PYSCHE 165 JOURNAL
LPPM Universitas Putra Indonesia YPTK Padang
Lubuk Begalung Highway, Padang, Zip Code: 25221, Sumatera Barat, Indonesia
Volume: 18, Issue: 3, Page: 235 - 245, September 30th, 2025, e-ISSN: 2502-8766
Available online at website: https://jpsy165.org/ojs/index.php/jpsy165/index

Employability Model Reviewed from Career Planning, Self-Adjustment, and Need for Achievement

Alya Surya Diningrum[1], Fatwa Tentama[2]✉,
[1,2] Psychology Study Program, Faculty of Psychology, Universitas Ahmad Dahlan, Yogyakarta, 55166, Indonesia
✉ Fatwa.tentama@psy.uad.ac.id

Abstract

Vocational High Schools play a crucial role in preparing graduates to enter the workforce. However, many Vocational High School graduates continue to face challenges in achieving optimal work readiness. These issues highlight the need for further research to identify the factors that influence students' employability. This study aims to test a theoretical model examining the influence of career planning, self-adjustment, and need for achievement on the employability of Vocational High School students. The research employs a quantitative approach, utilizing Structural Equation Modeling (SEM) for data analysis. The participants comprised 360 Grade XII students from Vocational High School "X", selected through a cluster random sampling technique. Data were collected using standardized scales that measured employability, career planning, self-adjustment, and the need for achievement. The analysis was conducted using SEM-PLS with the SmartPLS software, version 4.1.1.1. The results indicate that the proposed model—where employability is influenced by career planning, self-adjustment, and need for achievement—demonstrates a good fit with the empirical data. Further analysis reveals a highly significant positive effect of career planning on employability, as well as significant positive effects of both self-adjustment and need for achievement on employability. Based on these findings, the study concluded that the model is valid and applicable for explaining the factors that influence the employability of vocational high school students. The results support the importance of fostering career planning, adaptability, and achievement motivation to enhance students' readiness for the workforce.

Keywords: employability, career planning, need for achievement, self-adjusment

1. Introduction

Education plays a critical role in equipping individuals with both technical skills and the ability to adapt to the evolving challenges of the modern workforce [1]. One form of education specifically designed to prepare students for employment is vocational education, particularly through Vocational High School, also known as Vocational High Schools. Vocational High Schools are structured to develop students' competencies, aiming to produce graduates who are immediately employable and capable of meeting the demands of the labor market and industry [2][3][4]. Graduates of Vocational High Schools are expected to possess practical skills and competencies relevant to the workplace, along with entrepreneurial mindsets, intellectual agility, and competitive capabilities. Furthermore, they are envisioned as individuals capable of leveraging local advantages in the global economy [5]. Despite these expectations, Vocational High School graduates continue to face significant challenges related to labor market readiness [6]. According to data from *Badan Pusat Statistik* (BPS) in 2024, the Open Unemployment Rate remains the highest among vocational school graduates: 11.13% in 2021, 9.42% in 2022, and 9.31% in 2023 [7]. This trend suggests that the primary objective of Vocational High Schools—to produce competent and job-ready graduates—has not yet been fully achieved.

The high unemployment rate among Vocational High School graduates reflects a misalignment between the competencies they have acquired and the actual labor market requirements. This mismatch contributes significantly to the unemployment problem [8][9]. Many graduates continue to struggle to secure employment despite having completed vocational training. Although Vocational High Schools are designed to provide practical and vocationally oriented education, a substantial number of their graduates still encounter difficulties entering the labor force [10]. One key factor contributing to this issue is the graduates' level of employability [11].

In vocational education, employability is often equated with job readiness. It is considered one of the essential qualities that Vocational High School graduates must possess to succeed in the workplace. Employability is conceptualized as a form of active adaptability that is specifically tailored to employment contexts. It enables individuals to identify, pursue, and realize career

Submitted: 02-07-2025| Revised: 30-08-2025 | Accepted: 10-09-2025 | Published: 30-09-2025

opportunities [12]. The concept encompasses an individual's capacity to gain and retain employment—both before entering the workforce and throughout their professional career—by proactively developing the knowledge, skills, and competencies required by the job market [13]. Employability comprises three interrelated dimensions: career identity, personal adaptability, and social and human capital. *Career identity* refers to an individual's understanding of their role within a job or organization, encompassing career goals, aspirations, personality traits, and personal values. *Personal adaptability* describes the ability to modify one's skills, knowledge, attitudes, and behaviors in response to dynamic and evolving situations. Lastly, *Social and human capital* refers to the investments individuals make in their professional development, including the use of formal and informal job search networks, as well as personal attributes that influence career progression [12].

The level of an individual's employability is strongly influenced by the extent to which they possess a combination of relevant hard skills and soft skills [14][15]. Individuals with high employability are more capable of handling workplace challenges effectively, which enhances their competitiveness in the labor market [16]. Conversely, those with low employability often struggle to adapt to the work environment due to a lack of self-confidence, which limits their opportunities to succeed in the workforce [17][18].

Numerous studies have examined the factors influencing the employability of Vocational High School students. Among these factors, career planning [19], self-adjustment [20], and need for achievement [21] have been identified as significant variables in shaping students' readiness for employment. Vocational High School students who engage in career planning early in their education—combined with the ability to adapt well in classroom settings, practical laboratories, and internship programs—and who exhibit a high need for achievement, are more likely to develop strong employability. Employability plays a critical role in professional development and career advancement. Individuals with strong employability skills are better positioned to achieve their career goals and to access job opportunities [22]. An individual is considered to have optimal employability when they can effectively meet and master workplace-relevant competencies, thereby increasing their value and competitiveness in the job market [23][15].

