Employability Skills and Career Development Self-Efficacy as Indicators for Workforce Success

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Abstract: The development of graduates' employability skills has become one of crucial agenda in today's educational milieu. One if the strategies is my adding the soft skills components in teaching and learning delivery across curriculum. This agenda includes Technical and Vocational and Education and Training (TVET) academic program which now has become the forefront agenda to spearhead the local skilled workforce for the nation. The research employed a quantitative descriptive and cross-sectional study among vocational college students from diploma programs across field of studies to combat numerous issues related to graduates' preparedness on entering workforce, particularly on lack of employability skills. The employability skills section of the instrument was adapted from Grant, Malloy, and Murphy (2009) and Sarigoz (2012). The CD-SEI (Career Development Self-Efficacy Inventory) was replicated from Yuen et al. (2005) as dependent variable. Findings related to employability skills were indicated at a moderate level. The self-efficacy for career development was moderately high. Students' self-efficacy for career development was not significantly influenced by the demographic variables of gender or academic success. Additionally, the results indicated that vocational college students have higher cognitive skills which significantly predicted the career development self-efficacy. The results of this study can be capitalized as guidelines to carry out a curriculum that is more industrially driven, contributing the exposure to industrial experiences as self-efficacy and employability skills values before venturing job market.

Keywords: Employability skill, career development, self-efficacy, career readiness, career development

1.   Introduction

With the economic downturns and challenging industrial demands, the employment market has fluctuated. The employment intake has become furrier over the last few decades in graduates who obtain a higher academic level would not get their job immediately after finishing their school or colleges (Belle et al., 2022). The Malaysian unemployment rate fluctuated between 3.5 per cent and 3.2 per cent in 2016, where a significant increase was shown in the third quarter of the year (Department of Statistics Malaysia, 2016). World Bank estimated that RM1b was spent on active labour market programs in 2013 (Staff, 2016). The World Bank, for instance, also highlighted that Malaysian firms consistently report difficulties in sourcing talent as one of their top business challenges. Among the skills gaps listed are basic numeracy and literacy skills, as well as 'soft' skills such as analytical thinking, communication, and problem-solving abilities. Although efforts have been made to address the shortage in employable skills through graduate employability programs, a survey by Talent Corp/World Bank showed that fewer than 30% of firms found graduate employability programs useful (Staff, 2016).

The development of employability skills has called upon necessary action from educational stakeholders due to the swiftness of the industrial landscape. Because technological innovation and globalization have shaped the workforce to be more volatile, demanding relevant skills is the way forward to survive in the workforce (Rojewski & Hill, 2017; Soemitra, 2023). It is indeed producing a challenge to the job seeker in coping with the industrial demands related to skills, however, the tough competition among corporate organizations has forced them to seek excellent employees among the best candidates in the job market (Horváth, & Szabó, 2019). Therefore, besides relevant technical skills to perform the job, organizations are looking for candidates who are well-developed in employability skills.

A considerable amount of literature has been published on defining employability skills. These studies produced numerous terminologies to describe the employability skills required in the workplace. Transferable skills (O'Neil, Allred & Baker, 1997), career skills (Smith & Krüger, 2011), and work readiness skills (Zinser, 2003) were some of the examples to describe the value of non-technical skills. Additionally, Omar, Bakar, and Rashid (2012) proposed employability skills as transferable skills which consistently exercised in the workforce, infusing knowledge and training disposition. Employability skills may also be inherited from values and personality development through the nurturing process and educational journey (Cheong et al., 2018; Cottrell, 2021). Leadership, teamwork, negotiation, communication, and creative and critical thinking are employability skills relevant to the workforce environment (McGunagle & Zizka, 2020).

On top of that, the employability skills listed are not new but rather an expansion to the challenging working environment. The fulfilment of these skills ensures graduates' capacity to work effectively and meet the requirements and standards required by employers. In comparison, soft-skill or practical skills are frequently listed in specific ways, whereas employability skills comprehensively cover myriad skills that are relevant to the existing and overarching workforce trends in that workforce environment. The relevant skills meeting up with the Industrial Revolution are required to perform tasks efficiently and ultimately contribute to organizational growth.

