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An Analysis of Factors Influencing Vocational Graduates' Decision to Pursue Higher Education in Computer and Informatics Engineering

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Abstract: In the context of global competition and rapid technological advancement, vocational education plays a critical role in preparing students for direct entry into the workforce. Nevertheless, a growing number of vocational graduates are choosing to pursue higher education as a means to expand their career opportunities and social mobility. This study investigates the factors influencing such decisions, focusing on students from the Computer and Informatics Engineering Department at a vocational school in Indonesia. Using a mixed-methods design, quantitative data were gathered through structured questionnaires administered to 12th-grade students, while qualitative insights were obtained via in-depth interviews. The analysis reveals that Better Career Opportunities, Family Support, and Social Environment all have a statistically significant effect on students' decisions to pursue tertiary education. Among these, Social Environment emerged as the most influential factor, accounting for 32.4% of the variance, followed by Family Support (3.1%) and Career Opportunities (3.1%). These findings underscore the importance of peer influence, school climate, and familial encouragement in shaping educational aspirations beyond vocational training. The results contribute to a deeper understanding of post-secondary transition dynamics in vocational contexts and provide implications for policy and practice aimed at supporting students' academic advancement.

Keywords: Higher Education; Career Aspirations; Family Support; Peer Influence; Vocational Students.

1. Introduction

The rapid advancement of science and technology has significantly reshaped multiple facets of modern life, including how nations prepare their future workforce [1]. In the context of Indonesia, Vocational High Schools (Sekolah

Menengah Kejuruan, SMK) are pivotal in equipping students with applied skills tailored to industry needs. These institutions are designed to produce mid-level professionals capable of entering the job market immediately upon graduation, particularly in technical and industrial sectors [2]–[6]. As part of a broader national effort to improve workforce competitiveness, the Indonesian government has continuously promoted vocational education through programs such as SMK Pusat Keunggulan (Centers of Excellence), emphasizing the importance of aligning educational output with labor market demand [7], [8].

Despite the vocational orientation of SMK programs, there has been a noticeable shift in recent years in which graduates increasingly choose to pursue higher education. According to data from the Ministry of Education, Culture, Research, and Technology, although the majority of SMK graduates enter the workforce, a growing percentage—particularly from technological fields such as Computer and Informatics Engineering—opt to continue their studies at the tertiary level. This trend suggests an evolving perception of vocational education, where graduates seek not only immediate employment but also long-term career development through further academic qualification [9]–[11].

Career advancement is often cited as a primary driver behind this decision. Higher education is perceived as a gateway to broader professional opportunities and access to more stable employment [12]–[14]. In an increasingly knowledge-based economy, a university degree has become a fundamental requirement for upward mobility [15]–[17]. In addition, graduates recognize that technological fields are evolving rapidly, and staying competitive requires continuous learning and specialization.

Beyond economic and professional motivations, socio-cultural dimensions also influence post-secondary educational decisions. Family support—particularly parental encouragement and expectations—plays a critical role in shaping students' academic trajectories [18], [19]. The role of social environments, such as peer influence, school culture, and community values, also determines students' aspirations and readiness to continue their studies [20]–[22].

However, while existing studies provide valuable insights, most are focused on general vocational student populations and lack specificity regarding particular programs or local contexts. In the case of Computer and Informatics Engineering graduates at SMKN 1 Tanjung Raya—a vocational institution located in a semi-rural area—the decision to pursue higher education may be shaped by distinct contextual factors, such as digital access, school-industry linkages, and regional socio-economic conditions. These nuances remain underexplored in the current literature.

Addressing this gap, the present study aims to analyze the factors influencing Computer and Informatics Engineering graduates at SMKN 1 Tanjung Raya to

pursue higher education. By examining both internal motivations and external influences, this research seeks to contribute to a deeper understanding of educational mobility among vocational graduates and inform policies that promote inclusive and equitable pathways to higher education.