One internal factor that significantly affects employability is career planning. This process is crucial for shaping the job readiness of Vocational High School students, especially in setting career goals and understanding career paths that align with their interests and potential [24]. Career planning involves a series of structured steps, including self-awareness, exploration of career options, decision-making, and preparation for entering the workforce in alignment with the desired professional trajectory [25]. According to Winkel and Hastuti [26], career planning encompasses three key components: (1) self-understanding, (2) awareness of the family environment, and (3) information about real-world conditions. Self-understanding includes knowledge of one's talents, interests, personality traits, potential, ambitions, limitations, and available resources. Understanding the family environment involves recognizing the requirements and expectations necessary for achieving success. Meanwhile, awareness of real-world conditions refers to the ability to think realistically when planning one's education and career.

Previous studies have revealed that career planning has a strong positive effect on students' perceptions of employability. Students with clear career plans tend to feel more prepared to enter the workforce [27]. This assertion aligns with findings indicating that career planning not only enhances students' awareness and readiness to design their career pathways but also directly strengthens the skills needed for employment [28]. Moreover, when career planning interacts with other internal factors such as *self-efficacy* and *soft skills*, it has a significant impact on job readiness. This claim suggests that career planning not only has a direct effect on employability but also contributes to the development of other supporting factors. Through well-structured career planning, supported by effective guidance programs, students can enhance their skills and preparedness, thereby becoming more equipped to face the challenges and demands of the modern workforce and industrial environment [29].

Another internal factor that significantly influences employability is self-adjustment, which refers to an individual's behavioral process of managing needs, tension, conflict, and frustration in a constructive manner [30]. It enables individuals to demonstrate openness to change, flexibility in task completion, and the ability to build effective interpersonal relationships with colleagues and supervisors [31]. In the workplace context, Vocational High School students who can adapt to work environments, organizational cultures, and professional demands are more likely to be accepted and succeed in the industrial sector.

Self-adjustment encompasses several critical components, including emotional regulation, defense mechanisms, and realistic attitudes. First, the ability to manage excessive emotions allows individuals to remain calm when facing problems, enabling them to identify appropriate solutions. Second, individuals with healthy defense mechanisms acknowledge their failures and persist in trying, while those with adjustment difficulties tend to give up and devalue their goals. Third, the ability to cope with personal frustration involves maintaining perseverance even in

the face of stress or feelings of hopelessness. Fourth, rational thinking and self-control are essential, enabling individuals to think clearly and regulate their thoughts, emotions, and actions in challenging situations. Fifth, learning from past experiences helps individuals apply previous lessons to future problems with greater wisdom. Ultimately, a realistic and objective attitude entails accepting reality, logically evaluating situations, and acknowledging personal limitations [30].

As indicated by previous studies, self-adjustment has a significantly positive simultaneous effect on job readiness. Students who demonstrate high levels of self-adjustment tend to exhibit greater preparedness for entering the workforce [32]. Furthermore, students with strong self-adjustment skills can effectively adapt to various environmental conditions, including those at home, in school, and within broader social interactions [20].

In addition to career planning and self-adjustment, another important internal factor influencing employability is the *need for achievement*. The need for achievement refers to an individual's internal drive to excel, to meet high standards, and to demonstrate superior performance in tasks that are personally meaningful [33]. It is characterized by a strong desire to attain exceptional outcomes through the setting of ambitious goals and a committed effort to achieve them [21].

The need for achievement comprises five interrelated characteristics. First, individuals with a high need for achievement tend to be innovative and creative in problem-solving, actively seeking new and improved ways to reach optimal outcomes. Second, they place a high value on feedback, using it to evaluate and improve future performance. Third, they demonstrate a strong sense of personal responsibility, as evidenced by their dedication and diligence in completing tasks to achieve defined goals. Fourth, persistence is a key trait, as they remain resilient in the face of challenges and are willing to take calculated risks. Lastly, they are motivated by complex and demanding tasks, as such challenges serve as opportunities to push themselves toward success [33].

Individuals with a high need for achievement tend to be more focused on personal accomplishment than on achieving specific positions or titles. They also display a strong desire for continuous performance improvement [34]. *The need for achievement*, or the motivation to achieve, has been found to have a direct and significant impact on employability among college students. Research indicates that students with a high need for achievement are more likely to demonstrate strong job readiness, as they are highly motivated to achieve academic excellence and develop their full potential [35]. Such individuals typically set ambitious goals and are willing to accept greater risks to achieve their objectives.

Based on the literature reviewed, there is a need for a quantitative approach that not only analyzes the factors influencing employability but also designs and tests an employability model. This study presents a novel contribution by employing a model testing approach that includes two main stages: model development and model evaluation (outer model and inner model analysis), distinguishing it from prior research. Moreover, the inclusion of career planning, self-adjustment, and need for achievement in a single integrated model—specifically in the context of Vocational High School students—has not been previously tested, thus providing a valuable contribution to the currently limited body of literature.

The objective of this study is to test the theoretical model that describes the roles of career planning, self-adjustment, and need for achievement in shaping employability, using empirical data from Vocational High School students. The hypotheses of this study are as follows: 1) The theoretical model involving career planning, self-adjustment, and need for achievement concerning employability among Vocational High School students is consistent (fit) with empirical data; 2) Career planning has a positive effect on employability; 3) Self-adjustment has a positive effect on employability; 4) Need for achievement has a positive effect on *employability*.

2. Methods

This study employs a quantitative approach using a multivariate correlational design. The objective is to measure and investigate the relationship among a combination of three or more interrelated variables simultaneously, assuming that each variable holds equal importance. This design provides a comprehensive overview of the interactions and mutual influences among the variables under study [36].

The population in this study consists of 360 twelfth-grade students of Vocational High School "X", distributed across six skill programs and organized into ten classes. The sample was selected using a cluster random sampling technique, a method commonly applied when dealing with geographically dispersed populations. In this approach, clusters are randomly selected, and samples are then drawn from elements within those clusters [37]. The randomization process was carried out to ensure that each student group had an equal chance of being selected as part of the research sample. This method aims to minimize bias and enhance the representativeness of the sample relative to the population. Four measurement scales were used in this study: the employability scale, the career planning scale, the self-adjustment scale, and the need for achievement scale. All scales employed a

four-point Likert model with the following response options: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

The employability scale was adapted from previous research [38] and constructed based on three core dimensions: career identity, personal adaptability, and social and human capital, comprising a total of 15 items [12]. The career planning scale was also adapted from previous research [38], which was developed around three aspects: self-knowledge and understanding, recognition of family environment, and awareness of environmental realities, comprising a total of 15 items [26]. The self-adjustment scale, similarly adopted from previous studies [38], was based on six aspects: control of excessive emotions, defense mechanisms, ability to cope with personal frustration, rational consideration and self-direction, learning from and utilizing past experiences, and maintaining realistic and objective attitudes. This scale includes a total of 24 items [30]. The Need for Achievement Scale was adapted from previous research [38] and developed around five key characteristics: innovation and creativity, feedback-seeking behavior, personal responsibility, persistence, and a preference for challenging tasks. This scale includes 15 items [33].

