



# Career-Related Characteristics Towards Career Certainty of Vocational College Students

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**Abstract:** Career path certainty in this era of innovation, digitalization, and globalization is increasing and continues to be the decisive factor in career selection by many people in the fast-growing, unpredictable, and highly competitive job market. This situation has forced students to make career choices as the first step to ensure that the available human resources are in line with the demand in the labor market. This study aims to determine the role of career-related characteristics in the relationship to career certainty among Vocational College students in Selangor. The career-related characteristics included in this study are career planning, career exploration, self-efficacy, outcome expectations, and career goals. This research is a quantitative and correlational study conducted on first-year Vocational College students in Selangor. Using simple random sampling, 230 students were selected as research respondents. The results showed that career planning, career exploration, self-efficacy, outcome expectations, and career goals showed an insignificant but moderate positive relationship with career certainty. This study provides a basis for planning career-related learning and development programs at the pre-university level. The study recommends that teachers actively initiate student career exploration activities during learning.

**Keywords:** Career certainty, career choice, career exploration, career self-efficacy

## 1. Introduction

The Industrial Revolution 4.0 (IR4.0) has changed the world with the discovery of various new technologies such as automation, Internet of Things (IoT), analytics and big data, simulation, systems integration, the use of robotics and the cloud that will accelerate the advancement of the modern world landscape. Combining all these developments will result in new and smart systems for society (Pereira & Romero, 2017). According to Hirschi (2017), digitization and automation are among the important drivers driving new trends in career selection and career development in the future. The effects and consequences of the emergence of IR4.0 have reshaped career patterns for the future labour market. Therefore, priority should be given to investment in human resources and career paths to take advantage of these growing economic opportunities (World Bank, 2019).

Career development and planning are closely related to IR4.0. The advent of technology and smart systems brings change and innovation to the world. This digital change requires a process of teaching, learning, and training to facilitate adaptation to new technologies (Serbes & Albay, 2017). In this context, career education is important at the beginning of the educational journey for an individual. Assisting students in making career choices is a critical step in ensuring human resources are in line with the demand in the labour market, where the process initially takes place between the ages of 15 and 17.

In contrast, career exploration will continue until 24 years old (Yusop, 2002). Career selection is the framework from which one’s career will be built in the future (Humayon et al., 2018). Therefore, students need to make appropriate career choices by considering income and career nature, ultimately influencing an individual’s personality, attitudes, and views on career (Kazi & Akhlaq, 2017). In the meantime, Quadri (2018) stated that most adolescents are still unaware of the various career opportunities available due to the lack of exposure to such information. Lack of information can make the career selection process difficult because most students, according to Kunnen (2013), tend to choose a career based on their interests rather than understanding the prospects of a particular career.

Good career planning can lead to career certainty in life. Information and guidance on relevant careers can help individuals determine good career choices (Nyamwange, 2016). Nyamwange also pointed out that most students with limited knowledge of the various career options available tend to choose based on their perceptions of ideal jobs and subjects studied in lower secondary school. Therefore, studies need to be conducted to identify the level of students’ career certainty and its relationship with students’ learning experience, career planning, career exploration, self-efficacy, outcome expectations, and career goals to ensure the efficiency of government-implemented workforce development initiatives to meet industry needs.

## 2. The Role of Technical and Vocational Education and Training (TVET) in Promoting Career Education

Cognitive Social Career Theory (SCCT) was first introduced in 1980. It later evolved into the Career self-efficacy theory, as introduced by Albert Bandura in 1986. This theory was refined and developed by Robert W. Lent, Steven D. Brown, and Gail Hackett in 1994. The theory forms the theoretical framework for this study. SCCT emphasizes expanding and clarifying interests related to careers, academics, career choices, career education, and career achievement (Figure 1). Bandura (1989) asserted that SCCT is the interaction between career choice, career self-efficacy, outcome expectations, goal setting, choice decisions, outcomes, and other factors, such as academic achievement and socio-economic background.

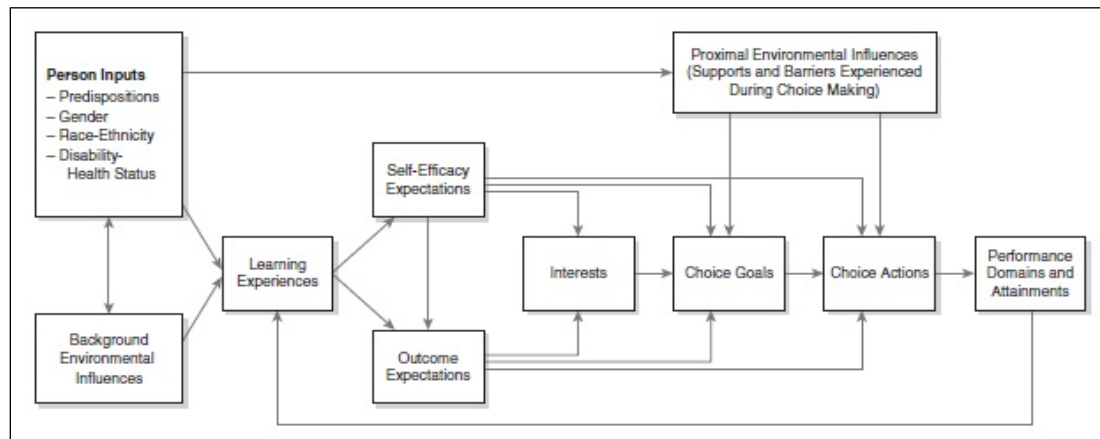


Fig. 1 - Interest and career choice in Cognitive Social Career Theory (SCCT)

Career certainty is a complex process that has a lasting impact on an individual’s life. Choosing a career is challenging and involves many interrelated factors (Kazi & Akhlaq, 2017). According to Ahmed et al. (2017), an individual’s career choice is influenced by two factors, namely social and psychological factors. Social factors involve an individual’s relationship with family and society, history, and exposure to the conditions of their environment. Environmental conditions encompass an individual’s perceptions, beliefs, ideas, and personalities. Due to the complex process of making career choices, a person tends to make career decisions based on several factors that dominate their lives, such as socioeconomic background, education, culture, and family influences (Humayon et al., 2018; Mohamed et al., 2021). The results can also be influenced by other factors such as media, peers, health barriers, income position, financial problems, income prospects, employment opportunities, social acceptance of a profession, recognition, and job satisfaction (Kazi & Akhlaq, 2017).

