

Factors Influencing the Involvement of TVET Graduates in Career Selection in the Technical Sector in Malaysia

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Abstract

Career selection is an important decision that influences an individual's career path. However, there are significant differences in career choices between men and women in the technical sector. Data were distributed through a questionnaire to TVET graduates around Malaysia. This study examines the influence of gender in the technical sector according to the field. Additionally, the study identifies other factors such as personality, changes in interest, obstacles, salary, and lack of prospects that influence career selection in the TVET sector. This quantitative study will use a survey method using a set of questionnaires to 246 students of Community Colleges, Polytechnics, Institute Kemahiran Belia Negara and ADTEC who were randomly selected in a stratified manner. The instrument used is taken from the ROSS Career Selection Model and has an alpha value of 0.882. The study samples were selected based on the recommendations of the G-Power application; a total of 246 people were used for analysis involving mean, t-test, one-way ANOVA, and Multiple Regression. Data were collected manually and through Google Forms and analyzed using SPSS 27.0. The analysis found that 56% worked according to their field, and 44% did not work according to their TVET field of study. The t-test value is 0.856 and the value ($p = 0.394 > 0.05$), indicating no significant difference between the level of involvement of TVET graduates based on gender. The ANOVA test found a significant value ($p=0.010 < 0.05$), showing a significant difference between the level of involvement of TVET graduates in career selection in the technical sector based on the institution category. Multiple regression results found five factors to be influential predictors in TVET career selection: Lack of Prospects ($r=.495$), Personality ($r=.584$), Career Obstacles ($r=.699$), Salary ($r=.557$), and Changes in Interest ($r=.494$). The findings of this study can provide benefits and serve as guidance for management to assist TVET graduates in future career selection in the technical sector.

Keywords: Career Selection; Career Obstacles; Mismatch; Personality; TVET Graduates.

1.0 Introduction

Technical and Vocational Education and Training (TVET) in Malaysia has developed and created career pathways and job opportunities in skill fields compared to academic fields. According to a report Ministry of Higher Education in 2023, 94.5 percent of TVET graduates have successfully obtained jobs which shows an increase compared to 2020 by 87%. The Graduate Tracer Study report states that community college graduates recorded the highest employability rate at 98 percent. Additionally, TVET increases the country's economic productivity and competitiveness (Muhamad et al., 2022). Although the number of graduates working has

increased compared to the previous year, there are still TVET graduates who are unemployed and still need to get jobs. According to the report of the National Economic Action Council, one of the factors of unemployment among graduates is that there is mismatch between the competencies required by the industry and the skills possessed by graduated (Abdul Halim, 2019). The findings of Hanapi and Kamis (2017) also indicate that the mismatch between technical skills and employability skills is one of the factors contributing to unemployment among graduates. This finding aligns with Abdullah (2001) most unemployed graduates do not receive job offers, but the tasks offered may not suit them.

Choosing the right career that matches one's personality is essential in determining the daily life pattern of every individual. Fatin Noor Amirah's (2019) study proves that choosing a job that provides enjoyment is important for everyone. Family demands cause some individuals to be more inclined to work reluctantly and less committed to the job (Suhaila et al., 2015). The mismatch between the skills acquired during studies and actual job tasks can reduce job satisfaction. Working in fields that do not match their studies, they tend to experience low job satisfaction. This mismatch can cause dissatisfaction, stress, and demotivation in the workplace. This study identifies several factors that do not match the field when examining the involvement of TVET graduates in career selection.

Therefore, this study was developed to examine the level of involvement of TVET graduates in career selection. The researchers also identify the strength of factors influencing career planning selection in the technical sector in Malaysia. The objectives of this study are to:

- i. Identify the level of involvement of TVET graduates in career selection in the TVET sector according to the field.
- ii. Identify the differences that influence the involvement of TVET graduates in career selection based on gender.
- iii. Identify whether differences influence the involvement of TVET graduates in career selection based on institutions.
- iv. Identify predictive factors in the involvement of TVET graduates in career selection.

Technical and Vocational Education and Training (TVET) is a crucial element in the economic and social development of a country. In Malaysia, TVET is seen as a critical component in strengthening a highly skilled workforce. A study by Tazifuzin (2023) emphasizes that TVET plays an essential role in reducing the unemployment rate among youth in Malaysia. Additionally, TVET is seen as a means to produce highly skilled human resources in line with the needs of Industry 4.0, which is one of the country's essential agendas in education (Zafir & Mohd Nazmy, 2019). A study by Mohd Zairulniza et al. (2020) found that TVET graduates in Malaysia show high employability rates in the industry.