Validity testing was conducted using two primary methods: convergent validity and discriminant validity. Convergent validity was assessed by examining the loading factors of each item and the Average Variance Extracted (AVE). A scale is considered to have acceptable convergent validity if each item has a loading factor greater than 0.5 and the AVE for each construct exceeds 0.4 [39]. Discriminant validity was assessed to ensure that each latent variable is empirically distinct from the others. This construct was evaluated using the Heterotrait-Monotrait ratio (HTMT) of correlations [40]. Reliability testing was conducted using two key indicators: composite reliability and Cronbach's Alpha. A construct is deemed reliable if its composite reliability exceeds 0.7 and its Cronbach's Alpha value is greater than 0.5 [40].

The data analysis technique employed in this study is Structural Equation Modeling (SEM) using the Partial Least Squares (PLS) approach, commonly referred to as SEM-PLS, conducted through SmartPLS software version 4.1.1.1. This multivariate analysis technique is particularly suited for exploratory research, as it aims to develop theory by focusing on explaining the variance in the dependent variables through the assessment of both the outer model (measurement model) and the inner model (structural model) [40].

Evaluation of the outer model in this study involves several indicators: convergent validity, loading factors, Average Variance Extracted (AVE), discriminant validity assessed using the Heterotrait-Monotrait ratio (HTMT), as well as internal consistency reliability evaluated through Cronbach's Alpha and composite reliability. Evaluation of the inner model is conducted through the following steps: 1) Assessing the structural model for collinearity issues, 2) Assessing the significance and relevance of the relationships within the structural model, 3) Evaluating the R^2 value, 4) Assessing the f^2 effect size, 5) Determining the predictive relevance (Q^2), and 6) Evaluating the q^2 effect size. The model fit is assessed using the Standardized Root Mean Square Residual (SRMR), which measures the difference between the observed correlations and those implied by the model. An SRMR value of less than 0.08 indicates a good model fit, whereas a value exceeding 0.08 suggests a poor model fit [40].

3. Results and Discussions

The results of this study are divided into two parts: the outer model test and the inner model test. The outer model test aims to determine the relationship between latent variables and their indicators, while the inner model test focuses on ensuring that the structural models are robust, accurate, and appropriately fit for application in the field.

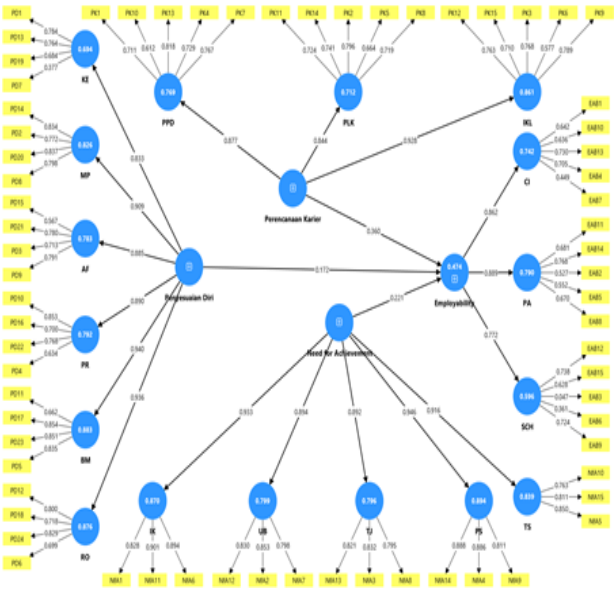

Figure 1. The Initial Output of the Outer Model

3.1 Outer Model Evaluation

3.1.1 Validity Test

Table 1. Average Variance Extracted (AVE) Value

Variable	Loading Factor	AVE	Description
Employability	0.797-0.885	0.431	Valid
Career Planning	0.723-0.884	0.504	Valid
Self-Adjustment	0.641-0.859	0.504	Valid
Need for Achievement	0.795-0.901	0.590	Valid

The results of this study are divided into two parts: the outer model test and the inner model test. The outer

model test aims to determine the relationship between latent variables and their indicators, while the inner model test focuses on ensuring that the structural models are robust, accurate, and appropriately fit for application in the field. Convergent validity was assessed by examining the loading factors of each item and the Average Variance Extracted (AVE) values. Based on the results of the outer model analysis illustrated in Figure 1, four measurement scales were evaluated: employability, career planning, self-adjustment, and need for achievement. The employability scale consisted of 15 items. The outer model testing revealed that several items did not meet the validity criteria, specifically EAB1 (0.642), EAB2 (0.527), EAB3 (0.047), EAB5 (0.552), EAB6 (0.361), EAB7 (0.449), EAB10 (0.636), EAB11 (0.681), and EAB15 (0.628). These nine items were deemed invalid and subsequently excluded. The final employability scale retained six valid items. The convergent validity test showed that the loading factors of the retained items ranged from 0.797 to 0.885, with an AVE value of 0.431.

The career planning scale also consisted of 15 items. The outer model testing indicated that six items did not meet the required validity threshold: PK4 (0.729), PK5 (0.664), PK6 (0.577), PK8 (0.719), PK10 (0.612), and PK14 (0.741). These items were therefore excluded from further analysis. The final version of the scale comprised nine valid items, with loading factors ranging from 0.723 to 0.884 and an AVE value of 0.504.