The employability skills set is referred to Manyika et al. (2017) as higher cognitive skills, social and emotional skills, and technological skills. The research extends to delve deeper view and conception of the extending global economy. The economic perspectives have influenced the development of the human capital of a nation related to skills empowerment and social living. Since economic factors become the premise in determining the growth of a nation, human capital becomes a great asset for a country. Suppose educational stakeholders from the ground level to higher education providers advocate efforts in developing employability skills. As a result, the supply of graduates will be given better opportunities and solicit contributions to the industries and job providers.

It appears to from the studies that numerous definitions were introduced to defining employability skills, it is undeniable that employability skills are a relevant and critical issue among graduates. This research attempts to explore the role of higher cognitive skills, social and emotional skills, and technological skills development of the students and determine the influence of career development self-efficacy on the studied variables. The effect of career development of self-efficacy becomes the predeterminant factor of the employability skills development in this study. The nature of the vocational programs which emphasize practical and technical skills progress is indeed important, however, lack of training on employability skills will expose graduates to unemployment and limit other relevant job opportunities suited to their academic qualifications.

The workforce environment has changed vastly. Since graduates are all set to enter the workforce with academic qualifications, the impact of the pandemic COVID-19 and Industrial Revolution 4.0 has contributed to the most challenging situations for job seekers (Othman et al., 2021; Shahriar et al., 2021). To cope with such challenges, this research delves into determining the role of employability skills in advocating for graduates' job opportunities. To cope with employers' demands, self-efficacy focusing on career development was added as a variable for the study. The relationship among studied variables was explored to determine the overarching issue related to graduates' employability. This study focuses on four research objectives: (a) to determine the level of career development self-efficacy and employability skills among vocational college students, (b) to investigate the relationship between students' demographic profiles and selected variables, and (c) to determine the relationship between career development self-efficacy and employability skills, and (d) to identify the predictors of employability skills that influence the career development self-efficacy of the vocational college students.

2.   Background of the Study

Graduates' skills for employment have been studied over decades because it is essentially important in job placement. Employability is a must-have skill required before entering employment. Graduates are struggling to find full-time employment due to market demands and economic changes while the supply of graduates is enormous and employers are criticizing the absence of employability skills among graduates (Jollands et al., 2015). Employers are seeking graduates who are thoroughly ready for jobs and well-prepared for the calamity of economic recession. There have been several studies in the literature reporting graduate deficiencies in employability skills when entering their first year job placement (see Ausman, 2008; Carnevale & Smith, 2013; Klimplová, 2012). This section presents a review of these studies and provides empirical findings related to graduates' skills from the perspectives of educational stakeholders and industries.

The need for employability skills in industries is crucial. To have prolific industrial experiences will galvanize students' exposure to real-life employment settings. Employability skills, by definition, are non-technical skills concomitantly beyond academic content where it is a skill that should be trained entirely through academic experiences (Overtoom, 2000). Non-technical skills refer to a set of values that nurture students' employability based on their life experiences and learning processes. The accumulation of skills such as communicating, working effectively in group settings, and maintaining work discipline (Lerman, 2013), encourage individual growth to become skilled employees with the employability traits demanded by employers.

The skills refer to "overarching expression for the knowledge, skills, and dispositions seen as prerequisites for success in the global workplace of the future" (Germaine et al., 2016, p. 19) has become the premise to get into employment. They listed four criteria as an indication towards graduates' competency of skills: (a) critical thinking and problem-solving skills, which include reasoning effectively, using systems thinking, making sound judgments and decisions, and solving problems, (b) communication skills, which include effective oral, written and non-verbal communication in a variety of forms, contexts, and technologies; listening to decipher meaning and intention; and communicating in diverse environments, (c) collaboration skills, which include working effectively and respectfully with diverse teams, exercising flexibility and willingness to accomplish a shared goal, and assuming shared responsibility for collaborative work while valuing individual contributions of team members, (d) creativity and innovation skills, which include thinking that creates new and worthwhile ideas; and elaborating, refining, analysing, and evaluating ideas to improve and maximize efforts.