According to Blustein and Phillips (1988), Borg (2014), and Fizer (2013), many factors influence students’ career certainty. These factors include various theories of career development and influencing factors such as childhood fantasies, cultural beliefs, personalities, previous experiences, gender, interests, life roles, skills, abilities, talents, social and economic conditions. Memories and curiosities can shape how one thinks about career and future life in terms of childhood fantasies. The career development theory asserts that career fantasies are relevant to students up to 14 years old (Rashid et al., 2009). Meanwhile, cultural beliefs are described as the influence of racial and ethnic background on one’s career choices.

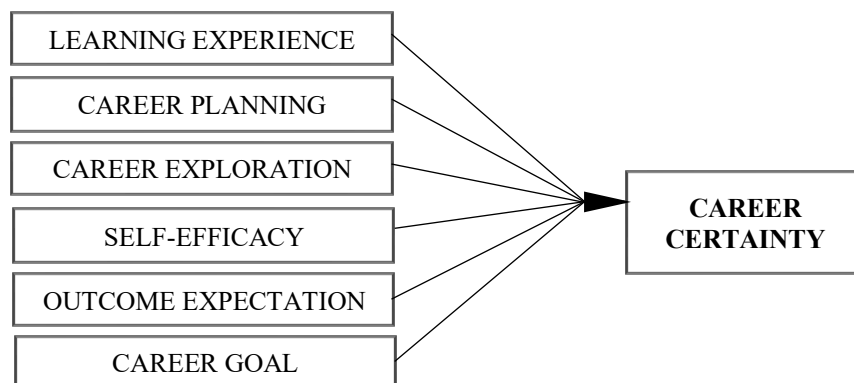
According to the SCCT, career self-efficacy influences career choices as it drives a person’s interest toward career goals and specific career decisions. Career self-efficacy is very important for career development, internally or externally (Lent et al., 1994). Moreover, Betz and Hackett (1996) described career self-efficacy as an individual’s expectations related to qualifications required for a particular career selection and adjustment.

Career exploration can increase a person’s knowledge of their career options, motivating them to strive to achieve their career goals. The process of career exploration involves learning about oneself, researching available career options, trying out new experiences, and making strategic plans to achieve professional goals. Xu et al. (2013) suggested that career exploration can determine career choices, while Gushue et al. (2006) found that career exploration can determine career certainty and self-efficacy. Career exploration plays a role in making career certainty by gathering information and increasing understanding of self and career choices. Previous studies have shown that career exploration is driven by socioeconomic and personality factors (Cho, 2017; Khalid, 2016). The reputation of a particular career perceived in the job market dramatically influences a person’s perception of the financial aspects, job roles, and cost-profit ratios of career choices. A person may be attracted to the offers and benefits of a particular position, which influences their career exploration and aspirations. On the other hand, personality factors can also drive career choice and potentially direct career exploration. Students with strong personalities tend to do career exploration, which allows them to make early career decisions based on their abilities.

The concepts of career counselling and career exploration are fundamental in preparing students for national development. Engaging with students in career exploration helps them understand themselves and the environment needed to foster career advancement and development. In addition, career exploration can trigger a person’s natural curiosity and desire to explore. Ali and Syafiq (2019) suggest that students should constantly be exposed to the profession they are proficient in through their personal experiences and environments. A person needs to learn about various career options from their early school years (Cho, 2017; Jamaluddin et al., 2019). Pre-university students should be able to make critical decisions about their future careers and plan strategies to achieve their career goals (Puad & Desa, 2020).

A research framework grounded on SCCT, as shown in Figure 1 below, was developed for this study. The framework describes the influence of the independent variables, self-efficacy, outcome expectations, career goals, and actions on career choice, specifically career planning and career exploration on career choices. On the other hand, career certainty is the dependent variable of this study. In general, an individual will form a sustained interest in an activity when they see themselves perform it and then expect the activity to bring results. On the other hand, interest is unlikely to develop in activities when individual doubt their competence and expects adverse outcomes. Furthermore, SCCT argues that for interest to develop in areas an individual is competent in, their environment needs to expose them to the types of direct, indirect, and convincing experiences that can enhance robust self-efficacy and positive outcome expectations. Interest will not develop when individuals do not have the opportunity to form strong self-efficacy and positive outcome expectations, regardless of their objective talents.

SCCT highlights situations that could increase an individual’s pursuit of their interests and the situations where interests need to be considered in making career-related choices. Collectively, environmental influences refer to the level of support (e.g., financial and emotional support from family), barriers (e.g., lack of finances, low education level), and opportunities available to individuals. SCCT asserts that interest will be a stronger predictor of choices made under support than choices made under more stringent environmental conditions. Under the latter circumstances, one’s interests may need to be forgotten or considered. In short, this theory states that an individual with outcome or success expectations will act towards achieving goals in a career when he believes in his ability and capability to succeed.



**Fig. 2 - Conceptual framework**

### 3. Methodology

This study adopted the correlational research design. It aims to identify or examine the relationship between the variables-career planning, career exploration, self-efficacy, outcome expectations, and career goals with the level of career certainty among vocational college students. The study involved students in vocational colleges in Selangor. These vocational colleges were chosen as the study sites to offer TVET stream courses fully. The population size for this study was 1680 based on enrolment in 2018. The sample size was determined by the Cochran (1977) formula, as Bartlett, Kotrlik, and Higgins (2001) proposed. This resulted in a sample size of 230. Five instruments were used to measure the constructs. The measurement of each construct was combined to form a research instrument. Then, the researchers utilized IBM SPSS Statistics software to calculate and analyze the collected data. The data were analyzed descriptively (mean and standard deviation) for each variable and inferentially (Pearson correlation and multiple regression) in determining the relationship among variables.

A pilot study was conducted on 30 first-year students in Setapak Vocational College, Federal Territory of Kuala Lumpur. The findings of this pilot study were used to measure the instrument's reliability. Table 1 below shows the reliability value obtained from the pilot study using Cronbach's Alpha values.

Permission to use and adapt the instruments was obtained from the respective instrument's authors. The researchers have applied through the Faculty of Educational Studies, Universiti Putra Malaysia, to obtain permission from the Education Policy Planning and Research Division (EPRD), Ministry of Education Malaysia. The EPRD then forwarded the approval for research to the Technical and Vocational Education Division (BPTV), the Ministry of Education Malaysia, and the vocational colleges involved.