The self-adjustment scale originally included 24 items. Three items—PD4 (0.634), PD7 (0.377), and PD15 (0.567)—were found not to meet the validity criteria and were removed. The resulting scale retained 21 valid items. The valid items had loading factors ranging from 0.641 to 0.859, with an AVE value of 0.504, indicating adequate convergent validity.

The Need for Achievement Scale consisted of 15 items. Based on the outer model analysis, all items met the required validity criteria. Therefore, no items were eliminated. The final scale retained all 15 valid items, with loading factors ranging from 0.795 to 0.901 and an AVE value of 0.590.

Table 2. Root ratio value of Average Variance Extracted (AVE)

Variable	HTMT
Career Planning <-> Employability	0.705
Self-Adjustment <-> Employability	0.642
Need for Achievement <-> Employability	0.660

Based on the results of discriminant validity testing using the heterotrait-monotrait (HTMT) ratio, the correlation value between career planning variables and employability is 0.705. The correlation value between the adjustment variable and employability is 0.642, while the correlation value between the Need for Achievement and employability is 0.660. These results indicate that the three scales meet the criteria for discriminant validity, specifically HTMT < 0.90.

3.1.2 Reliability Test

The reliability test in this study was conducted by examining the values of composite reliability and Cronbach's alpha. A construct is considered reliable if the composite reliability value is greater than 0.7 and the Cronbach's alpha value is greater than 0.5.

Table 3. Cronbach's Alpha and Composite Reliability Values

Variable	Cronbach's Alpha	Composite Reliability	Remark
Employability	0.731	0.818	Reliable
Career Planning	0.875	0.901	Reliable
Self-Adjustment	0.944	0.951	Reliable
Need for Achievement	0.949	0.955	Reliable

Based on the reliability testing results, the employability scale yielded a Cronbach's Alpha value of 0.731 and a composite reliability of 0.818. The career planning scale demonstrated a Cronbach's Alpha of 0.875 and a composite reliability of 0.901. The self-adjustment scale recorded a Cronbach's Alpha of 0.944 and a composite reliability of 0.951. Lastly, the Need for Achievement Scale showed a Cronbach's alpha of 0.949 and a composite reliability of 0.955. These results indicate that all four measurement scales meet the required criteria for validity and reliability. Therefore, the final outer model in this study is considered acceptable and suitable for further analysis.

3.2 Inner Model Evaluation

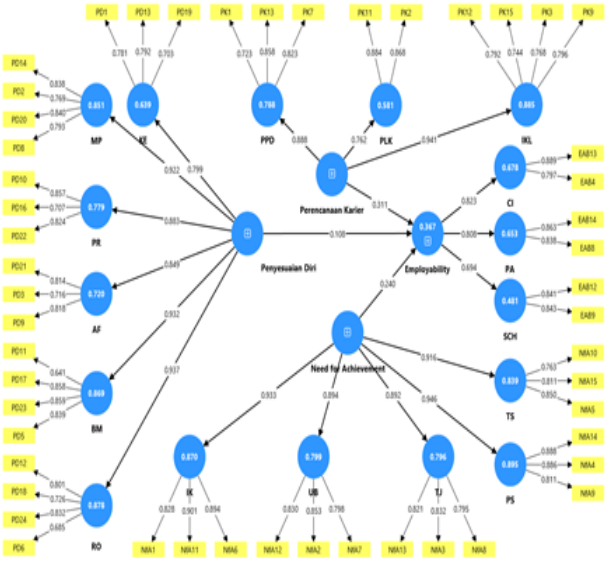

Figure 2. Fit Model

3.2.1 Collinearity Test

The collinearity test was assessed using the variance inflation factor (VIF) for each predictor variable. The

assumption of no multicollinearity is considered met if the VIF value for each predictor is less than 3 or greater than 5. The VIF values for this study are presented in the table below.

Table 4. Collinearity Statistics (VIF) Value

Variable	VIF
Career Planning <-> Employability	2.637
Self-Adjustment <-> Employability	3.267
Need for Achievement <-> Employability	3.067

Based on the collinearity test results, the Variance Inflation Factor (VIF) values were as follows: career planning on employability = 2.637, self-adjustment on employability = 3.267, and need for achievement on employability = 3.067. These values indicate the absence of multicollinearity. This result suggests that there is no significant overlap or redundancy among the variables—career planning, self-adjustment, and need for achievement—concerning employability, and that the items within each construct demonstrate adequate discriminant validity.

3.2.2 Hypothesis Test

Hypothesis testing was conducted by examining the t-statistic with a significance level of 5% ($\alpha = 0.05$). A hypothesis is accepted if the t-value exceeds 1.96 (i.e., $t > 1.96$) and the p-value is less than 0.05 ($p < 0.05$).

Table 5. Hypothesis Test Result

Variable	Original Sample	t-statistics	p-value	Remark
PK → EAB	0.329	3.941	0.000	Positive and highly significant influence
PD → EAB	0.149	1.745	0.041	Positive and significant influence
NfA →EAB	0.199	2.057	0.020	Positive and significant influence

Based on the results of hypothesis testing presented in the table above, the second hypothesis is accepted, as indicated by a p-value of 0.000 ($p < 0.05$) and a t-value of 3.941, suggesting a positive and highly significant effect of career planning on employability. The third hypothesis is also accepted, with a p-value of 0.041 ($p < 0.05$) and a t-value of 1.745, indicating a positive and significant effect of self-adjustment on employability. Furthermore, the fourth hypothesis is accepted, with a p-value of 0.020 ($p < 0.05$) and a t-value of 2.057, indicating a positive and statistically significant effect of the need for achievement on employability.

3.2.3 Coefficient of Determination (R^2)

The R^2 (coefficient of determination) value is interpreted as follows: an R^2 of 0.75 is considered strong, 0.50 is moderate, and 0.25 is weak.

Table 6. Coefficient of Determination (R^2) Value

Variable	R^2	Remark
Employability	0.368	Weak

In this study, the R^2 value was 0.368, indicating that the influence of the exogenous variables on the endogenous variable falls within the weak category.