2. Material and methods

This study employed a mixed-methods approach that integrates both quantitative and qualitative research techniques. The rationale behind this approach was to gain a comprehensive understanding of the various factors influencing students' decisions to pursue higher education after graduating from vocational school. The combination of methods enabled the researchers to triangulate data and validate findings from different perspectives, thereby enhancing the robustness and credibility of the study.

The research was conducted at SMKN 1 Tanjung Raya, a vocational high school located in West Sumatra, Indonesia. The study population consisted of 66 twelfth-grade students enrolled in the Computer and Informatics Engineering Department. These students were selected as participants based on their imminent graduation and the relevance of their academic background to the topic under investigation.

2.1 Quantitative Method

The quantitative component of this research utilized a structured questionnaire distributed online via Google Forms. The instrument was designed to measure the impact of three independent variables on students' intentions to continue their education to the tertiary level. These variables included better career opportunities, family support, and the influence of the social environment. The dependent variable in this study was the students' decision to pursue higher education. Each construct was operationalized through multiple items using a Likert scale to facilitate statistical analysis.

2.2 Qualitative Method

To complement the quantitative findings, a qualitative method was employed through in-depth, semi-structured interviews. A total of 15 students were purposively selected to participate in the interviews, representing a diverse range of academic performance and socio-economic backgrounds. The interviews focused on capturing deeper insights into students' motivations, personal aspirations, perceived barriers, and the role of familial and peer influences in their decision-making process. The data from the interviews were transcribed, coded, and thematically analyzed to identify recurring patterns and contextual factors.

2.3 Data Analysis

The quantitative data collected through the questionnaire were analyzed using Statistical Package for the Social Sciences (SPSS) software. Several statistical tests were conducted to ensure the validity and reliability of the data and to test the research hypotheses. First, a normality test using the Kolmogorov-Smirnov method was performed, where a significance value greater than 0.05 indicated that the data were normally distributed. Second, multicollinearity was assessed using the Variance Inflation Factor (VIF), with VIF values below 10 suggesting the absence of multicollinearity among the independent variables. Third, a heteroscedasticity test was conducted to evaluate the homogeneity of residual variance; values above 0.05 were interpreted as evidence of homoscedasticity. In addition, both the t-test and F-test were applied to examine the partial and simultaneous effects of the independent variables on the dependent variable. Finally, the adjusted R-squared value was used to determine the proportion of variance in students' decisions that could be explained by the combined influence of the independent factors.

3. Results and discussion

This section presents the findings derived from both the quantitative and qualitative components of the study, along with the interpretation of these results in relation to the research objectives. The quantitative analysis was carried out through a series of statistical tests to examine the relationship between the independent variables—better career opportunities, family support, and social environment—and the dependent variable, which is the students' decision to pursue higher education. Before conducting inferential analysis, it is essential to ensure that the dataset meets the assumptions of classical linear regression. One of the primary assumptions is that the data must follow a normal distribution.

3.1 Normality Test

The normality test was conducted to assess whether the distribution of the data met the assumption of normality, which is a prerequisite for many parametric statistical analyses. In this study, the Kolmogorov-Smirnov test was employed to evaluate the distribution of the residuals. According to statistical convention, a significance value (p-value) greater than 0.05 indicates that the data are normally distributed, while a value less than or equal to 0.05 suggests a deviation from normality. The results of the normality test are presented and discussed as follows the Table 1.

Table 1. Normality test

One-Sample Kolmogorov-Smirnov Test			
			Unstandardize d Residual
N			66
Normal Parameters a.b	Mean		,0000000
	Std Deviation		8,52466608
Most Extreme Differences	Absolute		,097
	Positive		,051
	Negative		-,097
Test Statistic			,097
Asymp. Sig. (2-tailed)[c]			,200[d]
Monte Carlo Sig.(2-tailed)[e]	Sig.		,122
	99% Confidence Interval	Lower Bound	,114
		Upper Bound	,131

Basen on table 1, The significance values for variables X1 (Better Career Opportunities), X2 (Family Support), X3 (Social Environment), and Y (Decision to Pursue Higher Education) were all 0.200, which is greater than 0.05. Thus, the data were considered to be normally distributed.

