within which they seek work (Moreau & Leathwood, 2006; Hillage & Pollard, 1998). Based on the Hillage & Pollard (1998) definition, it clearly relates employability with employment focusing on ‘readiness to work’. However, Hillage & Pollard (1998) realised that employability assets depend on personal circumstances and external factors; a context which is not offered by all the models.

Knight & Yorke (2003) have refined the definition and advocated that employability is “...a set of achievements - skills, understandings and personal attributes - that make individuals more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy”. They also emphasized that employability ‘does not rest when the first graduate job is achieved, but needs ‘to be constantly renewed to be sustainable’ (Watts, 2006). To further understand this concept, Knight and Yorke (2004) have proposed a model called USEM, an acronym for Understanding, Skills, Efficacy belief and Metacognition, which links to employability and good learning. The USEM model is widely used in scholarly work on employability especially related to curriculum design.

- **Understanding (U)** - Appropriate subject knowledge, apprehension and applicability
- **Skills (S)** - Subject-specific and generic abilities
- **Efficacy beliefs (E)** - Awareness and understanding of one’s self and one’s abilities
- **Metacognition (M)** - The ability to reflect on and regulate one’s own learning and behaviour

(Source: Knight and Yorke (2004))

One of the earliest models of employability was developed by Law & Watts (1977) known as DOTS. It refers to:

- **Decision learning** - skills which students can acquire that will help them to make decisions in a manner more satisfactory to themselves.
- **Opportunity awareness** – The help which is given to students to experience, explore and gain some understanding.
• Transition learning - helping them to acquire the skills and information they need to cope with the new situations that they will encounter.

• Self-awareness – Students will have the opportunity to develop their personality as a unique individual. It requires the students to reflect upon their personal strength and potential. This element will answer the questions of what kind of satisfactions are sought, what kind of interests are developing, what personal aspirations are being formulated, and what is most valued in one’s experience of the world?

(Source: Law & Watts, 2003)

The DOTS model is simple to understand for individuals dealing with the complexity of career development learning, but some scholars have argued that the simplicity of the model has delayed the adoption of innovative theory and the development of creative new frameworks (McCash, 2006). Dacre Pool & Sewell (2007) have argued that the model has shortcomings when it is applied beyond the career education to broader concepts of employability (Dacre Pool & Sewell, 2007).

Realizing that there is a loophole in employability concepts, Dacre Pool & Sewell (2007) have articulated a new definition of employability. They suggested that,

... Employability as set of skills, knowledge, understanding and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful... (Dacre Pool & Sewell, 2007)

The definition has been used as a starting point for them to develop a new theoretical and practical framework for employability named CareerEDGE. This model represents 5 elements which are: (1) Career development learning, (2) Experience of work and life, (3) Degree subject knowledge, understanding and skills, (4) Generic skills, and (5) Emotional intelligence, on the lower level of the model. They assumed that the lower level refers to opportunities for students to access and develop everything need (Dacre Pool & Sewell, 2007). The second level is Reflection and Evaluation; in which students reflect and evaluate what they have acquired in the lower level. The third level refers to self-efficacy, self-confidence and self-esteem. Below is the metaphoric diagram of the CareerEDGE model conceived by Dacre Pool & Sewell (2007) as the key to employability:
Students’ Employability in WBL Settings

In the context of the 2u2i program, the student will be given 2 years in university to learn about the subjects’ theory and understanding the subject discipline, which will then be applied during their 2 year enrolment in WBL and after graduation. Based on the CareerEDGE and DOTS models, the student should understand the purpose of learning (self-awareness) by observing, direct ‘hands-on’ and transferring of knowledge onto the work environment (Jackson, 2016a; Feldmann & Sprafke, 2015; Ross & Elechi, 2002).

1) Career Development Learning – It is essential for undergraduates to receive some education in career development learning (Dacre Pool & Sewell, 2007). Understanding the demands of the labour market will also be an added advantage to the undergraduates in order for them to stay competitive (Tomlinson, 2012). According to Hillage & Pollard (1998), presentation of the graduates plays an important role in securing occupations. Without knowing what to expect in the career world, students would not have ideas on how to create a CV, how to search for jobs, etc. Career guidance can be obtained through services and activities that can assist individuals (in any situation throughout their lives) to choose education, training and occupation and to manage their careers (Smith et al., 2009). In the historical study conducted by Law & Watts (1977), career development learning helps individuals develop their self-awareness, opportunity awareness and career management skills. In the context of WBL, the students could learn about the career world, and the process of learning...
represents the development of necessary skills (Smith et al., 2009; Mcmahon, Patton, & Tatham, 2002). Therefore, we also find that these elements are important and propose the following:

P1: Career development learning has significant contribution in enhancing employability.