Industries development is unpredictable. Layoffs and low employment intake contributed to unemployment among job seekers. Employees are demanded to learn future job skills and be prepared for the current job scope due to the rapidly changing employment landscape (Ausman, 2008). For example, a study by Baird (2011) found the importance of having cross-functional skills as ground-breaking to get hired by industries. He listed basic communication, problem solving, leadership, self-management, time management, teamwork, and adaptability as necessary skills before entering employment. These skills were primarily demanded by business leaders, educators, researchers, and administrators in today's job market (Baird, 2011).

In the 21st-century employment market, degrees and diplomas have been overshadowed by skills credentials (Ausman, 2008; Hartman et al., 2005; Klimplová, 2012).). Educational institutions have been squandered by industries to produce skills-driven graduates. Often, employers and educational providers are disconnected from having meaningful conversations and consensus on what defines a quality graduate. Therefore, it is rhetoric to mention the quality of graduates created by the educational institutions was at the same point, employers lack participation in meaningful dialogue with educational stakeholders in fulfilling what possession of skills they require.

More recent studies have confirmed that the knowledge economy, skills profound be the pillar of current employment settings (Baird, 2011; Carnevale & Smith, 2013; Carnevale, Smith, & Strohl, 2013; Hartman et al., 2005) and the development of human capital (Klimplová, 2010). In 2013, Carnevale, Smith, and Strohl published a report in which they described the precedent of job readiness skills for individuals' occupations. They agreed upon three criteria: (a) work values (individual preferences for work outcomes), and (b) work interests (individual preferences for work environment). Interests include artistic, conventional, enterprising, investigative, realistic, and social, and (c) personal qualities (characteristics that affect how well someone does a job). Some are agreeableness, conscientiousness, emotionality, and extroversion.

Based on the stated criteria, it is interesting to note that personality has become the major element of the study. The values of personality outcome contribute to intrinsic factors that assist graduates to survive in the current job market. Besides the extrinsic which is more physical; by visualizing positive attitudes and charismatic traits, employers will determine whether graduates are ready for the selected job although they have had minimal working experience. Therefore, career development self-efficacy contributes a significant impact on understanding the values of job seekers.

The significant factor influencing an individual's career development is self-efficacy (Bandura, 1977; Betz & Hackett, 1983; Betz & Luzon, 1996; Lapan, Gysbers, Multon, & Pike, 1997). Hence, career development self-efficacy can be linked as a way of individual's career behaviour is performed based on their belief in their abilities (Anderson & Betz, 2001). However, research done by Mansor and Tan (2009) found that most undergraduate students have a low level of career readiness that will affect their career development process. Suppose all candidates for the entry-level worker should be able to demonstrate appropriate skills to obtain a job and stay competitive to guarantee growth in their career.

In most cases, the available occupations on the job market are always contradicted by subject matters and the academic qualifications of the graduates (Rahim, 2011). This could be due to a lack of information and sometimes also due to the constant changes arising from economic development. Graduates must plan for their future and career aspirations are a crucial part of their lives regardless of the state of the economy. They must focus on a particular career as otherwise they will not be motivated to work hard in school to attain their future goals. Theorists of career development such as Super, Ginzberg, and Gottfredson propose that career development progresses through specific stages from childhood through adolescence to later stages (Baruch, 2006). According to Phipps (1995), Super (1980), and Trice et al (1995), although teenagers aspire for a certain career, their career aspirations are believed to be unstable and change many times before adulthood.

Therefore, students nowadays must be equipped with proper knowledge about a future career before entering the world of work to be able to perform excellent performances expected by the employer and to be able to fit into the purposes of the occupation. One way to help students make correct career choices is to expose them to Technical and Vocational Education and Training (TVET) because through TVET students are exposed to varied career options (Moodie, 2002). To smooth student's exploration of careers, Norain Jaafar, Zakaria, and Rasheid (2018) proposed the employability skills taught in Vocational College (VC) should be paralleled with the student's course enrolment so that they are very competent to perform many tasks in the real work situation. Janet, Kimberly, and Ken (2010) highlighted TVET curriculum should include 21st-century skills as well as career and technical education to groom students for their future careers.