3.2 Multicollinearity Test

The multicollinearity test was conducted to determine whether there was a high correlation among the independent variables that could potentially distort the regression coefficients. Multicollinearity is problematic when independent variables are highly correlated, as it undermines the statistical significance of predictors in a multiple regression model. In this study, the multicollinearity assessment was performed using two indicators: Tolerance and Variance Inflation Factor (VIF). A Tolerance value below 0.10 or a VIF above 10 is generally considered indicative of multicollinearity.

Table 2. Multicollinearity Test

coefficients[a]							
Model	Unstandardizd B	Coefficient Std. Error	Standardized Coefficients Beta	T	Sig.	Colinearity Tolerance	Statistics VIF
1 (Constant)	-14,635	17,614		-8,31	,409		
Better Career Opportunities (X1)	,344	,199	,182	1,731	,088	,902	1,108
Family Support (X2)	,148	,150	,102	,986	,328	,927	1,079
Social Environment (X3)	,766	,148	,529	5,182	<,001	,954	1,049

a. Dependent Variable: Continuing Education to College (Y)

Table 2 presents the results of the multicollinearity test. The Tolerance values for the three independent variables—Better Career Opportunities (X1), Family Support (X2), and Social Environment (X3)—were 0.902, 0.927, and 0.954,

respectively. These values are all well above the threshold of 0.10, indicating low levels of inter-correlation among the predictors. Furthermore, the corresponding VIF values for X1, X2, and X3 were 1.108, 1.079, and 1.049, respectively, all of which are below the critical cut-off of 10. These findings confirm that multicollinearity is not present in the regression model and that the independent variables can be reliably used in further analysis.

The absence of multicollinearity supports the assumption of independence among the predictors, which is essential for maintaining the accuracy and interpretability of the multiple linear regression model.

3.3 Heteroscedasticity Test

Heteroscedasticity refers to a condition in which the variance of the residuals is not constant across all levels of the independent variables in a regression model. The presence of heteroscedasticity violates one of the key assumptions of classical linear regression, potentially leading to inefficient and biased estimators. To assess this assumption, a heteroscedasticity test was performed using the absolute value of the residuals (ABS_RES) as the dependent variable in a secondary regression. The results of the heterokedasticity test in this study can be seen in table 3.

Table 3. Heteroscedasticity Test

Model		Coefficients[a] Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	16,838	9,004		1,870	,066
	Better Career Opportunities (X1)	-,046	,085	-,069	-,534	,596
	Family Support (X2)	-,092	,081	-,145	-1,130	,263
	Social Environment (X3)	,002	,080	,004	,031	,975

a. Dependent Variable: ABS_RES

As presented in Table 3, the significance values (p-values) for all three independent variables exceeded the commonly used threshold of 0.05. Specifically, the variable Better Career Opportunities (X1) had a significance value of 0.596, Family Support (X2) was 0.263, and Social Environment (X3) yielded a significance of 0.975. These values indicate that none of the independent variables significantly affect the variance of the residuals. Therefore, it can be concluded that the regression model does not exhibit signs of heteroscedasticity.

The absence of heteroscedasticity suggests that the assumption of homoscedasticity—constant variance of residuals—is satisfied, thereby validating the use of ordinary least squares (OLS) estimation and supporting the reliability of the regression results.

3.4 Hypothesis Testing

This section discusses the partial influence of each independent variable on students' decisions to pursue higher education. Each hypothesis was tested using the t-test, while the significance of the overall model was assessed using the F-test. Additionally, the coefficient of determination (Adjusted R^2) was used to examine how much variance in the dependent variable could be explained by each predictor individually. The results are elaborated below.