2) **Experience** – Working or employment experience is crucial for employers. Employers value the work experience and how students are able to apply their study onto the career world, develop their confidence as well as enhance their employability skills and attributes (David J. Finch; Melanie Peacock; Nadege Levallet; William Foster, 2016; Jackson, 2016a, 2016b; Cole & Tibby, 2013). In a study by Cranmer (2006), she concluded that there is no evidence that skills development in HEI contribute to student employability, but structured work experience in employment-based training showed positive effects to skills development (Cranmer, 2006). Qenani, MacDougall, & Sexton (2014) reported that a student’s internship experience resulted in an increase of self-confidence with respect to their employability. Employer perception is vital in order to get employment (Trede & McEwen, 2015; Fern, 2012; Pillai, 2009) and WBL programs provide employers an opportunity to engage in pre-recruitment and to evaluate the interns without having pressures of the hiring process and market competition (Smith et al., 2009). During WBL, not only does working experience matter but life experiences are also taken into consideration. According to Dacre pool & Sewell (2007), there is a need for students to be given opportunities and guidance through life and career related experiences as part of the course program, voluntary work or part-time work, to enhance their employability. Therefore, we propose that:

P2: Work and life experiences have positive contributions towards employability.

3) **Degree Subject Knowledge, understanding and skills** - The real motivation for students to pursue their studies in HEI is due to the subject-specific courses or specific discipline, to gain academic qualification and finally, to get a good job. Academic qualification is the first preference that employers will consider when judging the job applicant (Dacre Pool & Sewell, 2007). During WBL, the application of subject knowledge onto practicum or internship will benefit students in enhancing their technical skill. Past studies have concurred that skills acquisition related to internship is significant (Jackling & Natoli, 2015; Silva et al., 2015; Galloway, Marks, & Chillas, 2014; Renganathan, Karim, & Li, 2012; Watts, 2006; Moreland & ESECT, 2005). In a study of Boahin & Hofman (2013), the finding obtained a significant relationship between subject disciplines and internship with acquisition of employability skills. According to Jackson (2016),

... Students use the experience to make sense of their intended profession through observing, questioning and interacting with seasoned professionals. Appraising and reflecting on their experience, through learning activities and assessment, are
highlighted as important elements of placement design and critical for students to
question and make sense of what they observed and learned... (Jackson, 2016a)

According to Dacre Pool & Sewell (2007), there are some cases that the graduates are
being hired based solely on their academic qualification or direct relevance to their
degree. However, although subject-specific knowledge and skills are extremely
important, the graduates’ perception of satisfaction and success in securing occupation
should not be neglected. We somewhat agree with the above statement. However,
choosing the right course program may enhance their competitiveness in their chosen
occupation. Therefore, we propose:
P3: Degree subject knowledge has significant contribution in enhancing employability.

4) **Generic skills** – The term generic skills represents the skills which can support the study
of any field and are transferable to a range of contexts in higher education and the
workplace (Bennett et al. 1999). In a study of Harvey (2005), employers prefer the
graduates with well-developed generic skills in certain areas. Activities such as learning
about one’s self, planning on how to accomplish a given learning task, monitoring self
comprehension and evaluating metacognitive in nature are significant in helping student
to enhance their generic skills (Moreland & ESECT, 2005). From the employer’s
perspective, it is favourable if the applicant can demonstrate practical skills and
commercial understanding gained during WBL or work placement (Mason, Williams, &
Cranmer, 2009). Helyer (2015) has advocated that the “light-bulb moment” does not
regularly occur and is hard to be realized during the learning process due to its ongoing
nature (especially in the workplace). This gradual learning process actually develops
students’ skills but it is being neglected and reflection is a good practice for personal
development (Helyer, 2015). Finch et al. (2015) also argued that reflecting upon
everyday experiences to enhance knowledge is a practice done by majority of the
people to establish generic skills. The most common skills deficiency in the Malaysian
context is communication, especially language barriers (Grapragasem et al., 2014; Pillai,
Khan, Ibrahim, & Raphael, 2012). Dacre Pool & Sewell (2007) have listed out several
generic skills such as willingness to learn, creativity, adaptability, communication,
teamwork, etc. Therefore, we propose:
P4: Generic skills have positive contribution in enhancement of employability.