**Table 1 - Pilot study**

| Variable            | Reference Source                 | Number of Items | Pilot Study Alpha Value |
|---------------------|----------------------------------|-----------------|-------------------------|
| Career Certainty    | Osipow et al. (1976)             | 16              | .83                     |
| Learning Experience | Lent et al. (2017)               | 20              | .87                     |
| Career Planning     | Albert S. Thompson et al. (2008) | 23              | .88                     |
| Career Exploration  | Albert S. Thompson et al. (2008) | 22              | .87                     |
| Self-Efficacy       | Robert W. Lent et al. (2017)     | 8               | .89                     |
| Outcome Expectation | Betz and Voyten (1997)           | 9               | .85                     |
| Career Goal         | Betz and Voyten (1997)           | 5               | .76                     |

### 4. Findings and Discussion

This study involved 120 male students (52%) and 110 female students (48%). In terms of race, 223 (97%) of the participants are Malay, 4 (2%) are Indian, and 3 (1%) are from other ethnic backgrounds. Table 2 below shows the frequency distribution of respondents based on gender and race.

**Table 2 - Demography of respondents (N=230)**

|        | Category | Frequency (f) | Percentage (%) |
|--------|----------|---------------|----------------|
| Gender | Male     | 120           | 52             |
|        | Female   | 110           | 48             |
| Race   | Malay    | 223           | 97             |
|        | Indian   | 4             | 2              |
|        | Others   | 3             | 1              |

The study findings on the level of career certainty indicate that respondents are at the developmentally undecided stage (refer Table 3). This suggests that respondents are at an intermediate level in making career decisions. They are less capable of making career decisions. Respondents were found to be unconcerned about the jobs they will pursue and require advice and assistance from others to determine their future careers. This indicates that Vocational College students are still uncertain about the careers they will pursue.

These findings align with Super's career development theory (1957), where respondents are still in the exploration stage of their careers. According to Luzzo (2002), this stage is crucial in the career selection process. This is because at this stage, students are still unsure about their own capabilities, the provided training, and job opportunities.

Respondents were also found to still struggle with choosing the best career for themselves and don't know the type of jobs that align with their chosen field of study. Despite having interests and abilities to make career decisions, they find it difficult to make choices, and most importantly, they don't know how to initiate a career in their chosen field. Respondents are seen to need advice and assistance from others such as teachers, parents, and peers in making career decisions. According to Abdullah et al. (2009), students at the intermediate stage need exposure to sufficient, extensive,

and accurate career information before entering the workforce. Without this, their knowledge about their careers becomes limited, and they cannot make appropriate career decisions.

**Table 3 - Career certainty (N=230)**

| Item  | Mean        | Standard Deviation | Interpretation  |
|---|-------------|--------------------|-----------------|
| I have made a decision regarding my career (for example: entrepreneur, fashion designer, engineer, and so on) and know how to pursue my chosen career.                              | 3.98        | .699               | High            |
| I have made a decision to enter a specific field (for example: accounting, culinary arts, automotive, and so on) and know how to execute my choice.                                 | 4.24        | .686               | High            |
| I have an ideal career that seems impossible to achieve, but I also haven't found any other career choices yet.   | 3.18        | 1.205              | High            |
| There are several careers that I'm interested in, but it's difficult for me to choose the best one.   | 3.69        | 1.069              | High            |
| I know I need to work, but there are no career choices that truly pique my interest.  | 2.54        | 1.203              | Moderate        |
| I already have a career choice, but I will disappoint many loved ones if I continue with my career choice.  | 2.29        | 1.369              | Low             |
| I haven't thought about a career yet, because there is no clear experience and information for me to make a career choice.  | 2.50        | 1.267              | Moderate        |
| I'm not confident in my career choice and have decided not to have a career choice at the moment.   | 2.20        | 1.259              | Low             |
| I find it difficult to achieve my dream career to the point where I need to consider other suitable career options.   | 2.70        | 1.318              | Moderate        |
| I want to make the right career choice, but there are no careers that suit me.  | 2.52        | 1.291              | Moderate        |
| I feel the need to take a career assessment test that can tell me which career I should pursue because I find it difficult to make a career choice.                                 | 3.16        | 1.282              | High            |
| I know the field I want to enter, but I don't know the specific type of job that suits my chosen field.   | 2.89        | 1.342              | Moderate        |
| I can't make a career choice at the moment because I don't know the skills I possess.   | 2.79        | 1.288              | Moderate        |
| I don't know my interests, but there are several things that capture my attention, even though I'm not sure if those things are related to the career opportunities I might pursue. | 2.97        | 1.305              | Moderate        |
| I have many career interests and can excel in whatever career I pursue. Therefore, it's difficult for me to choose a career that I'm passionate about to make it my chosen path.    | 3.00        | 1.197              | High            |
| I have made a decision about my career, but I'm not sure what I need to do to achieve my chosen career path.  | 3.07        | 1.150              | High            |
| <b>Overall</b>  | <b>2.98</b> | <b>.72</b>         | <b>Moderate</b> |

The analysis results in Table 4 showed that the vocational college students' overall learning experience is moderate, with a mean of 3.75 (SD=.41). More specifically, the analysis of the level of past Learning Experience demonstrated a moderate mean of 3.83 (SD=.571). The analysis of students' positive and negative emotions about entering the Vocational College is moderate at 3.64 (SD=.430).

The analysis also found that people who are essential and admired by students impact their past learning experience and career-related decision-making and direction. The student's level of past learning experience is moderate. This indicates that students could gather vital information to make decisions related to their careers. Meanwhile, even though admired people such as parents, teachers, and public figures provide students with past learning experiences, they cannot make career-related decisions.