3.4.1 Hypothesis 1 – Influence of Better Career Opportunities

This hypothesis tests whether the variable Better Career Opportunities (X1) has a significant partial effect on students' decisions to pursue higher education.

Table 4. Results of t-Test for Partial Hypothesis Testing

coefficients[a]						
Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	30,163	15,229		1,981	,052
	Better Career Opportunities (X1)	-,546	,145	-,359	-3,782	<,001
	Family Support (X2)	,312	,137	,215	2,272	,027
	Social Environment (X3)	,884	,136	,610	6,517	<,001

a. Dependent Variable: Decision to Pursue Higher Education (Y)

The findings indicate that Better Career Opportunities (X1) significantly affect students' decisions to pursue higher education, as evidenced by a t-value of –3.782 and a significance level of < 0.001. Since the p-value is below the 0.05 threshold, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. This confirms that perceptions of enhanced career prospects have a significant negative partial effect on students' decisions. Interestingly, the negative coefficient suggests that, in this sample, students who perceive better immediate job prospects may be less inclined to continue to higher education.

Similarly, Family Support (X2) exhibits a significant positive influence, with a t-value of 2.272 and a p-value of 0.027. This indicates that support and encouragement from family members positively contribute to students' willingness to pursue further education.

Moreover, Social Environment (X3) demonstrates the strongest influence among the three predictors, with a standardized beta of 0.610, a t-value of 6.517, and a highly significant p-value of < 0.001. This suggests that peer influence, school culture, and community expectations are critical determinants of students' educational aspirations.

These results provide empirical support for the study's hypotheses and highlight the multifaceted nature of students' decision-making processes regarding higher education.

To assess the joint influence of all independent variables on the dependent variable, an F-test was conducted using the analysis of variance (ANOVA) method. This test determines whether the combination of predictors—Better Career Opportunities (X1), Family Support (X2), and Social Environment (X3)—significantly affects students' decisions to pursue higher education. The F-test is a critical step in validating the overall regression model. A significant F-value, where $F_{calculated}$ exceeds F_{table} and the p-value is below 0.05, indicates that the independent variables jointly contribute to explaining the variation in the dependent variable.

Table 5. Results of F-Test for Simultaneous Effect

Anova[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3652,639	3	1217,546	18.760	<,001[b]
	Residual	4023,800	62	64,900		
	Total	7676,439	65			

a. Dependent Variable: Y
b. Predictors: (Constant), X3, X2, X1

Based on Table 5, the calculated F-value is 18.760 with a significance level of less than 0.001. According to the decision rule at $\alpha = 0.05$, with degrees of freedom $df_1 = 3$ and $df_2 = 62$, the critical F-table value is approximately 2.75. Since $F_{calculated} > F_{table}$ (18.760 > 2.75) and the p-value is < 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.

This finding indicates that the independent variables—Better Career Opportunities (X1), Family Support (X2), and Social Environment (X3)—collectively have a statistically significant influence on students' decisions to continue their education to the higher education level. The high F-value and low significance level demonstrate that the regression model is robust and that the predictors meaningfully contribute to explaining the variation in the dependent variable.

To determine how much of the variation in students' decisions to pursue higher education can be explained by the independent variable Better Career Opportunities (X1), a coefficient of determination analysis was conducted. This analysis uses the value of R Square and Adjusted R Square from the regression model summary to assess the strength of the relationship and the explanatory power of the model. While R Square shows the proportion of explained variance, the Adjusted R Square provides a more accurate estimate by

accounting for the number of predictors and sample size, particularly in models with a single or limited number of independent variables.