5) **Emotional intelligence** – Emotional intelligence was popularized and has been defined
by Goleman (1998) as,

…the capacity to recognize our own feelings and those of others for motivating
ourselves and for managing emotions well in ourselves and relationships...

Managing emotions is one aspect that should not be undervalued as it represents the
maturity of an individual in handling situations (Paadi, 2014; Huq & Gilbert, 2013).
During work placement, the undergraduate may encounter various emotions and the employer views these competencies as personal qualities (Knight & Yorke, 2003). Furthermore, being able to handle anger, conflict and negative emotions will positively affect healthy well-being (Finch et al., 2015). The development of emotional intelligence starts from home during early childhood with parents’ encouragement (Tucker et al., 2000). Having a good foundation of managing emotion, the student will hone their emotional intelligence and be perpetually motivated to enhance skills as preparation for career world. Emotional intelligence is not only applicable to students for employment but also for life in shaping one’s understanding and actions (Paadi, 2014; Armour, 2012). Efficacy beliefs in one’s emotional functioning capabilities, legitimate self-confidence, life interest, and career orientation have recently been shown to be important in relation to a graduate’s employability (Dacre Pool & Qualter, 2012; Moreland & ESECT, 2005). Therefore, we propose:
P5: Emotional intelligence has significant contribution in enhancing employability.

6) **Social support** - Social support was not included as an element to the CareerEDGE model. However, we believe that this factor contributes to the employability of the students. According to Fabio & Kenny (2015), social support represents a contextual factor that is associated with progress in education and career development. Supportive relationships between peer, family and teacher will offer benefits for all parties i.e. students and employer as well as HEI. Normally, students rely on adults and friends for guidance in choosing their college as well as career (Fabio & Kenny, 2015). In a study of Jones, Torezani, & Luca (2012), support from HEI and peer support in the learning environment play important roles in guiding students to gain valuable skills and encourage them to realize their potential. WBL offers a collaboration between three parties i.e. student, HEI and employer. For a student, the ‘quality’ of the company or institution in liaising between HEI (especially academic staff) appears crucial in supervising them (Wilton, 2014). During the placement, work assignments will be given to the interns and an assertion to provide the resources needed. Here, social support from peer and supervisor could enlarge perceived impact on work assignment outcome (Feldmann, 2015). In a study of Jackson (2015), she argues that unsupportive co-worker caused the students took longer time to fit in and understanding the workplace practices. Hillage and Pollard (1998) have concurred that external factors such as social support (relationship with others) contribute to enhancing their employability asset. Therefore, we propose:
P6: Social support has significant contribution in enhancing employability.
Proposed Conceptual Framework
Based on the above discussion, we have developed a conceptual framework as depicted in Figure 2.

![Conceptual Framework Diagram]

Figure 2: The authors’ proposed conceptual framework

Concluding Remarks and HRD implication
Employability is a continuous issue and is likely to be revisited over many times. It is a lifelong process and it applies to all students whatever their situation, course or mode of study (Jackson, 2015; Cole & Tibby, 2013). The labour market is changing over time due to the emergence of technologies, economic crises and industries’ demand. Traditionally, knowledge and skills development produced through HEI and industry have tended to be flexible and open-ended (Tomlinson, 2012). The adoption of employability into curriculum design and/or implementation has become an educational objective for HEI to stay competitive and an intention to enhance students’ knowledge and skills (Jackson, 2016a; Yorke, 2004). However, the relevancy of the curriculum should be discussed among academicians and industry in order
to fit the demand of the recent labour market. The collaboration between HEI and industry could provide deeper understanding between supply and demand of labour market marginalization (Feldmann, 2016; Rajibussalam, Sahama, & Pillay, 2016; Tran, 2016; McQuaid & Lindsay, 2005; Moreland & ESECT, 2005). By understanding the value of students’ employability and adaptability to the labour demand, redesigning HEI curriculum would become fruitful with the support of all stakeholders.

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