**Table 4 - Learning Experience (N=230)**

| Item  | Mean        | Standard Deviation | Interpretation  |
|---|-------------|--------------------|-----------------|
| My approach to making important career-related decisions has paid off.  | 3.67        | .842               | Moderate        |
| Important people ( parents, teachers, counselors, etc.) tell me that I have the ability to gather information to make career-related decisions.                                       | 4.01        | .927               | High            |
| People I idolize (parents, teachers, figures, sports persons, celebrities, actors, etc.) have the ability to gather important information to make decisions related to their careers. | 4.03        | .957               | High            |
| I have the ability to make decisions related to my career.  | 3.63        | .813               | High            |
| Important people (parents, teachers, counselors, etc.) convince me I have the ability to evaluate the best options when making career-related decisions.                              | 3.95        | .888               | High            |
| People I admire (parents, teachers, figures, etc.) tell me that I have the ability to gather important information to make decisions related to their careers.                        | 4.08        | .858               | High            |
| I have the ability to make decisions related to my career.  | 3.62        | .897               | High            |
| Important people (parents, teachers, counselors, etc.) convince me I have the ability to consider a variety of options when making career decisions.                                  | 3.76        | .856               | High            |
| I have idols (e.g., parents, figures, sportsmen, artists, actors, etc.) who are knowledgeable about interests and abilities tailored to my career choices.                            | 3.83        | 1.037              | High            |
| I am able to gather the information needed to make career-related decisions.  | 3.63        | .814               | High            |
| Important people (examples: parents, teachers, counselors, etc.) convince me that I have the ability to manage the challenges that arise when making career decisions.                | 3.81        | .881               | High            |
| I have idols (e.g., parents, figures, sportsmen, artists, actors, etc.) who have explained how they choose an academic major or career path.  | 3.89        | .965               | High            |
| <b>Total</b>  | <b>3.83</b> | <b>.57</b>         | <b>High</b>     |
| <b>How did you feel when you decided to enter a vocational college?</b>   |             |                    |                 |
| Disappointed / Sad  | 2.19        | 1.173              | Low             |
| Anxious   | 3.22        | 1.132              | High            |
| Determined  | 4.37        | .746               | High            |
| Inspired  | 4.21        | .761               | High            |
| Fear  | 2.63        | 1.250              | Moderate        |
| Active  | 3.82        | .979               | High            |
| Grateful  | 4.47        | .740               | High            |
| Excited   | 4.18        | .958               | High            |
| <b>Total</b>  | <b>3.64</b> | <b>.43</b>         | <b>Moderate</b> |
| <b>Overall</b>  | <b>3.75</b> | <b>.41</b>         | <b>High</b>     |

In the meantime, students’ positive and negative emotions about deciding to enter a vocational college are moderate. In this regard, the students feel grateful and determined when attending a vocational college. They did not feel sad or upset about deciding to study in a vocational college. Overall, the people who are important and admired by the students help them make their career decisions.

The results of the analysis in Table 5 showed that vocational college students have a high outcome expectation (Mean=4.36; SD=.45). Thus, the students are aware of the consequences of long-term success in making educational or career decisions and the impact of educational performance on career choices and future success.

The results in Table 5 showed that the student’s level of outcome expectation is at a high level. In this study’s context, the students are still at the stage of making less planning about the direction of their education or career. They are still oblivious to the advantages of being in a vocational college and the bright opportunity it will bring in achieving their ambitions and venturing into a broader career field. In addition, the students also agreed that getting good results in exams will help them land the career of their choice.

Overall, students are still vague about their academic or career path. They are still skeptical of their abilities despite getting good academic results. Students should be allowed to plan their academic or career paths. In this regard, guidance from parents and teachers who are closest to the students is very important. The analysis showed that vocational college

students have a moderate career goal with a mean of 4.16 (SD=.56). This shows that vocational college students still have no clear goals to achieve in the career they are about to pursue.

**Table 5 - Outcome expectation (N=230)**

| Item  | Mean        | Standard Deviation | Interpretation  |
|---|-------------|--------------------|-----------------|
| If I work hard, I will get excellent results.   | 4.68        | .584               | High            |
| If I succeed in the Vocational College, I will have a bright opportunity to achieve my ambitions.                                       | 4.51        | .685               | High            |
| If I get a good result in the exam, I will have the opportunity to venture into my chosen career.                                       | 4.54        | .645               | High            |
| If I succeed in school, I will live a better life to the end of life.   | 4.17        | .844               | Moderate        |
| If I get good exam results, I will have the opportunity to venture into a wider career field.   | 4.44        | .701               | Moderate        |
| If I find out about other career fields, I will have the opportunity to choose a better career for myself.                              | 4.03        | .869               | Moderate        |
| If I can identify my interests and abilities, I will have the opportunity to make good career choices.                                  | 4.39        | .738               | Moderate        |
| If I know about the field of study required for a particular career, I will make better career choices.                                 | 4.20        | .736               | Moderate        |
| If I spend more time gathering information about careers, I can learn about the things I need to know to make the right career choices. | 4.31        | .690               | Moderate        |
| <b>Overall</b>  | <b>4.36</b> | <b>.45</b>         | <b>Moderate</b> |

The study found that the career goal level of vocational college students is high (refer to Table 6). The result indicated that the students were still unclear about their next steps. They have low knowledge of the career path and take less action to achieve their career goals. Self-confidence and knowing the goals or targets of the future career are critical to facilitate exploring knowledge related to the field of study they chose in the vocational college.

**Table 6 - Career goal (N=230)**

| Item   | Mean        | Standard Deviation | Interpretation  |
|--|-------------|--------------------|-----------------|
| I intend to spend more time learning about career options.                                     | 4.10        | .825               | Moderate        |
| I plan to talk to a lot of people about careers.   | 4.04        | .829               | Moderate        |
| I am determined to learn more about my abilities and interests.                                | 4.42        | .681               | Moderate        |
| I intend to gain all the necessary knowledge in my chosen career.                              | 4.36        | .684               | Moderate        |
| I plan to talk to teachers/counselors in my school about career options in a particular field. | 3.88        | .861               | Moderate        |
| <b>Overall</b>   | <b>4.16</b> | <b>.56</b>         | <b>Moderate</b> |

Table 7 below showed the level of career planning among vocational college students. The career planning level refers to the extent to which students plan the career they want to pursue. The results of the analysis of the study showed that vocational college students have a high career planning level with a mean of 3.69 (SD=.60). Overall, the vocational college students showed high awareness, concerns, and involvement in making academic and employment choices.

In general, students at the secondary level are already thinking and planning about their future academic or career paths. In this study, the students showed moderate awareness, concerns, and involvement in deciding their academic and career pathways. This finding aligns with Nor Amalina’s (2004) findings, which found that students’ career planning is at a moderate level.

Vocational college students should already plan and know how to achieve their dream careers. If a student is already thinking about a field of study or career but has yet to seek any relevant information, he will have limited information on the career. This situation will hinder him from making career decisions. Azizi and Fariza (2008) found that career choice at an early stage is important and stated that students’ knowledge of the current job situation would influence their career choice. Therefore, students should increase their career planning level, particularly when studying career-oriented courses. Students should also plan their future careers according to their knowledge of a particular field. This can further increase their level of career certainty, making it easier for them to make career decisions.