3.2.4 f^2 Effect Size

The f^2 effect size is categorized into three levels: an f^2 of 0.02 is considered small, 0.15 is moderate, and 0.35 is large.

Table 7. The f^2 Effect Size Value

Variable	f^2	Remark
Career Planning	0.063	Small
Self-Adjustment	0.011	No contribution
Need for Achievement	0.021	Small

Given the f^2 effect size value of $0.063 > 0.0$ for career planning, it falls within the small effect category.

3.2.5 Predictive Relevance (Q^2)

For predictive relevance (Q^2), a value of $Q^2 > 0$ indicates that the model has good predictive relevance, while a value of $Q^2 < 0$ suggests poor predictive capability. In this study, the Q^2 value was greater than zero, signifying that the model possesses adequate predictive relevance.

Table 8. Predictive Relevance (Q^2) Value

Variable	Q^2	Remark
Employability	0.366	Good

In this study, the predictive relevance (Q^2) value was 0.366, indicating that the model has good predictive relevance. This result suggests that the model can effectively predict the influence of exogenous variables on the endogenous variable.

3.2.6 The q^2 Effect Size

The q^2 effect size is categorized into three levels: $q^2 = 0.02$ is considered small, $q^2 = 0.15$ is moderate, and $q^2 = 0.35$ is classified as large.

Table 9. The q^2 Effect Size Value

Variable	q^2	Remark
Employability	0.366	Large

Given that the q^2 value in this study is 0.366, which exceeds the threshold of 0.35, it can be concluded that the model demonstrates strong predictive relevance.

3.2.7 Model Fit

Furthermore, the Standardized Root Mean Square Residual (SRMR) value serves as an indicator of model fit. An SRMR value of less than 0.08 indicates a good model fit, whereas values above 0.08 suggest a poor model fit.

Table 10. Model Fit Value

Model Fit	Model Estimate
SRMR	0.063

The SRMR value obtained in this study was 0.063, thereby confirming that the research model exhibits a good fit between the theoretical framework and the empirical data.

3.3 Discussion

The primary objective of this study was to design and test the fit of a theoretical model that describes the role of career planning, self-adjustment, and the need for achievement in influencing employability among Vocational High School students, using empirical data. This research introduces a novel approach that distinguishes it from previous studies. Specifically, this study simultaneously examines employability in conjunction with the variables of career planning, self-adjustment, and need for achievement within a single structural model.

In contrast, prior studies have examined employability in conjunction with various other variables. For example, one study examined employability concerning entrepreneurial readiness, peer support, and adversity quotient [41]. Another study examined employability skills, including self-efficacy, hope, optimism, resilience, and career adaptability [42]. A third study assessed employability together with social support and resilience [43]. Therefore, the model proposed in this study offers a distinct theoretical contribution compared to earlier research models. In addition to the differences in the conceptual model, this study also diverges in terms of data analysis techniques. It employed Partial Least Squares Structural Equation Modeling (PLS-SEM) as the analytical method. This approach contrasts with the methods commonly used in earlier studies, such as correlational and multiple linear regression analyses conducted with SPSS software [17][44][45]. As such, the current study contributes a methodological advancement by employing a more robust and comprehensive model testing approach.

The findings of this study indicate that career planning, self-adjustment, and need for achievement simultaneously exert a significant influence on employability among vocational high school students. This result suggests that students' ability to formulate a clear career path, adapt to their environment and changes, and maintain a strong internal drive for achievement plays a crucial role in enhancing their readiness to enter the workforce. Effective career planning enables students to set realistic short-term and long-term goals and to develop competencies aligned with labor market demands [24]. Meanwhile, self-adjustment facilitates greater flexibility and responsiveness to the dynamics of the work environment, including building social relationships and coping with psychological pressure [45]. Furthermore, the need for achievement motivates students to continually improve their capabilities and engage in healthy competition to secure desirable employment opportunities [46].

Based on the results of the data analysis, all four hypotheses in this study were supported. The first hypothesis was accepted based on the fulfillment of the specified fit indicators, particularly the Standardized Root Mean Square Residual (SRMR) value of 0.063, which is below the threshold of 0.08. This result indicates that the theoretical model—comprising career planning, self-adjustment, and need for achievement among Vocational High School students—fits well with the empirical data.

The findings for the second hypothesis reveal that career planning has a positive and highly significant influence on employability. This result suggests that students' employability is strongly affected by their ability to plan their careers. These results align with previous research indicating that vocational high school students with clear career plans tend to be better prepared for the workforce, thereby significantly enhancing their employability [19]. Other studies have demonstrated that career planning indirectly promotes employability by fostering positive learning attitudes, highlighting the mediating role of such attitudes in the relationship [28]. Similarly, it has been found that students' perceptions of career planning are positively correlated with their perceptions of employability, underscoring the importance of equipping students with career planning skills early in their education [27]. Moreover, students with well-structured career plans generally exhibit higher levels of motivation and stronger focus when preparing for job market demands [24]. As noted in prior research, individuals who engage in career planning are also more proactive in seeking information, gaining work experience, and participating in additional training to enhance their competencies [47].

The findings related to the third hypothesis indicate that self-adjustment has a positive and significant effect on employability. The greater an individual's capacity for self-adjustment, the more likely they are to develop the skills and readiness needed to enter the workforce. In other words, individuals who are better adapted to changing environments and demands are more likely to attain higher levels of employability [2]. This assertion is consistent with research showing that individuals with strong emotional and social adjustment skills are more adept at navigating new challenges in work and learning environments [20]. Similar findings emphasize that self-adjustment enables individuals to overcome obstacles and adapt to the dynamic nature of the workplace—an essential component of job readiness [48].

Furthermore, individuals with high self-adjustment skills tend to be more flexible, open to new experiences, and capable of managing emotions and behaviors adaptively in response to job-related stress

[49]. Self-adjustment supports emotional stability, flexibility in responding to change, and adaptability in the face of workplace challenges. This statement aligns with research findings indicating that emotional intelligence and self-adjustment are closely associated with adaptability in dynamic work environments [20]. Effective self-adjustment also enhances students' ability to build healthy social relationships and manage stress resulting from occupational pressures, both of which are critical aspects of employability [45].