TVET graduates should plan their career selection to ensure the best career choice. It should align with the courses taken by the students during their studies to enable them to be competent in completing the tasks assigned when they work. Individuals tend to work under pressure when there is a mismatch in their field of study. This mismatch can cause dissatisfaction, stress, and loss of motivation in the workplace. Magdalena (2017) support this finding by stating that although graduates have secured employment, in the long term, those working outside their field of study and performing tasks unrelated to the knowledge and skills acquired in their institutions will impact organizational productivity. This is due to decrease job satisfaction and low wages or salaries. Students who choose fields that match their interests and abilities are more satisfied and successful in their careers. Early assessment of students' interests and abilities can enhance the suitability of career selection in the TVET field.

This study uses the TVET Student Career Development Path Model, also known as the ROSS career model. Ahmad Rosli Mohd Noor (2016) developed this model based on Super's Career Development Theory (1971) and Gottfredson's Career Aspirations Theory (1981). The model was later expanded into a career path model for TVET students.

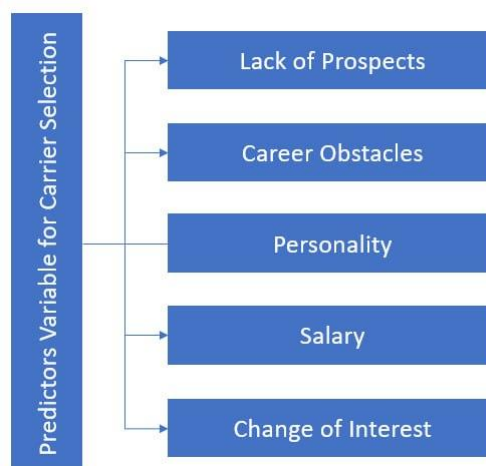


Figure 1: Conceptual Framework of the Study

2.0 Methodology

A quantitative study was conducted on 246 respondents consisting of TVET graduates of Community Colleges (168 respondents), Polytechnics (23 respondents), and other TVET institutions (56 respondents). The respondents were selected through stratified random sampling, which contribute to the disparity between institutions. The sample size selection was determined using the *G-Power sample selection software*. The *G-Power* software was chosen because the study population could not be identified, making the use of *G-Power* appropriate to determine the minimum sample size for this study.

The research instrument used questionnaires to measure and collect the required data. The questionnaire contains two sections: A and B. Section A includes demographic information of TVET graduates. Section B includes information about TVET graduates working according to their field or not and factors influencing career planning selection that affect the tendency of TVET graduates in career selection. This instrument was taken from Ahmad Rosli's (2016) study and had an alpha value of 0.882, validated by three counselling experts.

The analysis was conducted using SPSS 27.0 software to address the research questions. For the first research question, percentage values were calculated to identify the level of involvement of TVET graduates in career selection in the TVET sector according to the field. Inferential statistics involving T-test were used to examine the differences influencing the involvement of TVET graduates in career selection based on gender and institution. Meanwhile, multiple regression tests examined the relationship between career planning selection factors and institutions among TVET graduates.

Section A contains data showing the respondents' backgrounds. A bar chart was used to display this information and provide clarity. For section B information, the data shows the respondents' answers to research questions 1 and 2. The questionnaire items for section B were measured using a Likert scale. The researcher used percentage values to facilitate the data analysis process for research question 1. Multiple regression analysis was used to determine the five predictor factors (Lack of Prospects, Personality, Career Obstacles, Salary, and Change of Interest) that influence the involvement of TVET graduates in careers in the technical sector in Malaysia (research question 4).

4.0 Results and Discussion

A total of 246 TVET graduates responded to the survey. 168 respondents (68.3%) were from Community Colleges, 23(9.4%) were from Polytechnics, and 55 (22.3%) were from other institutions, as shown in Figure 2.