The findings for career exploration showed that vocational college students have a moderate level of career exploration with a mean of 3.81 (SP=.57). The study’s findings showed that vocational college students refer to the sources closest to them and provide as much helpful information as possible to help them make career plans.

**Table 7 - Career planning (N=230)**

| Item   | Mean        | Standard Deviation | Interpretation  |
|--|-------------|--------------------|-----------------|
| Find information about the field of study being pursued  | 3.69        | .98                | Moderate        |
| Looking for information on job opportunities in the field of study   | 3.73        | .99                | Moderate        |
| Talk about Career Planning with adults (examples: parents, teachers, counselors, etc.) who know me.  | 4.05        | 1.09               | Moderate        |
| Taking a course that can help me choose a suitable career field once I graduate.   | 3.97        | 1.01               | Moderate        |
| Take external courses (for example, sewing courses, cooking courses, wiring courses, etc.) that can guide me during on-the-job training)                       | 3.29        | 1.25               | Low             |
| Participate in activities inside and outside of college that can help me study better during my studies here.  | 3.60        | 1.12               | Moderate        |
| Participate in school co-curricular activities (e.g., career clubs, invention clubs, etc.) that can help me choose the right type of job upon graduation here. | 3.57        | 1.16               | Moderate        |
| Look for a part-time job during the holidays to help me determine the type of job I can apply for later.   | 3.43        | 1.20               | Low             |
| Find solutions to things that might make it difficult for me to get the training or job I want.  | 3.40        | 1.08               | Low             |
| Getting the training needed to get my dream job.   | 3.66        | .98                | Moderate        |
| Getting the education needed to get my dream job.  | 3.94        | .89                | Moderate        |
| Gain experience in my dream job.   | 4.03        | .95                | Moderate        |
| Looking for a job as soon as I finish school.  | 4.01        | .92                | Moderate        |
| Doing things can help me be a good employee, so it is easy to get a job.   | 4.01        | .87                | Moderate        |
| Knowing the things to do in the job I want.  | 3.89        | .96                | Moderate        |
| Knowing the abilities needed to do the job I want.   | 3.81        | 1.00               | Moderate        |
| Knowing where to work for the job I want to.   | 3.59        | 1.13               | Moderate        |
| Field of study or training required to obtain the job.   | 3.85        | .97                | Moderate        |
| How much manpower is needed in the field in the future?  | 3.60        | 1.06               | Moderate        |
| Different ways to venture into that field of work.   | 3.30        | 1.13               | Low             |
| Promotion opportunities in the job.  | 3.55        | 1.14               | Moderate        |
| The number of days and hours worked in a week for the job.   | 3.55        | 1.14               | Moderate        |
| <b>Overall</b>   | <b>3.69</b> | <b>.60</b>         | <b>Moderate</b> |

The results in Table 8 showed that the students have a moderate level of career exploration as the students are still at the stage of seeking information from various sources. They were more likely to refer to parents, teachers, and the internet for information. Furthermore, the students are less likely to consult school counsellors for information.

Another finding is that the students have a moderate perception of how much valuable information is obtained from people or sources they refer to in helping them explore career Planning. This shows that the information obtained is quite useful, and parents, teachers, and even the internet are sources of career information for students. Therefore, parents and teachers are vital in providing students with knowledge and information about academic and career paths.

**Table 8 - Career exploration (N=230)**

| Item   | Mean        | Standard Deviation | Interpretation  |
|--|-------------|--------------------|-----------------|
| <b>Will you refer to the people or resources listed below to obtain information in planning to work or further your study?</b> |             |                    |                 |
| Parents.   | 4.73        | .714               | High            |
| Siblings.  | 3.05        | 1.131              | Low             |
| Friends.   | 3.75        | .845               | Moderate        |
| Relatives  | 3.51        | 1.124              | Moderate        |
| Teachers   | 4.15        | 1.026              | Moderate        |
| School Counsellors   | 3.03        | 1.076              | Low             |
| Adults other than those mentioned above who are knowledgeable and capable of helping make decisions                            | 3.69        | 1.064              | Moderate        |
| Print media (school catalogs, books, magazines, etc.).   | 3.40        | 1.101              | Low             |
| People working in the field or at the college are being considered.  | 4.01        | 1.006              | High            |
| TV shows, dramas, movies.  | 3.20        | 1.138              | Low             |
| Internet.  | 4.12        | 1.010              | High            |
| <b>Total</b>   | <b>3.85</b> | <b>.61</b>         | <b>Moderate</b> |



| <b>How much useful information is obtained from the people or sources listed below to help you plan for the future?</b> |             |            |                 |
|---|-------------|------------|-----------------|
| Parents.  | 4.60        | .757       | High            |
| Siblings.   | 3.69        | 1.151      | Moderate        |
| Friends.  | 3.59        | .920       | Moderate        |
| Relatives.  | 3.45        | 1.143      | Moderate        |
| Teachers.   | 4.33        | .870       | High            |
| School counselor.   | 3.92        | 1.103      | High            |
| Adults other than those mentioned above who are knowledgeable and can help make decisions                               | 3.59        | 1.097      | Moderate        |
| Print media (school catalogs, books, magazines, etc.).  | 3.27        | 1.079      | Low             |
| People who are working in the field or at the institute or college.   | 4.00        | .993       | High            |
| TV shows, dramas, movies.   | 3.10        | 1.181      | Low             |
| Internet.   | 4.02        | .976       | High            |
| <b>Total</b>  | <b>3.78</b> | <b>.62</b> | <b>Moderate</b> |
| <b>Overall</b>  | <b>3.81</b> | <b>.57</b> | <b>High</b>     |

The analysis results in Table 9 showed that vocational college students have a high level of self-efficacy with a mean of 4.02 (SD=.54). Vocational College students have identified the career options that can provide high satisfaction and learned about the careers they may pursue. This shows that vocational education is increasingly becoming the choice for tertiary education among community members and students feel confident to study in vocational colleges. This study found that the students in this study have a high level of self-efficacy. This finding contrasts with the findings of Abd Rahim et al. (2011) and Mohamad et al. (2008), which found that students' self-efficacy is moderate. The high self-efficacy level among vocational college students allows them to make accurate and precise career decisions.