The findings related to the fourth hypothesis indicate that the need for achievement has a positive and significant effect on employability. This finding highlights the crucial role of the need for achievement in shaping students' employability levels. These results are consistent with prior research suggesting that individuals with a high need for achievement are more likely to enjoy challenges, set high personal standards, and demonstrate persistence in achieving goals—qualities that are essential in the workforce [21]. Previous studies also indicate that such individuals often set ambitious targets and are willing to take greater risks to achieve their desired outcomes [34].

Furthermore, individuals with a high need for achievement typically exhibit strong perseverance, take personal responsibility, and do not easily give up when facing career obstacles. They view every opportunity as a challenge for personal development and skill enhancement [33]. Consistent with these insights, research has also shown that students with high achievement motivation are better prepared to compete in the job market because they possess initiative, persistence, and a strong commitment to their work [46]. Other findings highlight that individuals driven by achievement motivation tend to be more disciplined, highly motivated to learn, and proactive in developing the competencies required in the workforce [50].

The practical implications of these findings suggest that schools can utilize this evidence to design programs that aim to strengthen students' employability. Such programs could focus on enhancing career planning through systematic career guidance services, improving self-adjustment skills through social skills training and emotional regulation workshops, and fostering the need for achievement by creating a challenging learning environment and providing positive reinforcement for student accomplishments. From a theoretical standpoint, the research model proposed in this study contributes to a deeper understanding of the factors influencing students' employability, particularly in terms of career planning, self-adjustment, and the need for achievement. Furthermore, these findings can inform theoretical advancements and character development strategies that align with the needs of the industry and future employers.

4. Conclusions

The results of this study indicate that the employability model, comprising career planning, self-adjustment, and the need for achievement among Vocational High School students, is well-aligned with the empirical data. The first hypothesis is supported, demonstrating that career planning has a positive and highly significant effect on employability. The second hypothesis is also accepted, indicating that service quality has a direct and positive effect on consumer satisfaction. The third hypothesis is supported, confirming that self-adjustment has a positive and significant influence on employability. Finally, the fourth hypothesis is accepted, showing that the need for achievement exerts a positive and significant impact on employability.

Acknowledgements

The authors would like to thank the Ministry of Higher Education, Science, and Technology, Directorate General of Research and Development for providing research funding support in 2025. The implementation and funding of this research were facilitated through contracts number 126/C3/DT.05.00/PL/2025, 0498.12/LL5-INT/AL.04/2025 and 042/PTM/LPPM.UAD/VI/2025. Thus, this research can be carried out smoothly and completed on time.

Funding Information *(mandatory)*

The source of research funding comes from the Ministry of Higher Education, Science, and Technology, Directorate General of Research and Development.

Author Contributions Statement *(mandatory)*

Name of Author	C	M	So	Va	Fo	I	R	D	W
Alya Surya Diningrum				✓	✓		✓	✓	✓
Fatwa Tentama	✓	✓							✓

C : Conceptualization
M : Methodology
So : Software
Va : Validation
Fo : Formal analysis
I : Investigation
R : Resources
D : Data Curation
W : Writing - Review

Conflict of Interest Statement

The researchers declare that this paper has no conflicts of interest.

Informed Consent *(if applicable)*

Informed consent was obtained from all persons involved in the study.

Ethical Approval *(if applicable)*

The study followed the guidelines of the Declaration of Helsinki.

Data Availability *(mandatory)*

The author confirms that the data that support the findings of this study are available within the article. The data that support the findings of this study are available from the corresponding author [FT], upon reasonable request.

References

[1] O. Rocha, D. Kamphambale, C. MacMahon, J. H. Coetzer, and L. Morales, "The power of education in a globalised world: Challenging geoeconomic inequalities," *Peace Review*, vol. 35, no 4, pp. 708-723, Oct. 2023, doi: 10.1080/10402659.2023.2270501.

[2] C. D. S. Indrawati, A. Subarno, W. Winarno, S. Permansah, A. W. Wirawan, and D. Rusmana, "Influence of work motivation, interpersonal skills, and knowledge construction on the work readiness of vocational students," *Education Research International*, vol. 2023, no. 1, pp. 1–10, Aug. 2023, doi: 10.1155/2023/4956337.

[3] P. Suharno, N. A. Pambudi, and B. Harjanto, "Vocational education in Indonesia: History, development, opportunities, and challenges," *Children and Youth Services Review*, vol. 115, pp. 1–8, Aug. 2020, doi: 10.1016/j.childyouth.2020.105092.

[4] L. Clarke and C. Winch, Eds., *Vocational Education*. London, UK: Routledge, 2012, doi: 10.4324/NOE0415380607.

[5] A. Prianto and U. N. Qomariyah, *Penguatan Employability dan Entrepreneurability Siswa SMK*. Kaizen Sarana Edukasi, 2021.

[6] E. Ohara, S. P. Harto, and R. F. Maruanaya, "Policy shift to reduce unemployment of vocational school graduates in Indonesia (A National Study)," *Jurnal Pendidikan Teknologi dan Kejuruan*, vol. 26, no. 2, pp. 129–139, Sep. 2020, doi: 10.21831/jptk.v26i2.33144.

[7] Badan Pusat Statistik, "Tingkat pengangguran terbuka berdasarkan tingkat pendidikan, 2021-2023," Oct. 15, 2024. [Online]. Available: https://www.bps.go.id/id/statistics-table/2/MTE3OSMy/tingkat-pengangguran-terbuka-berdasarkan-tingkat-pendidikan.html

[8] M. Chavan and L. Carter, "Management students—expectations and perceptions on work readiness," *International Journal of Educational Management*, vol. 32, no. 5, pp. 825–850, Jun. 2018, doi: 10.1108/IJEM-10-2016-0219.

[9] M. Maulina and N. H. Yoenanto, "Optimalisasi link and match sebagai upaya relevansi SMK dengan dunia usaha dan dunia industri (DUDI)," *Jurnal Akuntabilitas Manajemen Pendidikan*, vol. 10, no. 1, pp. 28–37, Apr. 2022, doi: 10.59841/inoved.v2i1.893.