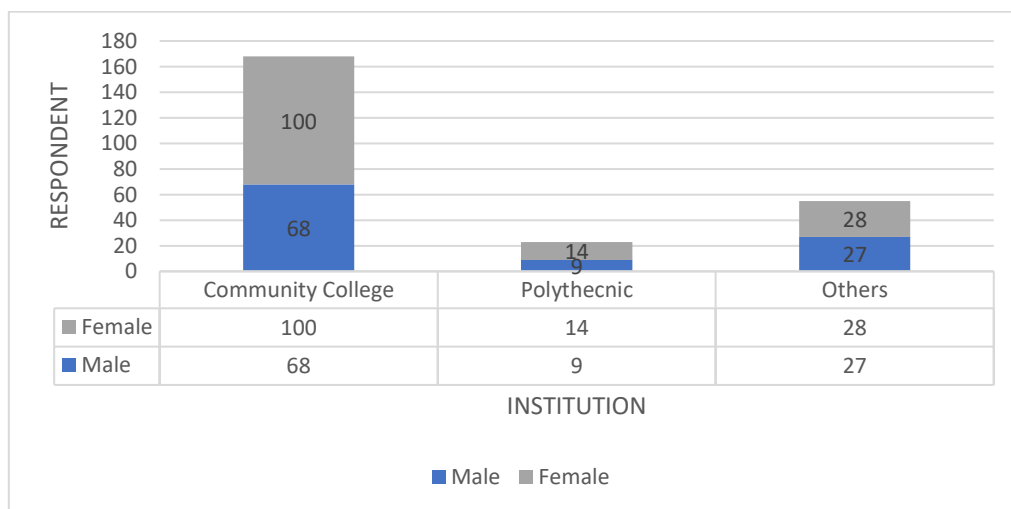


Figure 2: Respondent Demographics by Institution

This study successfully addressed the research questions posed:

- i. *Identify the level of involvement of TVET graduates in career selection in the TVET sector by field.*

Figure 3 shows that 138 respondents (56%) worked in their field, while 108 respondents (44%) worked outside their field. This indicates a relatively high percentage of TVET graduates working outside their field of study. This data aligns with Che Ros et al. (2021) findings, which found that many graduates from the TVET Institute of Human Resource Training, Sabah Zone, did not work in their field of study. Similarly, Muhamad Firdaus Che Amat (2019) found that while 100% of Diploma in Electronic Engineering (Communication) graduates were employable, only 35.3% worked in their field. Additionally, 50% of Electrical Technology Certificate graduates from three community colleges found jobs outside their field, according to Ahmad Rosli et al. (2018). Various factors have been identified as reasons for choosing careers outside the technical field of study.

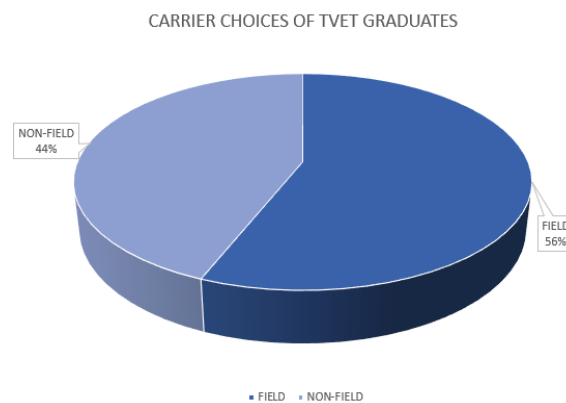


Figure 3: TVET Graduates' Involvement in Technical Sector Careers

- ii. *Determine whether differences influence TVET graduates' career selection involvement based on gender.*

Results show that TVET graduates who are not working in their field based on gender: males (57) and females (51). The mean score for female graduates (mean=4.0824) is slightly lower than that for male graduates (mean=4.1895). The t-test shows a t-value of 0.856 and a p-value of 0.394 (> 0.05), indicating no significant difference in the level of involvement of TVET graduates based on gender. This data clearly shows that the involvement of TVET graduates, whether male or female, is not influenced by career planning factors such as lack of prospects, carrier obstacles, salary, personality, and change of interest. This aligns with the findings of Mohamad M.M et al. (2023), who stated that job satisfaction as a Vocational College instructor is not influenced by gender. Studies by Zailroslawanee (2014) and Norlizawati (2020) also found no difference in career interests between male and female students. This indicates equal opportunities for male and female students to enhance awareness of their respective career selections.

Table 1: Gender Difference Analysis

Gender	n	mean	sd	t	sig.
Male	57	4.1895	0.69222	0.856	0.394
Female	51	4.0824	0.59756		
Total	108				

iii. Determine whether differences influence TVET graduates' career selection involvement based on the institution.

Table 2 shows the level of involvement of TVET graduates in career selection across three categories of institutions studied. The study used a one-way ANOVA test to see if there were any differences in the level of involvement of TVET graduates in career selection based on each institution category. The analysis found a significant value of 0.010, lower than 0.05, indicating a significant difference in the level of involvement of TVET graduates in career selection in the technical sector based on institutional categories. Thus, TVET institutions like community colleges, polytechnics, and other institutions influence career selection involvement in the TVET sector. The study by Syamhanim et al. (2023) states that the work-based learning approach in polytechnics helps graduates secure jobs after graduation. Each institution's planning is important in ensuring TVET graduates meet current industry needs and demands.

Table 2: TVET Graduates' Involvement by Institution

Program	Value df	Sig. p
Between Groups	2	0.010
Within Groups	105	
Total	107	

iv. Identify predictive factors in the involvement of TVET graduates in career selection.

