The Relationship between Career Self -Efficacy and Career Adapt-ability among Vocational College Students

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Abstract
The ability to understand themselves and the abilities they have can help students in making career choices that they want to pursue later. This study aimed to identify the levels of career self -efficacy and career adapt-ability, differences in career self -efficacy based on gender and specialization among diploma students. This study uses a survey type design to identify students' career self -efficacy. A total of 245 diploma students in a vocational college were used as the study sample. The instruments used in the study are Career Decision Self -Efficacy - Short Form (CDSE - SF) and Career Adapt Ability Scale (CAAS). The findings of the study show that the level of career self -efficacy of diploma students is moderate. The results of t test analysis showed that there was no significant difference between males and females for career self -efficacy (t (245) = 0.628, p> .05). Meanwhile, the results of the Anova test showed that there was no significant difference between the study streams for career self -efficacy (F (4,240) = 1.616, p> .05). These results indicate that career self -efficacy and career adapt-ability have a positive relationship among diploma students. This study has implications for the vocational colleges and in particular the Psychology and Career Unit in vocational colleges in designing and developing career development programs that are appropriate to the needs of students. The further studies are recommended to focus on other variables such as family and social support in influencing students 'career development
Keywords: Career Self -Efficacy, Career Adapt-ability, Diploma, Vocational College

Introduction
The Malaysian Ministry of Education (2020) states that Technical and Vocational Education (PTV) is a form of education system that begins with students completing Grade 3 taking an entrance test to qualify for learning such as specific exercises involving technical skills and other aspects of basic skills. The implementation of this education system aims to help individuals equip themselves with technical knowledge, skills, and experience, and to promote the formation of self-confidence and self-esteem. PTV is an educational pathway that

emphasises technical skills, personality empowerment and the promotion of critical thinking to meet future career challenges (Rosly et al., 2019).

This branch of education comprises students aged between 16 and 19 years (Ministry of Education Malaysia, 2020). Super (1990) noted that individuals aged 15 to 24 undergo a process of self-exploration and career development at the second stage of career development theory. In this stage, students are preparing to enter the world of work or to continue their studies at a higher level. Students who complete PTV prepare for their careers and continue their studies according to the suitability of their chosen specialisation after completing On Job Training (OJT). Paijan and Hanapi (2018) noted that choosing a career and a field of study is a critical and important process for an individual.

However, with the spread of the Covid 19 pandemic, the country's economic situation is increasingly affected, and the marketability of graduates is also likely to suffer. Dumping of graduates from different universities is also a major problem as different sectors are also affected by the outbreak. According to the Malaysian Bureau of Statistics (2020), the unemployment rate in Malaysia started to increase from March 2020. This is because the employment sector, which had previously offered various areas of work, could no longer function as usual. People with PTV graduates are also at risk of having their career opportunities affected and finding it difficult to find a job because sectors such as manufacturing cannot operate as usual.

For this reason, there are individuals or groups among the existing workforce who have lost their source of income because of Covid-19. Sectors that have been badly affected include construction, tourism, hospitality, fisheries, and real estate. However, other sectors are no less affected as they are also affected by the magnitude of various aspects in the industry. The impact of this contagious epidemic is that future graduates will have difficulty finding jobs. This is because the affected sectors are still trying to maintain stability by considering various aspects, especially the recruitment of new staff, which may affect the structure of the company. This leads to new graduates wanting to get a place in the career world.

Next, Fatima (2016) explains that marketability is a person's ability to get a job and stay in that career, as well as the ability to adapt to the needs of the industry. Graduates who find jobs after graduation become the measure of a person's success based on marketability trends. Focusing on the overall percentage of employed graduates, which stands at 58.6%, it is evident that it is at a moderate level as it has not yet reached a satisfactory rate based on the percentage results achieved (Ministry of Higher Education, 2019). The affected sectors are not unique to Malaysia but are taking place globally, making this problem even more serious. The marketability of graduates is also affected by this situation.

After the Covid 19 phase, graduates must be prepared for all the opportunities that the labour market will offer later on. The job market will also be more competitive because of the competition among graduates for a place in various industries (Azri et al., 2019). Meanwhile, Seng et al (2019) noted that despite their obvious academic qualifications, employers in Malaysia have concerns about the translation of graduates' knowledge and skills to the jobs on offer. The implementation of initial planning should start with getting to know oneself and shaping an individual's direction as well as enhancing existing skills. Therefore, this study aims to measure the relationship between career self-efficacy and career adjustment among students of a vocational university.