[10] R. Ubihatun, A. I. Aliyya, F. Wira, V. I. Ardhelia, and D. O. Radianto, "Tantangan dan prospek pendidikan vokasi di era digital: Tinjauan literatur," *Jurnal Kajian Ilmu Seni, Media dan Desain*, vol. 1, no. 3, pp. 1–11, Mei. 2024, doi: 10.62383/abstrak.v1i3.118.

[11] N. O. Mabunda and L. Frick, "Factors that influence the employability of National Certificate (Vocational) graduates: The case of a rural TVET college in the Eastern Cape province, South Africa," *Journal of Vocational, Adult and Continuing Education and Training*, vol. 3, no. 1, pp. 89–108, 2020.

[12] M. Fugate, A. J. Kinicki, and B. E. Ashforth, "Employability: A psycho-social construct, its dimensions, and applications," *Journal of Vocational Behavior*, vol. 65, no. 1, pp. 14–38, Aug. 2004, doi: 10.1016/j.jvb.2003.10.005.

[13] I. Römgens, R. Scoupe, and S. Beausaert, "Unraveling the concept of employability, bringing together research on employability in higher education and the workplace," *Studies in Higher Education*, vol. 45, no. 12, pp. 2588–2603, Jun. 2019, doi: 10.1080/03075079.2019.1623770.

[14] J. Andrews and H. Higson, "Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study," *Higher Education in Europe*, vol. 33, no. 4, pp. 411–422, Sep. 2010, doi: 10.1080/03797720802522627.

[15] S. S. Fadhil, R. Ismail, and A. Alnoor, "The influence of soft skills on employability: A case study on technology industry sector in Malaysia," *Interdisciplinary Journal of Information, Knowledge, and Management*, vol. 16, pp. 255–283, Jun. 2021, doi: 10.28945/4807.

[16] H. Tushar and N. Sooraksa, "Global employability skills in the 21st century workplace: A semi-systematic literature review," *Heliyon*, vol. 9, no. 11, p. e21023, Nov. 2023, doi: 10.1016/j.heliyon.2023.e21023.

[17] B. R. Nabilah, F. Tentama, and H. S. Widiana, "Employability predictor factors: Resilience, self-esteem, and self-confidence," *Psikostudia: Jurnal Psikologi*, vol. 11, no. 2, pp. 240–248, Jun. 2022, doi: 10.30872/psikostudia.v11i2.7357.

[18] M. Yorke and P. Knight, "Evidence-informed pedagogy and the enhancement of student employability," *Teaching in Higher Education*, vol. 12, no. 2, pp. 157–170, Apr. 2007, doi: 10.1080/13562510701191877.

[19] M. Pasaribu and M. Subhan, "Employability skills siswa dalam perencanaan karir siswa kelas xii di sekolah menengah kejuruan," *Jurnal Administrasi Pendidikan dan Konseling Pendidikan*, vol. 3, no. 2, pp. 59–65, Oct. 2022, doi: 10.24014/japkp.v3i2.13847.

[20] F. W. Prasetyo, D. S. Purnama, and A. B. Prasetya, "The effect of self-esteem on self-adjustment," *Psikopedagogia: Jurnal Bimbingan dan Konseling*, vol. 9, no. 1, pp. 31–38, Jun. 2020, doi: 10.12928/psikopedagogia.v9i1.19223.

[21] M. Finogenow, "*Need for Achievement*," in Encyclopedia of Personality and Individual Differences, 1st ed., pp. 1–4, 2017, doi: 10.1007/978-3-319-28099-8_537-1.

[22] V. M. Iyer and K. Dave, "Industry's role in employability," *Industrial and Commercial Training*, vol. 47, no. 3, pp. 151–158, 2015, doi: 10.1108/ICT-11-2014-0072.

[23] I. M. Suarta, I. K. Suwintana, F. Pranadi, and N. K. D. Hariyanti, "Employability skills for entry-level workers: A content analysis of job advertisements in Indonesia," *Journal of Technical Education and Training*, vol. 10, no. 2, pp. 49–61, Oct. 2018, doi: 10.30880/jtet.2018.10.02.005.

[24] N. A. P. Paramitha and Harmanto, "Pengaruh perencanaan karir dan employability skills terhadap kesiapan kerja peserta didik kelas xii jurusan akuntansi dan keuangan lembaga SMKN Kasiman," *Syntax Literate*, vol. 9, no. 9, pp. 4792–4802, Sep. 2024, doi: 10.36418/syntax-literate.v9i9.16332.

[25] A. Latif, A. M. Yusuf, and M. Effendi, "Hubungan perencanaan karir dan efikasi diri dengan kesiapan kerja mahasiswa," *Konselor*, vol. 6, no. 1, pp. 29–38, Aug. 2017, doi: 10.24036/02017616535-0-00.

[26] W. S. Winkel and S. Hastuti, *Bimbingan dan Konseling di Institusi Pendidikan*. Yogyakarta, Indonesia: Media Abadi, 2013.

[27] N. A. N. Haszeri and S. A. Rodzalan, "Career planning and employability: Secondary school students perceptions," *Research in Management of Technology and Business*, vol. 2, no. 1, pp. 75–90, 2021, doi: 10.30880/rmtb.2021.02.01.006.

[28] Y. Sun and Y. C. Chang, "A study on the impact of career planning on employability among college students in Hebei Province, China," *Edelweiss Applied Science and Technology*, vol. 8, no. 6, pp. 1300–1311, 2024, doi: 10.55214/25768484.v8i6.2243.

[29] J. A. L. Sentinuwo, F. G. Worang, and B. W. Mac Donald, "Pengaruh perencanaan karir, self-efficacy dan soft skill terhadap kesiapan kerja mahasiswa lulusan Fakultas Ekonomi dan Bisnis Universitas Sam Ratulangi," *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, vol. 13, no. 1, pp. 731–743, Feb. 2025, doi: 10.35794/emba.v13i01.60715.