Table 6. Coefficient of Determination for the Effect of Better Career Opportunities (X1)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,215[a]	,046	,031	10,695

a. Predictors: (Constant), X1

As shown in Table 6, the Adjusted R Square value is 0.031. This indicates that the variable Better Career Opportunities (X1) explains approximately 3.1% of the variance in students' decisions to pursue higher education. While the relationship is statistically measurable, the relatively low percentage suggests that this factor alone has a limited explanatory power in isolation. The remaining 96.9% of the variance is likely influenced by other variables not included in this simple regression model, such as family support, peer influence, personal motivation, financial considerations, and institutional factors.

This finding reinforces the importance of analyzing additional predictors in a multiple regression framework to more comprehensively understand the range of factors that shape vocational students' post-secondary educational decisions.

In conclusion, although Better Career Opportunities have a statistically significant influence on students' decisions, the overall explanatory power of this factor is limited when analyzed in isolation. This underscores the importance of considering multiple influencing factors in the broader model, such as family encouragement and the surrounding social environment, which will be discussed in the following subsections.

3.4.2 Hypothesis 2 – Influence of Family Support

To evaluate the second hypothesis, which examines the effect of Family Support (X2) on students' decisions to pursue higher education, both the t-test and coefficient of determination analysis were conducted. The t-test determines whether the relationship is statistically significant, while the Adjusted R Square value helps assess how much of the variation in the dependent variable can be explained by this single predictor.

Table 7. Coefficient of Determination for the Effect of Family Support (X2)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,214[a]	,046	,031	10,697

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
a. Predictors: (Constant), X2				

As presented in Table 7, the Adjusted R Square value for Family Support is 0.031, indicating that this variable explains approximately 3.1% of the variance in students' decisions to pursue higher education. Although the proportion of explained variance is relatively low, the t-test yielded a value of t = 2.272, which exceeds the critical value (t_{table}= 1.998) at α = 0.05. This indicates that Family Support has a statistically significant partial effect on the decision to continue education.

In conclusion, the results support the hypothesis that Family Support plays a significant role in influencing students' educational choices. Although its individual contribution in terms of explained variance is modest, its statistical significance highlights the importance of familial encouragement and involvement in motivating students to pursue further education. This suggests that interventions aimed at increasing parental or family engagement could positively impact students' educational trajectories.

3.4.3 Hypothesis 3 – Influence of Social Environment

The third hypothesis examines whether the Social Environment (X3)—which includes influences from peers, school atmosphere, and the broader community—significantly affects students' decisions to pursue higher education. To test this, a t-test and coefficient of determination analysis were performed. The t-test indicates the statistical significance of the predictor, while the Adjusted R Square value reveals how much of the variance in the dependent variable can be attributed to the Social Environment.

Table 8. Coefficient of Determination Analysis (X3)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,578[a]	,334	,324	8,937
a. Predictors: (Constant), X3				

As shown in Table 8, the Adjusted R Square value is 0.324, indicating that the Social Environment explains approximately 32.4% of the variance in students' decisions to pursue higher education. This represents the highest individual contribution among the three independent variables in this study. Furthermore, the t-test result shows a t_{value} of 6.517, which is significantly greater than the critical value of 1.998 at α = 0.05. This confirms that the variable has a statistically significant positive influence on the dependent variable.

In conclusion, the Social Environment has a strong and statistically significant impact on students' educational decisions. With the highest explanatory power among all variables tested, it suggests that peer influence, school culture, and community expectations are critical in shaping students' aspirations. These findings underscore the importance of fostering a supportive and achievement-oriented environment both within schools and in the broader social context to encourage the pursuit of higher education.

3.5 Interview Results

The qualitative data obtained through in-depth interviews with 15 students from the Computer and Informatics Engineering Department at SMKN 1 Tanjung Raya offered rich insights into the underlying factors that shape students' decisions regarding higher education. These interviews served to complement the quantitative findings and provide contextual depth to the motivations and considerations influencing students' choices.