Career self-efficacy

According to Bandura (1977), self-efficacy is a person's confidence in his or her abilities and skills to do something successfully. A person is able to do something well if they believe in their abilities. This causes the individual's existing belief in self-efficacy to be able to function meaningfully to understand and determine something (Betz & Hackett, 1988). Bandura (2000) also explains that self-efficacy is a person's belief and confidence in their own abilities to perform aspects of cognitive, motivational, and appropriate ways according to individual needs. People also have self-efficacy when they can cope with difficulties that arise in different areas of life.

According to Bandura (1982), the basis of self-efficacy theory is individual achievement and enthusiasm, which are determined by confidence in oneself. Furthermore, according to Van der Bill and Shorttridge-Baggett (2002), an individual is more likely to engage in activities where self-efficacy is high than other activities. Self-efficacy is also a key aspect that encompasses a person's performance, motivation, and well-being. This can encourage an individual to do something well. According to Komarraju et al (2013), career self-efficacy is important when it comes to choosing a career. Study by Mahmud et al (2019) found that individuals with intermediate and low levels have a lack of self-confidence and trust in themselves when it comes to career choice. A person who has a lack of self-confidence and understanding in relation to the career they want to pursue will choose a less suitable career. This theory was developed by Brown et al (2014) based on the social cognitive theory introduced by Albert Bandura. This theory is also called social cognitive because it involves the interaction process that takes place between people in the environment to obtain information. According to Sharf (2014), career self-efficacy is the most important aspect in mobilising people to action. Individuals who push themselves to try something will get results depending on the efforts made. This theory is also related to constructivists who are concerned with the ability of individuals to determine and influence aspects of self-development.

This theory focuses on aspects of interaction between people in the environment and factors that may influence a person's career choice. Zunker (1990) stated that the cognitive aspect of the individual influences the way the individual digests the information received. This theory is also able to determine the development of an individual's career to explain the impact of formal education on an individual's interest in a career, career choice and level of job performance. This aspect of career self-efficacy is divided into five subscales, namely self-perception, career information, chosen goals, planning and problem solving (Betz, et al., 2007). The study conducted by Mahmud et al (2020) shows that there is no significant difference between career self-efficacy and gender. The implementation of the intervention programme, when offered, is suitable for both genders. This study, conducted on undergraduate students, is recommended to improve career intervention programmes based on students' career readiness. Nevertheless, Jelas, et al (2013) found that there is a difference between career self-efficacy and gender. The results show that women are stronger than men in terms of career self-efficacy.

A study by Mahmud et al (2020) also finds that there is no significant difference between career self-efficacy and field of study. The study was conducted with 1391 students at a public university. This study also states that career counsellors play a role in increasing graduate employability. In a study conducted by Mahmud et al (2017), it was found that students of social science course scored higher than other science students. The difference in career self-efficacy may vary between students of different fields of study.

The study by Jakaria et al (2020) shows that there is no relationship between career self-efficacy and career development of managers in a factory. Students who have high self-efficacy can achieve excellent results, while individuals who choose the same situation tend to have low efficacy (Lent, et al., 1984). According to Emily et al (2016), the results of the study showed that low career self-efficacy leads to career-related thinking disorders and not being able to make good decisions. Individuals with high career self-efficacy, on the other hand, are more confident when it comes to making decisions and determining their career direction.

Career Adjustment

According to Ebenehi et al (2016), career adjustment is an important component for an individual to adapt to later career and organisation. Studies show that career self-efficacy is a good predictor of career adjustment among university students in Nigeria. A total of 603 respondents randomly selected from 6 different types of colleges were found to have high self-monitoring and self-control scores for career adjustment. The study suggests that future researchers look at workplace adjustment from the students' perspective after graduation.

The constructivist theory introduced by Mark L. Savickas is related to career adjustment. This theory focuses on individual characteristics and interests in career choice. Savickas (2007) states that the work environment also has an influence on how well a person can adapt. Previous experiences also shape an individual's understanding and choice of future career. According to Sharf (2015), the concept of constructivist theory is divided into four aspects, namely vocational personality, task development, dimensions of vocational adjustment and life issues.