**Table 9 - Self-efficacy (N=230)**

| <b>Item</b>   | <b>Mean</b> | <b>Standard Deviation</b> | <b>Interpretation</b> |
|---|-------------|---------------------------|-----------------------|
| Determine the career choice that is thought to suit your personality.                 | 4.03        | .753                      | High                  |
| Identify the career that best suits your skills.                                      | 4.10        | .722                      | High                  |
| Choose the career option that works best for you from your ambitions.                 | 3.92        | .767                      | Moderate              |
| Find out more about the career you love.  | 4.07        | .787                      | High                  |
| Match your skills, life values, and interests with relevant jobs.                     | 4.01        | .823                      | High                  |
| Get the information to make the right choice about the career path you want to pursue | 3.94        | .727                      | Moderate              |
| Find out more about job prospects that can meet your needs.                           | 3.89        | .828                      | Moderate              |
| Identify the career that best suits your interests.                                   | 4.20        | .762                      | High                  |
| <b>Overall</b>  | <b>4.02</b> | <b>.54</b>                | <b>High</b>           |

This study used Pearson correlation analysis to determine the relationship between independent and dependent variables (refer Table 10). The correlation analysis result indicated a significant and positive relationship between the learning experience and career certainty, with a correlation coefficient of  $r = .279$ ,  $p = .001$ . However, the relationship between these variables is weak (Moore et al., 2016). This shows that Learning Experience has a weak, positive relationship with career certainty. This means that a high learning experience can help students make career decisions. Meanwhile, the value of the correlation coefficients for outcome expectation is  $r = .122$ ,  $p = .033$ , and career Goal is  $r = .116$ ,  $p = .040$ . This indicates that the relationship is weak. Furthermore, the correlation analysis results showed a non-significant and positive relationship between career planning and exploration with career certainty. The correlation coefficient value for career planning is  $r = .136$ ,  $p = .019$ , and career exploration is  $r = .126$ ,  $p = .028$ , and this relationship is weak. The correlation analysis for self-efficacy also showed a non-significant and positive relationship with career certainty. The correlation coefficient value for Career Planning is  $r = .104$ ,  $p = .058$ , and the relationship is weak.

The correlation analysis showed that outcome expectations and career goals have a non-significant and positive relationship with career certainty. The correlation coefficient value for outcome expectation is  $r = .122$ ,  $p = .033$  and  $r = .116$ ,  $p = .040$  for a career goal. and this relationship is weak. Meanwhile, the correlation analysis results showed a non-significant and positive relationship with career certainty for career planning and exploration. The correlation coefficient value for career planning is at  $r = .136$ ,  $p = .019$ , and career exploration is at  $r = .126$ ,  $p = .028$ . This relationship is weak. The correlation analysis for self-efficacy also showed a non-significant and positive relationship with career certainty. The correlation coefficient for career planning is  $r = .104$ ,  $p = .058$ , and the relationship is weak.

A moderately significant and positive relationship exists between the learning experience and career certainty. Despite having an influential role, the career-related learning experience can play a role in forming self-efficacy and outcome expectations (Lent & Brown, 1994). According to SCCT, one's learning experience is based on the experience

of self-efficacy and outcome expectations formed by the source person and the contextual background. Therefore, students' learning experience is considered essential in forming interests, career choices, and career performance (Schaub & Tokar, 2005). However, there are few empirical studies in vocational development on learning experience despite having an essential role in SCCT (Schaub & Tokar, 2005; Lent et al., 2017).

**Table 10 - Pearson correlation analysis with career certainty**

| Variable            | Correlation Coefficient (r) | Strength of Relationship |
|---------------------|-----------------------------|--------------------------|
| Learning Experience | .279                        | Very Weak                |
| Career Planning     | .136                        | Very Weak                |
| Career exploration  | .126                        | Very Weak                |
| Self-Efficacy       | .104                        | Weak                     |
| Outcome expectation | .122                        | Weak                     |
| Career Goal         | .116                        | Weak                     |

Outcome expectations and career goals have been found to have an insignificant but positive relationship with career certainty. These findings align with Betz and Voyten (1997), which related high career certainty to outcome expectations and career goal. In this regard, students who anticipate and set future career goals will experience low career anxiety. They are likely to make career decisions based on expectations and goals for their career. Students should already anticipate the career they will pursue based on their interests and abilities. Therefore, setting a career goal for the future must be done from the beginning of school, specifically in Form 1.

Career planning and career exploration also showed an insignificant and positive relationship with career certainty. These findings are supported by Betz and Voyten (1997), which found that high career certainty will support career planning and the career development process. This finding aligns with Prideaux and Creed (2001) and Mazlina (2002), who asserted that high career certainty indicates a high level of career exploration. In this light, career exploration is essential for students to obtain careers. Efficient, effective, and guided planning and career exploration activities enable students to recognize their interests, values, and abilities. Meanwhile, students' learning experience shows an insignificant and negative relationship, and the relationship is weak. Table 11 below of Analysis of Variance from multiple regression showed a significant relationship (p-value=.003) between Career Certainty and Learning Experience using the stepwise regression method.

**Table 11 - Career certainty model analysis**

| Model      | Sum Squared | df  | Mean Squared | F      | Sig. |
|------------|-------------|-----|--------------|--------|------|
| Regression | 9.365       | 1   | 9.365        | 19.300 | .001 |
| Residual   | 110.632     | 228 | .485         |        |      |
| Total      | 119.996     | 229 |              |        |      |

The results showed that the correlation between the independent and dependent variables is moderately high for model 1 (learning experience) with  $r = .279$ . It was also found that all the independent variables could explain that model  $1 = 7.8\%$ . This regression is significant with  $F(1,228) = 19,300, p < .001$ . The study found that the independent variables are positively related to Beta (learning experience) = .491. This indicates that the regression coefficient in the population from which the sample was obtained is positive,  $t = 4.393, p < .001$ . Table 12 below shows that self-efficacy predicts career certainty. The regression equation for this analysis is  $y = .491 + 1.141$

**Table 12 - Learning experience predicts career certainty**

| Variable            | B    | Beta (β) | t     | p-value | r <sup>2</sup> | Contribution |
|---------------------|------|----------|-------|---------|----------------|--------------|
| Learning Experience | .491 | .279     | 4.393 | .000    | .078           | 7.8%         |

This analysis shows that the factor influencing the career certainty of vocational college students is learning experience = 27.9% (moderate contribution). The high level of student learning experience can increase students' confidence in making their career decisions. Creed et al. (2007), Lent et al. (1994), Bandura (1986), and Betz and Voyten (1997) stated that Self-Efficacy is a motivational variable that influences focus, initiation, and strength of action and is the best predictor for career certainty. In the meantime, Bandura (1977, 1982, 1986) provides a solid theoretical case for developing self-efficacy or learning experience. The learning experience is a critical theoretical mechanism that fosters self-efficacy. It can also enhance an individual's self-efficacy, and its influence differs from others as it depends on how one evaluates the experience cognitively. Betz (2007) states that learning experiences play an essential role in understanding the early development of self-efficacy and planning intervention programs for low or weak Self-Efficacy. In conclusion, a high learning experience can enhance self-efficacy and increase students' confidence in career decisions.