Meanwhile, most of the past research identified a relationship between the skill set needed in the workplace with a specific process in career development such as career choice and career adaptability but not career development. Norain Jaafar, Zakaria, and Rasheid, (2018) found employability skills have a strong and positive correlation with career choice. Meanwhile, Makki et al (2015) analyse past literature and come out with a research framework to relate work readiness skills, career self-efficacy, and career exploration among engineering students. Another study by de Guzman and Choi (2013) observed career adaptability had a significant correlation with employability skills in Papua New Guinea. Besides that, limited study has been conducted to find the prediction on career development self-efficacy by aspect in employability skills among vocational college students. Therefore, this research is going to identify the prediction between employability skills and career development self-efficacy among students in vocational colleges to fill the gap left in both practical and literature. The USEM Model developed by Knight and Yorke (2004) was utilized to guide the choice of the variables for the study. USEM is an acronym for understanding, skills, efficacy beliefs and meta-cognition derived from the theory of learning to determine of the underpinning criteria for "holistic" and "functional" employees. Knight and Yorke (2004) suggest four main areas of competence that constitute employability skills: Understanding (mastery of the subject matter of a field), skilful practices (so-called generic skill in addition to subject-specific skills), efficacy beliefs (trust that one can make some impact on situations and events), and meta-cognition (awareness of one's own competence as well as limitations combined with an insight in how to learn more).

Graduate Prospects (2013) explored efficacy beliefs as one of the important traits to ensure graduates' success in the job market. They claimed that the self-image and self-confidence of the graduates will allow them to cope with failure and unforeseen challenges during their tenure. The graduates with strong efficacy beliefs would regard failure as an opportunity to learn and to do better in future. On the other hand, graduates with low self-efficacy contemplate failure as an irremediable result of their own lack of intelligence. The findings of the research also pointed out the role of metacognitive abilities as an essential component of graduates' employability. Meta-cognition is defined as the knowledge of an individual's own thinking processes and strategies, and the ability to consciously reflect and act on that knowledge to modify those processes and strategies (Graduate Prospects, 2013). Equally important, the graduates' self-image and self-confidence allow them to cope with unforeseen challenges in the workforce. Each of the criteria developed for the model comprises of set of values and elements to warrant graduates' employability. On another note, Yorke (2004) regards employability as a multi-faceted characteristic of the individual. It is, after all, the individual whose suitability for a post is appraised and defined as a set of achievements of skills, understanding and personal attributes that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.
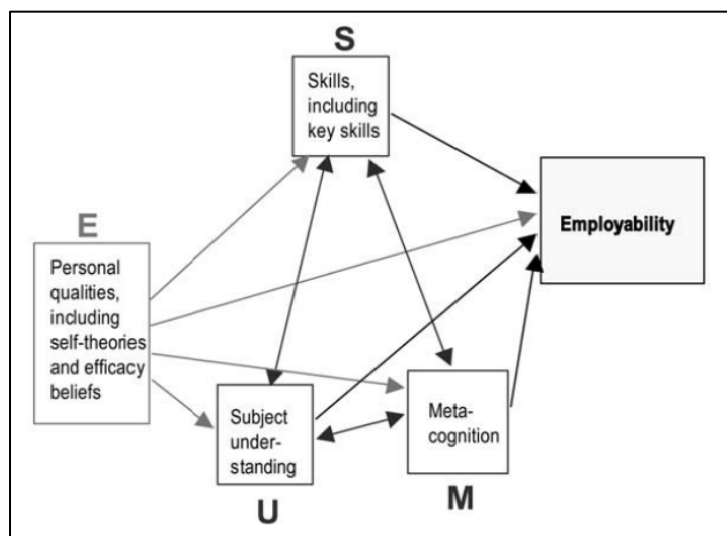
Fig.1 - USEM Model. Adapted from "Learning, curriculum and employability in higher education" by P. Knight, and M. Yorke, 2004, *London: Routledge Falmer*