According to Holland (1957), the aspect of vocational personality is the selection of a career according to the personality type one possesses, such as Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E) and Conventional (K). As far as task development is concerned, it is divided into five stages seen based on individual development, namely the stage of growth, exploration, strengthening, maintenance, and decline (Super, 1952). The vocational adjustment aspects are divided into four subscales, namely self-awareness, self-control, curiosity, and self-confidence (Savickas, 2005). Finally, the life theme aspect of the individual's narrative about the importance of a job done is related to the theme of their life. Next, this study measures the relationship between job adjustment and social support among university students (Sahin & Kirdok, 2018).

The social support component is divided into three areas, namely family, teachers, and friends. For vocational adjustment, the family aspects in the social support component are the predictors positively associated with high scores. The teacher's aspect is a predictor with a moderate level. The friend's aspect, on the other hand, has the lowest value for vocational adjustment. Buyukgoze-kavas (2016) found that students' vocational adjustment is at a moderate level. A study conducted in Turkey with 415 students showed that students have medium and high scores on vocational adjustment. The students can adapt well to the career they want to pursue in the future. The recommendation for this study is to strengthen the aspect of self-resilience and provide optimism to the students to increase the level of career adjustment for the future.

In addition, a study by Waheed et al (2019) found that the level of career adjustment of students is high and moderate. The study was conducted with 102 trainees' uniform students in a public university. On the other hand, there is no significant difference between career adjustment and gender. The study suggests a qualitative implementation as the factors leading to career choice are not interest alone but the presence of other factors. This study shown

that there is a relationship between career adjustment and support from friends. However, there is no significant relationship between career adjustment and family and social support. The study was conducted with a total of 83 practise teachers interviewed at a public university. The recommendation of this study is implemented in the form of an experiment to measure the effectiveness of a career programme implemented.

Methodology
Research Design
This study is a quantitative study. This study is a survey study. This study combines a descriptive, comparative and correlational research design. Descriptive research aims to find the mean, standard deviation and level of the corresponding variable. Comparative studies, on the other hand, aim to identify differences in the related variables. The correlational study aims to determine the relationship between related variables.

Sample Study
The study population consisted of students from a vocational school in Batu 3 district, Selangor. The sample studied was a total of 245 1st and 2nd year diploma level Malaysian Skills Certificate (SKM) students at Shah Alam Vocational University. The students involved are categorised into 5 disciplines, namely Business Administration (n=45), Computer Systems (n=38), Databases (n=35), Industrial Machinery (n=82) and Welding (n=42).

Study Instrument
This questionnaire consists of five parts, namely Part (A): Students' background information, Part (B): Career exploration, Part (C): Self-efficacy in career decision, Part (D): Career Adapt-ability and Part (E): Students' Career Choice. The research instruments used are Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) and Career Adapt Ability Scale (CAAS).

The instrument is known as Career Decision Making Self-Efficacy (CDMSE) and was developed by Betz et al. (1996). However, CDMSE was renamed Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) by Betz and Taylor in 2006. This instrument contains 25 items that have been combined from the original 50 items. This questionnaire aims to measure the self-efficacy subscale, which includes self-appraisal, occupation information, goals selection, planning and problem solving. The instrument CDSE-SF is scored using a five-point Likert scale for each question asked. The questionnaire has five dimensions of the scale, namely 1 for Very unsure to 5 for Very sure.

The instrument CDSE-SF has a high validity stability based on the results of a study conducted on a sample of students from different ethnic groups in Australia and Africa. Luzzo's (1996) validity test showed that there is a significant positive relationship between the Career Decision-Making Attitudes Test and the CDSE-SF (r = .41). Students who have high scores on Career Decision-Making Attitudes also have high scores on CDSE-SF.

The reliability determined for the total Cronbach's alpha was .96, while Taylor and Betz (1983) determined a value between .86 and .89 for the five subscales. According to Mahmud et al (2020), a pilot study also conducted with the Malay version of CDSE-SF revealed that the reliability coefficient of vocational self-efficacy was .911, self-knowledge was .616, career information was .712, goal choice was .607, planning was .797 and problem solving was .561. Next, this study uses an instrument called the Career Adapt Ability Scale (CAAS), which is used by Mark Savickas and Porfeli (2012) to measure career adaptation. The subscales measured are concern, control, curiosity and confidence. This instrument has 24 items and uses a 5-point Likert scale. The questionnaire has five dimensions of the scale, namely 1 refers to Very

insecure to 5, Very secure. Table 2 explains the interpretation of the mean based on Mark Savickas and Porfeli's (2012) interpretation of the mean.