Table 4 uses multiple regression analysis because five predictive career selection factors are expected to influence TVET graduates' involvement in careers in Malaysia's technical sector. The identified variables influencing career selection are Lack of Prospects, Personality, Career Obstacles, Salary, and Change of Interest. The results of the Multiple Regression Analysis in Table 3 show that all five factors contribute to career selection for TVET graduates. The analysis found an R2 coefficient of 0.501, indicating that the independent variables (Lack of Prospects, Personality, Career Obstacles, Salary, and Change of Interest) influence 50.1% of TVET graduates' career selection involvement. Salary returns are an essential source of income that determines their quality of life, while the minimum salary rate measures the service provided in each organization (Azura, 2013). Recognition and rewards in service motivate employees to remain enthusiastic and committed to their tasks (Ali Usman, 2010). Each individual working in the public or private sector is influenced by rewards and salary returns as work motivation (Azlinda Jaini, 2013). Moreover, Fatin Noor Amirah (2019) also proves that selecting a job that provides work enjoyment is important for each individual.

Table 3: Career Selection Predictive Factors

Predictive Factors	n	r	p
Lack of Prospects	108	0.495	0.000
Personality	108	0.584	0.000
Career Obstacles	108	0.699	0.000
Salary	108	0.557	0.000
Change of Interest	108	0.494	0.000
Predictors (constant): Change of Interest, Career Obstacles, Lack of Prospects, Salary, Personality			

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.708	0.501	0.476	0.35667

The analysis found that the t-value influences all predictor variables for Career Selection: Lack of Prospects, Personality, Career Obstacles, Salary, and Change of Interest. All these factors are positively and significantly related to Career Selection. The highest regression coefficient is for the Career Obstacles factor, at 0.392. This shows that the sample obtained has a positive regression coefficient ($t = 4.581$; $p < 0.05$). Multiple Regression Analysis shows significant contributions of predictive factors influencing career selection among TVET graduates. The analysis found Beta values for the Change of Interest factor ($\beta = 0.035$, $p > 0.00$), Salary ($\beta = 0.004$, $p > 0.00$), Career Obstacles ($\beta = 0.392$, $p < 0.00$), Personality ($\beta = 0.080$, $p < 0.00$), and Lack of Prospects ($\beta = 0.013$, $p < 0.00$) as significant predictors influencing career selection tendencies.

Table 5: Multiple Regression Analysis Results

Model	Unstandardized B	Coefficients Std. Error	t	p
(Constant)	2.038	0.227	8.983	0.000
Lack of Prospects	0.013	0.065	0.197	0.000
Personality	0.080	0.085	0.950	0.000
Career Obstacles	0.392	0.086	4.581	0.000
Salary	0.004	0.077	0.048	0.000
Change of Interest	0.035	0.063	0.557	0.000

Dependent Variable: Career Selection Factors

Regression Equation:

Career Selection,

$$y = .038 + 0.013 X1 + 0.080 X2 + 0.392 X3 - 0.004 X4 + 0.035 X5$$

X1 = Lack of Prospects

X2 = Personality

X3 = Career Obstacles

X4 = Salary

X5 = Change of Interest

In conclusion, all five variables influence career selection tendencies. The Career Obstacles factor is the most dominant factor affecting career selection by TVET graduates in employment. Family demands are among the barriers that cause some individuals to work under compulsion and give less commitment to their jobs (Suhaila, 2015). However, this study's findings contradict Nurul's (2020) study, which emphasized that interest negatively influences career selection. Nevertheless, most studies, such as Jasmi (2013), Ahmad Rosli (2016), and Zaidi et al. (2020), clearly show the role of interest in career selection.

4.0 Conclusion

Overall, this study successfully examined the predictive factors affecting career selection tendencies among TVET graduates. The Career Obstacles factor is the most dominant factor influencing TVET career selection. Further studies can delve deeper into the barriers to career selection. Additionally, considering the differences in the level of involvement of TVET graduates in career selection in the technical sector based on the institution category, further studies can examine these differences.

The findings of this study can guide management in assisting TVET graduates' involvement in careers in Malaysia's technical sector. However, institutions and the government must work together to provide suitable plans for TVET graduates and create more job opportunities. All parties involved must comprehensively implement all planned strategies to ensure success and a positive impact on TVET graduates, especially in career selection.

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Author Contributions

H. Abdullah: Conceptualization, Data Collection, Writing; **S. N. Nasuka:** Data Collection, Methodology, Writing; **N. A. Malik:** Discussion, Conclusion, Writing.

Conflict Of Interest

The manuscript has not been published anywhere else and is not being considered by any other journals. All authors have authorized the review, agree with the submission, and state they have no conflicts of interest in the work.

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