Therefore, the learning experience is a factor that influences the career certainty of vocational college students and the characteristics of students who have career certainty and high learning experience.

## 5. Implication and Conclusion

Certainty in making students' career choices can be improved by providing adequate information on their chosen career field. Abdullah (2019) stated that providing students with quality, up-to-date, and comprehensive knowledge can help them utilize their academic knowledge more effectively. Students need it all in exploration and self-preparation when exploring opportunities and making future career choices. Students also need guidance to focus and rely on themselves in understanding and exploring their talents and interests. Students must explore career choices with an open mind as their interests will likely change. Moreover, students' intellectual and personality development needs to be challenged while still in school.

Teachers and school administrators should play an active role in initiating career exploration activities for students while studying. Career fairs, career talks, tours, and other career-related activities are beneficial to spark interest among students. The findings made in this study provide the basis for future studies on the role of career exploration as a variable and other career-related fields. This study provides valuable information for academics and faculty involved in planning curriculum structures and career education programs for students in technical and vocational fields.

In today's innovative, digital, and global world, social support and career self-efficacy are important factors influencing the development of career certainty among students. These factors can influence an individual's career choice directly or indirectly. At the same time, early career exploration among students influences their career choices. Career exploration helps ensure their interests match the job demands of the market. Even small-scale activities and exposure to the job market can guide students in choosing their careers.

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## References

- Ahmed, K. A., Sharif, N., & Ahmad, N. (2017). Factors Influencing Students' Career Choices: Empirical Evidence from Business Students. *Journal of Southeast Asian Research*, 2017(2017), 1-15. doi:10.5171/2017.718849
- Ali, R., & Shafiq, F. (2019). Student's Experiences of Career Counselling and Their Perceptions of Outcomes in Rawalpindi (Pakistan) Colleges. *Pertanika Journal of Social Sciences and Humanities*, 27(T2), 139-153. <http://www.pertanika.upm.edu.my/pjssh/browse/special-issue?article=JSSH-1604-2016>
- Bandura, A. (1986). *Social Foundation of Thought and Action: A Social Cognitive Theory*. Prentice Hall.
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining the appropriate sample size in survey research appropriate sample size in survey research. *Information Technology, Learning and Performance Journal*, 19(1), 43-50. doi:10.1109/LPT.2009.2020494
- Betz, N. E. (2007). Career self-efficacy: Exemplary Recent Research and Emerging Directions. *Journal of Career Assessment*, 15(4), 403-422. doi:10.1177/1069072707305759
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation Of a Short Form of The Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment*, 4(1), 47-57. doi:10.1177/106907279600400103
- Betz, N. E., & Voyten, K. K. (1997). Efficacy and Outcome Expectations Influence Career Exploration and Decidedness. *The Career Development Quarterly*, 46(2), 179-189. doi:10.1002/j.2161-0045.1997.tb01004.x
- Blustein, D. L. & Phillips, S. D. (1988). Individual and Contextual Factors In Career Exploration. *Journal of Vocational Behavior*, 33(2), 203-216. doi:10.1016/0001-8791(88)90056-5
- Borg, T., Bright, J. E., & Pryor, R. G. (2014). High School Students—Complexity, Change and Chance: Do the Key Concepts Of The Chaos Theory Of Careers Apply? *Australian Journal of Career Development*, 23(1), 22-28. doi:10.1177/1038416214523394
- Cho, H. (2017). The Role of Career Counselling In Job And Career Development. *Pertanika Journal of Social Sciences and Humanities*, 25(S), 29-38. <http://www.pertanika.upm.edu.my/pjssh/browse/special-issue?article=JSSH-S0422-2017>
- Cochran, W. G. (1977). *Sampling Techniques*. John Wiley & Sons, Inc. (3rd ed.). John Wiley & Sons.