One of the most dominant themes that emerged was the strong influence of family encouragement, even in cases where parents had no personal experience with higher education. As one student shared, "My parents didn't go to college, but they really support me so I can have a better life than them." This statement highlights how emotional and instrumental support from family members plays a critical role in motivating students to pursue further education. Family encouragement appeared not only as a source of emotional reinforcement but also as a key factor in shaping students' aspirations and self-belief.

The social environment also emerged as a significant factor, particularly the influence of peers and teachers. A participant remarked, "Almost all of my classmates plan to continue to university, so I feel motivated too." This indicates that peer expectations and school culture can reinforce educational goals and foster a sense of academic belonging, which in turn encourages students to continue their studies.

However, the interviews also revealed that not all students aspired to pursue higher education. Three of the fifteen respondents expressed a preference for entering the workforce immediately after graduation. One student stated, "I already have enough skills from my vocational training and internship. I want to work and save money first." This reflects a pragmatic approach, where vocational education is perceived as sufficient for employment, and immediate financial independence is prioritized over academic progression.

Overall, the interview results demonstrate that students' decisions are influenced by a complex interplay of external factors—such as family support and peer influence—and internal factors, including personal motivation, career goals, and perceptions of self-efficacy. The use of a mixed-methods approach has therefore enriched the study by providing a more holistic understanding of

the multidimensional factors that drive vocational students' choices regarding higher education.

3.6 Discussion

This study investigated the factors that influence students of the Computer and Informatics Engineering Department at a vocational high school to pursue higher education. The findings from both quantitative and qualitative data revealed that Better Career Opportunities, Family Support, and Social Environment each have a statistically significant influence, both individually and collectively, on students' decisions. These results align with previous research indicating that educational aspirations are influenced by a combination of economic, familial, and sociocultural considerations [23], [24].

The first variable, Better Career Opportunities, was shown to have a significant effect, although the relationship was negative. This suggests that when students perceive strong immediate job prospects—often gained through internships or hands-on vocational training—they may deprioritize higher education in favor of entering the labor market. This reflects a pragmatic approach among vocational students who evaluate opportunity costs and short-term financial returns over long-term academic investment [25], [26]. The qualitative data supported this, with several students explicitly stating that they considered their vocational skillset sufficient for immediate employment.

On the other hand, Family Support had a positive and statistically significant effect, albeit with a relatively modest adjusted R^2 value. Despite the lower proportion of explained variance, interviews revealed that emotional encouragement, future-oriented parental values, and even non-academic role modeling can be powerful motivators for students. This highlights that non-material support may be just as important as economic resources in shaping aspirations [27], [28]. The role of family, therefore, should not be underestimated in vocational contexts where parental educational attainment is often limited, but hopes for upward mobility remain strong.

Among all three factors, Social Environment emerged as the most influential, with the highest beta coefficient and explanatory power (Adjusted $R^2 = 0.324$). This finding confirms the importance of peer influence, teacher encouragement, and normative pressures within school communities. The interviews reinforced this, with students noting that their decisions were shaped by observing the intentions and behaviors of their classmates. This supports existing theories in social psychology, which posit that peer norms and school culture significantly affect academic behavior, particularly in collectivist societies [29], [30].

From a theoretical perspective, the findings extend previous models of student decision-making by confirming that in vocational settings, the desire to pursue higher education is not solely driven by economic rationality. Instead, it is the

result of a multidimensional interplay between perceived opportunity structures, social reinforcement, and familial expectations. This positions the present study as a contribution to the evolving literature on post-secondary transition from vocational education systems, particularly in emerging economies.

Practically, the results imply that vocational schools and educational policymakers must adopt a more integrated approach to support students' aspirations. First, there is a need for structured guidance and counseling programs that help students weigh the long-term benefits of higher education against short-term employment incentives. Second, parent engagement initiatives can amplify the positive impact of family support, especially when parents lack prior experience in higher education. Lastly, fostering a positive academic climate—through role models, university outreach, and peer motivation strategies—can enhance the social desirability of continuing education.