Findings
The results of the study are explained even more clearly by the tables and explanations given.

Descriptive Analysis
The following are the results of a descriptive analysis that includes the demographic information of the respondents and the variables used in this study. Table 3 describes the demographic information of the respondents, namely gender, field of study and year of study. The total number of vocational school graduates is 245. The table shows that the number of male students is 179 (73.1%) and the number of female students is only 66 (26.9%).
Thereafter, the specialisation is divided into five courses, namely Business Management, Computer Systems. Database, Industrial Machining and Welding Technology. The total number of respondents from the Industrial Machining specialisation is the highest at 84 (34.3%) as compared to the other four. The respondents are graduate students who are in the third and fourth year of their studies. There are more fourth-year students than third-year students, 55.9% (137 people).

Table 3
Descriptive Analysis of Study Respondent Demographics (n=245)

Demographics		Frequency	Percentage
Gender	Male	179	73.1
	Female	66	26.9
Specialisation	Business Management	46	18.8
	Computer Systems	38	15.5
	Database	35	14.3
	Industrial Machining	84	34.3
	Welding Technology	42	17.1
Years of study	Third year	108	44.1
	Fourth year	137	55.9
Specialisation	Business Management	46	18.8

Table 4 describes the variables of career self-efficacy and career adjustment in terms of mean, standard deviation, and Cronbach's alpha. The table shows that the variable of vocational self-efficacy has a mean of 3.62, a standard deviation of .624 and a Cronbach's alpha value of .952. For the subscale of self-appraisal, the mean is 3.58, the standard deviation is .658 and the Cronbach's alpha value is .849. The subscale of occupational information has a mean of 3.61, a standard deviation of .682 and a Cronbach's alpha value of .847. The goal selection has a mean of 3.72, a standard deviation of .702 and a Cronbach's alpha of .900. The planning subscale has a mean of 3.58, a standard deviation of .739 and a Cronbach's alpha of .903. For the Problem-Solving subscale, the mean is 3.61, the standard deviation is .648 and the Cronbach's Alpha value is .833.

Next, the Career Adapt-ability variable declares a mean of 3.77, standard deviation of .719 and Cronbach's alpha of .968. The Concern subscale has a mean of 3.63, standard deviation of .794 and Cronbach's alpha of .915. The Control subscale has a mean of 3.77, standard deviation of .762 and Cronbach's alpha of .921. Curiosity has a mean of 3.84, a

standard deviation of .786 and a Cronbach's Alpha value of .945. The Confidence subscale has a mean of 3.85, a standard deviation of .782 and a Cronbach's Alpha value of .953.

Table 4
Descriptive Analysis of Career Self-Efficacy & Career Adjustment

Variables & Subscale	Mean	Standard deviation	Alpha Cronbach
Career self-efficacy	-	-	.952
Self-appraisal	3.58	.658	.849
Occupational information	3.61	.682	.847
Goal selection	3.72	.702	.900
Planning	3.58	.739	.903
Problem-Solving	3.61	.648	.833
Total Mean Score	3.62	.624	-
Career Adapt-ability	-	-	.968
Concern	3.63	.794	.915
Control	3.77	.762	.921
Curiosity	3.84	.786	.945
Confidence	3.85	.782	.953
Total Mean Score	3.77	.719	-

Career Self-Efficacy Based on Gender
Table 5 below explains the results for differences in career self-efficacy by gender among diploma students. The result of the inferential statistics of the independent t-test shows that there is no significant difference in the self-efficacy of diploma students based on gender, $t(245) = 0.628$, $p > .05$. Based on the results of the t-test, the mean score for professional self-efficacy of male diploma students is higher than that of female diploma students. This clearly shows that there is no significant difference between the differences in professional self-efficacy due to gender.

Table 5
Analysis of differences in professional self-efficacy of diploma students by gender

Gender	N	Mean	Standard deviation	t	Significant Value
Male	179				
		3.62	.628	.485	.628
Female	66	3.59	.617	.489	

Career Self-Efficacy Based on Specialization
Table 6 explains the results for the difference in career self-efficacy based on diploma students' specialisation. It was found that there is no significant difference in the career self-efficacy of diploma students with specialisation $F(4,240) = 1.616$, $p > .05$. A one-way anova-analysis shows that there is no significant difference in the career self-efficacy of students with specialisation programmes completed despite having different courses of study.

Table 6
Analysis of differences in self-efficacy of diploma students based on specialisation.