3. Methodology

This research employed descriptive and correlational studies within the quantitative design in investigating a possible predictive factor of students' employability skills on career development self-efficacy. The population of the study involved 70 students enrolled in the Diploma of Database Management System and Web Application program in two vocational colleges in Selangor, Malaysia. A purposive sampling technique was utilized, and the sample size was set at 59. The employability skills section was divided into three constructs: (a) higher cognitive skill, (b) social and emotional skill, and (c) technological skill. A set of questionnaires was developed as the main data source. Part A comprised the demographic profiles of the respondents. Part B consisted of employability skills items based on higher cognitive skills which were adapted from Sarigoz (2012), Social-Emotional Competence Questionnaire (SECQ) by Zhou and Ee (2012), and technological skills from Grant, Malloy, and Murphy (2009). Part C contains questions related to the student's career development self-efficacy adapted from Yuen et al. (2005). The Career Development Self -efficacy Inventory (CD-SEI) comprised six constructs: (a)career planning, (b) gender issues in career, (c) vocational training selection, (d) job hunt preparation, (e) job hunting, and (f) career goals setting. The total number of questions in this questionnaire is 48 questions. The questionnaire was initially piloted to 20 respondents and the results of the Alpha reliability coefficient for all sections were higher than $\alpha = 0.8$. To ensure the content validity and reliability of the instrument, one expert reviewer within the area of expertise related to TVET education was appointed to check the coherency and consistency of the constructs. The content validity check is important to align with the research objective. The instrument was first translated to Malay language and each item was validated to ensure consistency with the meaning of the English version.

4. Results

4.1 Demographic Profiles

The response rate was indicated at 100%. Three out of the 59 completed questionnaires were excluded in data analysis due to outliers (n=56) 95%. Most of the respondents were from Kuala Selangor Vocational College with a frequency of 36 students (64.3%) followed by students at Shah Alam Vocational College with 20 students (35.7%). Thirty-nine respondents (69.6%) were male whereas 17 (30.4%) were female students. Students' academic performance at the vocational colleges was measured using a Cumulative Grade Point Average (CGPA). The researchers divided the students' academic performance into three scales: 3.50-3.99, 3.00-.3.49, 2.50-2.99. The majority of the respondents (55.4%) scored at 3.50 to 3.99, 35.7 % of the students obtained CGPA between 3.0 and 3.49, and 8.9 % of the respondents secured between 2.50 to 2.99.

Table 1 - Demographic profiling of the respondent

Demographic factors	Frequency	Percentage (%)
Vocational college		
Kuala Selangor	36	64.3
Shah Alam	20	35.7
Gender		
Male	39	69.6
Female	17	30.4
Academic Achievement (CGPA)		
3.50-3.99	31	55.4
3.00-3.49	20	35.7
2.50- 2.99	5	8.9

Note**:** n = 56

4.2 Descriptive Analysis

Research Question 1: What is the level of employability skills among students in vocational colleges?

Table 2 presents the means and standard deviations for all aspects of employability skills. The results reported that the employability skills of the students were at a moderate level with (M = 3.79, SD = 0.34). The constructs that comprise employability skills show a moderate level. The social and emotional skills mean score of 3.87 and standard deviation of 0.45 which it is the highest aspect compared to the other aspects of employability skills. In contrast, high cognitive skills which have a mean score of 3.67 and standard deviation of 0.39 is the least aspect of employability skills.

Table 2 - The mean and standard deviation of students' employability skills

Aspects of Employability skills	M	SD
Social & Emotional Skills	3.87	0.45
Technological Skill	3.75	0.41
High Cognitive Skill	3.67	0.39

Overall M = 3.79, SD = 0.34

Research Question 2: What is the level of career development self-efficacy among students in vocational colleges?

The analysis presented in Table 3 displays the means and standard deviations for factors related to career development self-efficacy among students. It appears from the table the total mean of career development self-efficacy set at a moderate level with (M= 3.83, SD= 0.33). The lowest means score for factors of career development self-efficacy is vocational training selection (M = 3.71, SD = 0.37) while the highest means score for factors of career development self-efficacy is career planning (M = 3.88, SD = 0.42).

Table 3 - The mean and standard deviation of students' career development self- efficacy

Factors of Career Development Self-Efficacy	M	SD
Career Planning	3.88	0.42
Gender Issues in career	3.86	0.45
Job Hunting	3.84	0.39
Job Hunt Preparation	3.84	0.49
Career Goal Setting	3.83	0.42
Vocational Training Selection	3.71	0.37

Overall M = 3.83, SD = 0.33

4.3 Inferential Analysis

Certain assumptions need to be fulfilled before inferential analysis can be carried out to make sure the results are accurate. The data must be normal. Therefore, skewness and kurtosis tests have been performed to check the normality of the data (West *et al*., 1995). The results of skewness for employability skills were 0.42 and career development self-efficacy was 0.35. The data can be concluded as normal because it does not exceed the cut point for skewness which is positive or negative 2. Results for kurtosis normal for both variables also normal which do not exceed the cut point (positive or negative 7). Second, the homogeneity of the variances must be the same across the groups. Third, data must be in linear forms. In brief, the data in this research have fulfilled all the assumptions, thus it is valid to perform the inferential analysis using this data.