The mixed-methods approach employed in this study provided a more comprehensive understanding by validating quantitative outcomes with qualitative insights. While the statistical analysis confirmed the significance of the three key factors, the interviews enriched the interpretation by revealing personal narratives and nuanced motivations behind students' decisions. This methodological triangulation strengthens the robustness and validity of the conclusions drawn.

Nonetheless, this study has limitations. It was conducted in a single vocational high school and focused on one department, which may affect the generalizability of findings. Future research should consider expanding the sample to include multiple vocational institutions across different regions and disciplines. Additionally, longitudinal studies could offer insights into how these influences evolve over time and whether initial intentions to pursue higher education are realized.

4. Conclusion

This study aimed to analyze the factors influencing the decisions of vocational high school students—specifically from the Computer and Informatics Engineering Department at SMKN 1 Tanjung Raya—to pursue higher education. Employing a mixed-methods approach, the findings revealed that Better Career Opportunities, Family Support, and Social Environment each have a statistically significant influence on students' educational intentions.

Among the three factors, Social Environment emerged as the strongest predictor, highlighting the importance of peer influence, school culture, and community expectations in shaping students' academic aspirations. Family

Support also played a meaningful role, particularly through emotional and motivational reinforcement, even in cases where parents lacked formal higher education experience. Conversely, the negative coefficient for Better Career Opportunities suggests that the perceived availability of immediate employment may discourage some students from pursuing further academic pathways.

The integration of quantitative and qualitative data provides a nuanced understanding of the complexity behind vocational students' educational choices. The results underscore the need for a comprehensive support system involving family, school, and community to foster a culture that encourages higher education participation.

While the study offers valuable insights, several limitations must be acknowledged. First, the sample was limited to a single vocational high school and one department, which may restrict the generalizability of the findings to other contexts or disciplines. Second, the cross-sectional design captures students' perceptions and intentions at a single point in time, without examining whether those intentions translate into actual enrollment in higher education. Third, the study did not control for other potential influencing variables, such as financial constraints, institutional accessibility, or academic achievement.

Future research should expand the sample scope to include multiple vocational schools from various regions and fields of expertise to enhance generalizability. A longitudinal approach is also recommended to track whether students who intend to pursue higher education actually do so, and what factors facilitate or hinder that transition. Additionally, incorporating variables such as socio-economic background, scholarship availability, and digital literacy may offer a more holistic view of the determinants influencing post-secondary education decisions among vocational students.

Further qualitative exploration involving parents, teachers, and counselors could also provide a multi-perspective understanding of how decision-making is shaped within students' immediate environments. Lastly, experimental or intervention-based studies could evaluate the effectiveness of structured guidance programs, peer mentoring, or parental involvement models in increasing higher education enrollment from vocational pathways.

Author's declaration

Author contribution

Silvia Gina Rahayu Alvi contributed to the conceptualization of the study, data collection, analysis, and manuscript writing. **Resmidarni** provided supervision, methodological guidance, and critical revision of the manuscript. **Yeka**

Hendriyani supported the validation process, literature review, and refinement of the research framework. **Legiman Slamet** contributed to the interpretation of findings and provided input on the discussion and conclusions. Both authors have read and approved the final version of the article.

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Competing interest

The authors declare that there are no competing interests that could have appeared to influence the work reported in this paper.

Ethical clearance

This study was conducted in accordance with ethical standards. Prior to data collection, informed consent was obtained from all participants. Ethical approval for this research was granted by the appropriate institutional review board, and all procedures complied with relevant regulations and guidelines for research involving human subjects.

AI statement

Artificial Intelligence tools, including large language models such as ChatGPT by OpenAI, were utilized to assist in language refinement, grammar correction, and improving the clarity of the manuscript. However, all content, analysis, and interpretations remain the sole responsibility of the authors, who thoroughly reviewed and verified the final version.

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