	Sum of Squares	df	Mean Square	F	Significant
Between groups	2.493	4	.623	1.616	.171
Within groups	92.562	240	.386		
Total	95.055	244			

The relationship between career self-efficacy and career adjustment

Table 7 explains the results for the relationship between career self-efficacy and career adaptability among diploma students. A Pearson correlation analysis was conducted to measure the relationship between career self-efficacy and career adaptability in graduate students. The results of the analysis show that there is a significant relationship between career self-efficacy and career adjustment r = .700, p <.05. The resulting correlation level between the variables is high. The null hypothesis (Ho3) is rejected based on the results of the analysis. The relationship between the variables can be seen in Table 7.

Table 7
Analysis of the relationship between career self-efficacy and career adapt-ability among diploma students

Variables	N	Min	Deviation Standard	Career self-efficacy	Career adjustment
Career self-efficacy	245	3.62	.624	-	
Career adjustment					-
	245	3.77	.719	.700	

Discussions

The results of the study revealed that the career self-efficacy of the diploma students is at a medium level for 48.2% and at a low level for 4.1%. The rest are at a high level. According to Komarraju et al (2013), career self-efficacy is important for career choice. Therefore, this study agrees with Mahmud, et al (2019) statement that individuals who have medium and low levels of self-confidence lack self-awareness and confidence in themselves when choosing a career. An individual who has self-confidence and lack of understanding in relation to the career they want to pursue will choose a less suitable career.

Next, the results of the study show that students' vocational adjustment is at a high level where students can adjust to the career choice they want to choose. However, there are also students who are at a medium and low level because they are still in the process of adjustment. According to Ebenehi et al (2016), career adjustment is an important component for a person to adapt to their future career and organisation. Career adjustment involves a clear understanding that includes the subscales concern, control, curiosity, and confidence in relation to the career that is suitable for oneself. This study was also supported by Waheed et al (2019) who found that students' level of career adapt-ability was at a high and medium level,

which shows that students are becoming more comfortable and clearer about their future career choice.

Furthermore, the study shows that there is no significant difference between career self-efficacy and gender. This study is supported by Mahmud et al (2020) who show that there is no significant difference between career self-efficacy and gender. The implementation of the intervention programme, when offered, is suitable for both genders. However, this study was contradicted by Jelas et al (2013) who found that there is a difference between career self-efficacy and gender. The results show that women have higher career self-efficacy than men. It is clear to see that both genders can make career decisions based on the self-efficacy of their respective careers.

The results of the study show that there is no significant difference between self-efficacy and specialisation of the diploma students. The aspect of specialisation has no significant effect on the self-efficacy of the students. This study is also supported by Mahmud, et al (2020) who found that there is no significant difference between career self-efficacy and field of study. However, this study was refuted by Mahmud et al (2017) who found that students in the social science field of study had higher scores than other science students. It is found that there is no significant difference in career self-efficacy among vocational students.

Further, the study shows that there is a significant relationship between career self-efficacy and career adapt-ability among graduate students. This study is supported by Ghazali et al (2019) who show that there is a significant relationship between vocational adjustment and support from friends. However, there is no significant relationship between career adjustment and family and social support. An opposite one study by shows that there is no relationship between career self-efficacy and career development of managers in a factory (Jakaria et al., 2020). Based on the above discussion, career self-efficacy and career adjustment are important aspects that help students to make appropriate career choices in the future. A solid understanding, knowledge, and self-confidence about the career they want to pursue gives individuals the opportunity to shape and determine the direction of their lives.

Conclusion

Career self-efficacy and career adapt-ability are important aspects for individuals when it comes to determining their career direction. Both aspects are catalysts for self-improvement in the process of identifying and selecting a career that matches one's interests, skills, and abilities. In this way, an individual can make the best choices for his or her future. An individual is also able to face various challenges that will arise through self-empowerment and confidence in the choices made. Students can also identify themselves by getting to know themselves better and the career they aspire to. Furthermore, a clear understanding of both aspects can lead to prospective graduates achieving high quality in terms of their personality and professional skills based on learning in educational institutions. Career self-efficacy can also influence individual readiness before entering the work phase. Graduates who have careful planning and specific knowledge about their career direction can make correct decisions and positively influence the course of their lives. Therefore, additional programmes and measures to prepare for career entry can help individuals become better prepared and more productive to keep up with graduates from other universities.

Acknowledgements

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