Research Question 3: What is the mean difference between gender in career development self-efficacy among students in vocational colleges?

An independent-sample t-test was conducted to test the difference in career development self-efficacy scores between male and female students. As depicted in Table 4 there was no significant difference in career development self-efficacy between males and females, $t(54) = 0.53$, $p = 0.60$. The mean stress score for male students (M = 3.85, SD = 0.27) was slightly higher than the mean for female students (M = 3.78, SD = 0.44). The effect (d) was 0.15, indicating a trivial effect.

Table 4 - Independent sample t-test

Variable	n	M	SD	t	*p*
Gender					
Male	39	3.85	0.27	0.53	0.60
Female	17	3.78	0.44		

*significant at p<0.05

Research Question 4: What is the mean difference between academic achievement in career development self-efficacy among students in vocational colleges?

One-way Analysis of Variance (ANOVA) as in Table 5 was conducted to explore the differences in students' career development self-efficacy scores based on academic achievement. Subjects were divided into three groups according to their CGPA: Group 1(CGPA of 3.50 to 3.99), Group 2 (CGPA of 3.00 to 3.49), and Group 3 (CGPA of 2.00 to 2.99). There was no significant difference in students' career development-self-efficacy as a function of academic achievement [F (56) = 0.84, p = 0. 44].

Table 5 - Result of analysis of variance (ANOVA)

	N	M	SD	f	p
CGPA				0.84	0.44
3.50 - 3.99	31	3.86	0.35		
3.00- 3.49	20	3.82	0.31		
2.00 - 2.99	5	3.66	0.20		

Research Question 5: What is the relationship between employability skills and career development self-efficacy among students in vocational colleges?

Table 6 reports Pearson Product Moment Correlation results to determine the relationship between working skills and career development self-efficacy in vocational college students. There was a strong, positive correlation between working skills and career development self-efficacy, which was statistically significant (r = 0.54, p= = 0.00).

Table 6 - Pearson product moment correlation matrix between employability skills and career development self-efficacy

		Employability Skills (ES)	Career Development Self-Efficacy (CDSE)
ES	Pearson Correlation	1	.54**
	Sig. (2-tailed)		.00
	n	56	56
CDSE	Pearson Correlation	.54**	1
	Sig. (2-tailed)	.00	
	n	56	56

**. Correlation is significant at the 0.01 level (2-tailed).

Research Question 6: What are aspects of employability skills predict career development self-efficacy among students in vocational colleges?

A Multiple Linear Regression was calculated to predict career development self-efficacy based on technological skills (TS), higher cognitive skills (HCS), and social & emotional skills (SES), and the results as displayed in Table 7. A significant regression equation was found [F (3, 52) = 7.60, p < 0.05], with an R^2 of 0.31. Student-predicted career development self-efficacy is equal to 1.70 + 0.24 (Higher cognitive skills) where higher cognitive skill is measured as a score. Student's career development self-efficacy increased by 0.24 units for each unit of higher cognitive skill score. Therefore, the result showed only one variable explained 31.0 % of the total variance in career development self-efficacy with higher cognitive skill was the predictor (ß = 0.29). The linear regression equation is as stated:

$$Y= .29 (HCS)+.25(SES) + .18 (TS)+1.70 \qquad (1)$$

Table 7 - Multiple linear regression correlation matrix between aspects in employability skills and career development self-efficacy

Variables	B	Std. Error	B
(Constant)	1.70	.45	
HCS	.24	.11	.29
SES	.18	.10	.25
TS	.14	.10	.18

Note: R^2 = 0.31 (p < 0.05)

5.   Discussion

The discussion leads to understanding the role of demographic profiles of the respondents related to employability skills development and career development self-efficacy. For example, there is a rationale to enclose gender in a career as one of the constructs in career development self-efficacy. The findings also revealed that the majority of the respondents possessed a high level of academic achievement. According to the Social Cognitive Career theory by Lent et al (1994), students who have higher cognitive ability and fully developed skill set will perform better at school and work. From this finding, the researcher can draw an inference the respondents that involved in the study, to some extent, have developed employability skills. The findings of the study also corroborated the USEM model as portrayed by Knight and Yorke (2004). The constructs of the variables which were theorized earlier were understanding, skills, efficacy beliefs and meta-cognition. These elements were found significantly predict to graduates' employability. The terminology of the developed constructs was modified to social and emotional skills, technological skills, and high cognitive skills to update the trend of employers' choice of employment prospects.