[30] A. A. Schneiders, *Self-Adjustment and Mental Health*. New York, NY: Rinehart and Winston, 1964.

[31] J. W. Santrock, *Life-span Development*, 14th ed. New York, NY: McGraw-Hill Higher Education, 2012.

[32] F. Tentama, S. Subardjo, N. Merdiaty, and S. A. Mulasari, "The effect of interpersonal communication and self-adjustment to the work readiness of vocational high school students," *International Journal of Research Studies in Education,* vol. 8, no. 3, pp. 29–38, Nov. 2019, doi: 10.5861/ijrse.2019.4004.

[33] D. C. McClelland, *Human Motivation*. New York, NY: The Press Syndicate of the University of Cambridge, 1987.

[34] R. W. Griffin and G. Moorhead, *Organizational Behavior: Managing People and Organizations*, 9th ed. Mason, OH: South-Western Cengage Learning, 2013.

[35] X. Li, R. Pu, and N. Phakdeephirot, "The influence of achievement motivation on college students' employability: a chain mediation analysis of self-efficacy and academic performance," *Frontiers in Psychology*, vol. 13, pp. 1–14, Oct. 2022, doi: 10.3389/fpsyg.2022.972910.

[36] B. F. J. Manly and J. A. Navarro Alberto, *Multivariate Statistical Methods*, 4th ed. Boca Raton, FL: CRC Press, 2016, doi: 10.1201/9781315382135.

[37] W. L. Neuman, *Social Research Method: Qualitative and Quantitative Approaches*, 8th ed. Pearson, 2020.

[38] F. Tentama, H. Yuliansyah, and Z. V. Rohmadani, *Aplikasi early detection work readiness (kesiapan kerja) berbasis model employability skill untuk siswa SMK untuk mendapatkan pekerjaan,*, 2024.

[39] J. F. Hair Jr., W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, 7th ed. Pearson, 2010.

[40] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *European Business Review*, vol. 31, no. 1, pp. 2–24, Feb. 2019.

[41] N. Zulmi and F. Tentama, "The effect of entrepreneurial readiness, adversity quotient, and social intelligence on employability students," *Journal of Education and Learning (EduLearn),* vol. 18, no. 1, pp. 26–36, Feb. 2024, doi: 10.11591/edulearn.v18i1.20770.

[42] A. Rahmani, N. G. M. Rai, and S. Y. Nilanglasari, "Pengaruh psychological capital dan employability skills terhadap career adaptability pada mahasiswa," *Jurnal Sains dan Seni ITS*, vol. 13, no. 3, pp. I96–I101, Apr. 2025, doi: 10.12962/j23373520.v13i3.130798.

[43] E. S. Binasari and F. Tentama, "Employability model for students in increasing career opportunities," *Journal of Education and Learning (EduLearn)*, vol. 19, no. 2, pp. 1167–1178, May. 2025, doi: 10.11591/edulearn.v19i2.21255.

[44] D. Zhou, Z. Peng, and H. Zhou, "The influence of career decision-making self-efficacy on employability of higher vocational students: mediated by emotional intelligence," *in Frontiers in Education*, vol. 8, pp. 1–12, Dec. 2023, doi: 10.3389/feduc.2023.1274430.

[45] F. R. S. Edi, "Kepercayaan diri dan penyesuaian sosial dengan employability pada siswa SMK," *Happiness: Journal of Psychology and Islamic Science,* vol. 5, no. 2, pp. 61–72, 2021, doi: 10.30762/happiness.v5i2.385.

[46] D. Chen, "Study on the achievement motivation and employability of higher vocational college students—An empirical analysis based on a medical and healthcare vocational college in Guangzhou," *Adult and Higher Education,* vol. 5, no. 15, pp. 123–126, 2023, doi: 10.23977/aduhe.2023.051519.

[47] N. Hasanah, S. Tartiyoso, and A. Azhari, "Pengaruh layanan informasi karir terhadap peningkatan pemahaman perencanaan karir pada siswa kelas XI jurusan TSM di SMK Swasta Sri Wampu," *Serunai: Jurnal Ilmiah Ilmu Pendidikan,* vol. 8, no. 2, pp. 129–136, 2022, doi: 10.37755/sjip.v8i2.779.

[48] A. Buyukgoze-Kavas, "Predicting career adaptability from positive psychological traits," *The Career Development Quarterly*, vol. 64, no. 2, pp. 114–125, May. 2016, doi: 10.1002/cdq.12045.

[49] Y. Guan et al., "Career adaptability, job search self-efficacy and outcomes: A three-wave investigation among Chinese university graduates," *Journal of Vocational Behavior,* vol. 83, no. 3, pp. 561–570, Dec. 2013, doi: 10.1016/j.jvb.2013.09.003.

[50] A. Yustina and T. Sukardi, "Pengaruh bimbingan kejuruan, motivasi berprestasi, dan kemandirian siswa terhadap kesiapan kerja siswa kelas XII TKJ," *Jurnal Pendidikan Vokasi,* vol. 4, no. 2, pp. 181–194, Apr. 2014, doi: 10.21831/jpv.v4i2.2544.

Biographies of Authors

Alya Surya Diningrum is a graduate of the master of psychology at Universitas Ahmad Dahlan, Yogyakarta. She also completed his undergraduate studies in the psychology study program at Universitas Ahmad Dahlan. The scientific field of Industrial and Organizational Psychology. Currently, the focus of his research is on the theme of work readiness and employability. She can be contacted at email: alyadiningrum@gmail.com

Fatwa Tentama is a lecturer at the Faculty of Psychology, Universitas Ahmad Dahlan, Yogyakarta. Fatwa Tentama is currently an associate

	professor in the field of psychological sciences. The scientific field of Industrial and Organizational Psychology with sub-fields of work behavior, work attitudes and entrepreneurship. His research focuses on Organizational Citizenship Behavior (OCB), employability, work readiness, entrepreneurship readiness, entrepreneurial intentions, contextual performance, etc. He can be contacted at email: fatwa.tentama@psy.uad.ac.id