- Creed, P. A., Patton, W., & Prideaux, L. A. (2007). Predicting Change Over Time in Career Planning and Career Exploration for High School Students. *Journal of Adolescence*, 30(3), 377–392. doi: 10.1016/j.adolescence.2006.04.003
- Fizer, D. (2013). Factors affecting career choices of college students enrolled in agriculture (Master's thesis). University of Tennessee, Martin. [https://www.academia.edu/download/36879398/Influences\\_on\\_Students\\_Choice\\_of\\_College\\_Major.pdf](https://www.academia.edu/download/36879398/Influences_on_Students_Choice_of_College_Major.pdf)
- Gushue, G. V., Clarke, C. P., Pantzer, K. M. & Clarke, C. P. (2006). The Relationship of Career Decision-Making Self-Efficacy, Vocational Identity and Career Exploration Behavior in African American High School Students. *Journal of Career Development*, 33(1), 19–28. doi:10.1177/0894845305283004
- Hirschi, A. (2018). The fourth industrial revolution: Issues and implications for career research practice. *The Career Development Quarterly*, 66(3), 192-204. doi:10.1002/cdq.12142
- Humayon, A. A., Raza, S., Khan, R. A., & Ansari, N. U. A. (2018). Effect Of Family Influence, Personal Interest and Economic Considerations on Career Choice Amongst Undergraduate Students in Higher Educational Institutions of Vehari, Pakistan. *International Journal of Organizational Leadership*, 7(2), 129–142. doi:10.33844/IJOL.2018.60333
- Jamaluddin, R., Ali, M. H., Kadir, S. A., & Kamis, A. (2019). Impact of fashion entrepreneurship programme on entrepreneurial interests, intention and competencies. *Journal of Technical Education and Training*, 11(1), 119-128. <https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/3125/2128>
- Kazi, A. S., & Akhlaq, A. (2017). Factors affecting students' career choice. *Journal of Research and Reflection in Education*, 11(2), 187-196. <http://www.ue.edu.pk/jrre>
- Khalid, N. (2016). A Study of Students' Choice of Higher Education in Achieving Their Career Aspirations. *Pertanika Journal of Social Sciences and Humanities*, 24(S), 131-138. <http://www.pertanika.upm.edu.my/pjssh/browse/special-issue?article=JSSH-S0270-2016>
- Kunnen, E. S. (2013). The effects of career choice guidance on identity development. *Education Research International*, 2013, 1-9. doi:10.1155/2013/901718
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward A Unifying Social Cognitive Theory of Career and Academic Interest, Choice and Performance. *Journal of Vocational Behavior*, 45(1), 79–122. doi: 10.1006/jvbe.1994.1027
- Lent, R. W., Ireland, G. W., Penn, L. T., Morris, T. R., & Sappington, R. (2017). Sources Of Self-Efficacy and Outcome Expectations for Career Exploration and Decision-Making: A Test of The Social Cognitive Model of Career Self-Management. *Journal of Vocational Behavior*, 99(2017), 107–117. doi:10.1016/j.jvb.2017.01.002
- Mohamad, M. H., Radzali, M. A., & Azhar, F. (2008). Aspirasi Kerjaya Di Kalangan Pelajar Kolej Komuniti *Persidangan Pembangunan Pelajar Peringkat Kebangsaan 2008*. [Career Aspirations Among Community College Students 2008 National Student Development Conference]. Universiti Teknologi Malaysia.
- Mohamed, H., Puad, M. H. M., Rashid, A. M., & Jamaluddin, R. (2021). Workplace Skills and Teacher Competency from Culinary Arts Students' Perspectives. *Pertanika Journal of Social Science and Humanities*, 29(1), 107-125. doi:10.47836/pjssh.29.1.06
- Moore, D. S., McCabe, G. P., & Craig, B. A. (2016). *Introduction To the Practice of Statistics*. W. H. Freeman and Company New (9th ed.). W. H. Freeman and Company.
- Nyamwange, J. (2016). Influence of student's interest on career choice among first-year university students in public and private universities in Kisii county, Kenya. *Journal of Education and Practice*, 7(4), 96–102. <https://www.iiste.org/>
- Pereira, A. C., & Romero, F. (2017). A Review of The Meanings and The Implications of The Industry 4.0 Concept. *Procedia Manufacturing*, 13(2017), 1206–1214. doi:10.1016/J.PROMFG.2017.09.032
- Prideaux, L., & Creed, P. A. (2001). Career Maturity, Career Decision-Making Self-Efficacy and Career Indecision: A Review of The Accrued Evidence. *Australian Journal of Career Development*, 70(3), 1-22. doi: 10.1177/103841620101000303
- Puad, M. H. M., & Desa, H. M. (2020). Dissecting Perceptions of New Graduates on Work Orientation and Self Confidence In Employability Skills Training Program. *Universal Journal of Educational Research*, 8(1A), 70-75. doi:10.13189/ujer.2020.081310
- Quadri, M. (2018). Influence of career choice on professional and job commitment of librarians in selected libraries in Oyo and Ogun states, Nigeria. *Library Philosophy and Practice*, 1729, 1-13. <https://digitalcommons.unl.edu/libphilprac/1729/>

- Rashid, A. M., Bakar, A. R., Asimiran, S., & Tieng, L. P. (2009). Career Development Interventions in Secondary Schools in The State of Terengganu, Malaysia. *European Journal of Social Sciences*, 8(1), 62-67. [https://europeanjournalofsocialsciences.com/ejss\\_issues.html](https://europeanjournalofsocialsciences.com/ejss_issues.html)
- Ruslan, N. A. (2004). *Perancangan Kerjaya: Satu Tinjauan Terhadap Persediaan Mahasiswa Islam Tahun Empat, Sarjana Muda Pengurusan, Fakulti Pengurusan dan Pembangunan Sumber Manusia*. [Career Planning: An Overview of the Preparation of Fourth Year Islamic Students, Bachelor of Management, Faculty of Management and Human Resource Development]. Universiti Teknologi Malaysia.
- Serbes, M. & Albay, M. (2017). Importance of career planning and development in education. *International Journal of Social Sciences & Educational Studies*, 4(2), 149-154. doi:10.23918/ijsses.v4i2sip149
- Schaub, M., & Tokar, D. M. (2005). The role of personality and learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, 66(2), 304–325. doi:10.1016/j.jvb.2004.09.005
- Thompson, A. S., & Lindeman, R. H. (2008). *Career Development Inventory Volume 1: User's Manual*. Palo Alto, CA Consulting Psychologists Press. <http://www.vocopher.org>
- World Bank. (2019). *World Development Report 2019: The changing nature of work*. World Bank. <https://elibrary.worldbank.org/doi/pdf/10.1596/978-1-4648-1328-3>
- Xu, H., Hou, Z. J., & Tracey, T. J. G. (2013). Relation Of Environmental and Self-Career Exploration with Career Decision-Making Difficulties in Chinese Students. *Journal of Career Assessment*, 22(4), 654–665. doi:10.1177/1069072713515628
- Yahaya, A., & Kassim, F. (2008). Faktor-Faktor yang Mempengaruhi Pelajar Tingkatan Empat Memilih Aliran Kejuruteraan Letrik Dan Elektronik Sebagai Pembentuk Awal kerjaya Di Sekolah Menengah Teknik Di Tawau, Sabah. [ Factors Influencing Form Four Students Choosing Electrical and Electronics Engineering Streams as Early Career Builders in Technical High School in Tawau, Sabah]. *Journal of Mathematics Education*, 113. <http://eprints.utm.my/id/eprint/6023/>
- Yusop, A. H. M. (2002). Kesediaan menceburi kerjaya perguruan: Satu kajian kes di kalangan pelajar-pelajar IPT aliran Pendidikan Teknik dan Vokasional. *Seminar Kebangsaan Pendidikan Guru 2002*. [Willingness to embark on a teaching career: A case study among Technical and Vocational Education IPT students. National Seminar on Teacher Education 2002]. <http://eprints.uthm.edu.my/id/eprint/4112/>
- Yusran, N. A., Puad, M. H. M., & Omar, M. K. (2021). Role Of Career Exploration in Influencing Career Choice Among Pre-University Student. *Pertanika Journal of Social Science and Humanities*, 29(S1), 77-99. doi:10.47836/pjssh.29.s1.05