Descriptive and inferential analysis was involved in analyzing the data. The pertinent facts of the extent of mastery level of employability skill were the primal intention of the study. The prominent constructs of employability skills were calculated based on the total mean. As a result, it has conclusively shown that the level of employability skills was moderate. The finding is consistent with the findings of the past study by Omar, Bakar, and Rashid (2012), which reported that Malaysian community college students were also found at a moderate level. Bakar, Mustapha, and Nasir (2013) further investigated employability skills at other skill-based educational institutions located in Malaysia and also depicted a similar result. Drawing the patterns for the past ten years, it is fair to argue that the employability skills developmental process has become stagnant. It is caused by the inability of instructors to impose employability skills traits in their teaching courses. Certainly, instructors have put much effort into accrediting the program due to overarching needs to accomplish the quality of the TVET-based programs. Surprisingly, gender and students' academic performance did not contribute to any of the studied variables which triggered a follow-up study on that note.

The social and emotional skill (SES) have the highest mean score compared to technological skill (TS), and high cognitive skill (HSH). The finding corroborated with Steinberg (2014) who claims that students may be nurtured to this skill since they are young and inherit values on the growing and nurturing process from parents. When the SES trait is internally developed and formed in family processes, it implicates times which become the premise in developing such skill. The technological skills and higher cognitive skills, on the contrary, commonly be introduced through formal and informal education in a school and university environment. Hence, they start to develop these skills when they begin their formal education. Although the student was not sanguine about the development of SES, it is equally important to TS and HSH. The SES demonstrates the intrinsic values that incontrovertible testimony commemorate excellent candidates for the workforce. On a different note, Kamaruzaman et. al. (2019) espoused that human skills and intelligence are equally important to compete in a world full of automation and technology.

In the past years, higher cognitive skills have attracted much attention as one of the most required skills by industries. World Economic Forum (2016), for example, listed higher cognitive skills as the top three skills needed in the workforce by the year 2020. The industry reaches upon consensus to find candidates among those who have high cognitive abilities to convene the challenging market and fluctuate economic stability. Employees demand the employees for tangible decision-making skills and adroit employees to address organizational issues as well as propose fast solutions to challenging workforce issues. The World Economic Forum (2017) become the forefront agency to identify the demanding skills which again considered cognitive abilities as a vital skill to overcome struggles among graduates to adjust themselves in the workforce.

Notably, the career development self-efficacy level was moderate. This finding indicates the students have had belief in self-planning to start their career and deal with the issue in a career that will affect their career growth in the future, however, their beliefs were fragile (Yuen *et. al.*, 2005). Less exposure to industrial settings, absence of an internship program, and lack of work experience produce reasons for low self-esteem and belief about career development. Exposure and experiences in the working world play a key role in preparing young people for the adult world (Chandler, Ringsell, & Lindop, 2007) and will help students decide on a future career (Onstenk & Blokhuis, 2007).

The construct in career development self-efficacy that had the highest mean score was career planning. Career planning in vocational education is important to prepare the students to become competent workforce (Chetana & Mohapatra, 2017). Career planning includes aspects in which students know how to balance their interests with a future career means students are aware of what type of jobs can benefit them in the future. In contrast, the construct in career development self-efficacy that had the lowest mean score was vocational training selection. This finding could be translated as the students do not believe in themselves in upgrading their skill set in the future (Yuen *et. al.*, 2005). The selection of vocational training could be related to upgrading skills or mastering new skills which are important since the landscape of work always changes due to the advancement in technology (World Economic Forum, 2016). High belief in their ability to select appropriate vocational training can promise them a bright future to stay competitive in this new set of work.

This research found that there was a positive and strong correlation between employability skills and career development self-efficacy. Jaafar, Zakaria, and Rasheid (2018) show that the relationship between employability skills and career choice is high which proves that the variables have a strong correlation. There is limited literature that relates

employability skills with career self-efficacy since determining the relationship between both variables is the gap that the researcher filled in the literature. From the findings, the students who master employability skills will be more confident in preparing them for a career in the future and they tend to have a positive outcome in career growth. In addition, people who possess high career self-efficacy are more ambitious towards their career life always speak with a positive attitude and can visualize success for themselves (Bandura, 1993).

Those who have low career self-efficacy cannot make career-related decisions, which usually leads to a delay in career decision-making (Betz, 1992). Career self-efficacy beliefs promote favourable career outcome expectations and encourage career choice actions or career behaviours and career exploration which is necessary to make progress towards career goals (Lent *et. al*., 1994). Niles and Sowa (1992) claimed job searching and other career behaviors were significantly correlated with career self-efficacy. This is further supported by another study that showed job search and re-employment are positively correlated with career self-efficacy (McArdle, Waters, Briscoe & Hall, 2007).

The result of Multiple Linear Regression confirms career development self-efficacy was predicted by employability skills. One of the three predictors significantly predicted career development self-efficacy among students in vocational colleges. Higher cognitive skill is a predictor that significantly influences career development skills. Social and emotional skill, as well as technological skill, does not significantly predict career development self-efficacy. Most of the past studies predicted the skills related to employment by career self-efficacy or participation in career development activities. Research conducted by Ebenehi, Rashid, and Bakar (2016) found career self-efficacy was the most significant predictor of career adaptability skill among higher education students in Nigeria, followed by personal goal orientation, career future concern, and perceived social support respectively. Another study by Dania, Bakar, and Mohamed (2014) found that three variables (self-concept, participation in career development activities, and industrial training) had influenced career development self-efficacy even though their study had reversed predictions between variables.

In addition, the higher cognitive skill is the most significantly influenced career development self-efficacy although it had the lowest level of employability skills possessed by students. This finding urges everyone involved in curriculum design in TVET, particularly vocational colleges to revise the curriculum to enhance the higher cognitive skills. Rabey (2008) found that there is room for improvement in the way that secondary schools prepare their students for the workforce and suggested placing more emphasis on teaching organizational structure and interactions. The teachers should cultivate a learning environment that supports students in applying cognitive skills. When students accomplish a task using higher cognitive skills, they will gain more confidence in their skills and ability to apply the skills in real work that can sustain their growth in future career development (Bandura, 1977).

6.   Conclusion

The present study was conducted to determine the relationship between career development self-efficacy (CDSE) and employability skills (ES) among students in vocational colleges. The current study unveiled the level of CDSE and ES was at a moderate level. It was also shown that no significant difference in career development self-efficacy in terms of gender and academic achievement. For correlation, there was a strong and positive relationship between employability skills and career development self-efficacy. The employability skills significantly predict the career development self-efficacy of the students. Higher cognitive skill was the strongest predictor of students' career development self-efficacy. Practically, TVET stakeholders should strategize and remodel the TVET curriculum to be more vibrant to produce a quality workforce for the future. The component of critical and cognitive abilities shall be emphasized to ensure the skills are well-developed when they join the workforce. Although the job market is not sanguine about chances of getting employment due to competition and economic crisis, the graduates continue to importune their future by developing the necessary skills, especially cognitive abilities. Critical and cognitive abilities incontrovertibly skills corroborated the employer demand. Gaining a better TVET educational experience for all students is the goal of the unpredictable workforce environment. Therefore, systematic TVET pedagogical approaches should be executed to foster demanding employability skills among students. TVET lecturers should facilitate in helping students develop higher-level cognitive skills adding to problem-solving skills. Future research is hoped to tap into the influence aspect of employability skills on the career establishment process among graduates from TVET institutions to fill the gap left in this research. A thorough investigation using a complex research design will eventuate comprehensive gaps related to skill mismatch. Possible research direction can be delved further into the influence of employability skills on negative factors that interrupt the process of career development such as career anxiety and interpersonal conflicts. This is important to provide data that can be used as a basis in the future to provide appropriate skills that can lower the effect of negative factors on an individual's career growth.

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