

Modeling the Relationship between Self-Efficacy, Locus of Control, and Career Planning among Adolescents

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Abstract

Low career planning maturity among high school students suggests that internal psychological factors, particularly self-efficacy and locus of control, significantly influence career readiness. This study aimed to analyze the effect of self-efficacy and locus of control, both partially and simultaneously, on students' career planning. A quantitative cross-sectional design was employed. The population consisted of Grade X and XI students from senior high schools, vocational schools, and Islamic senior high schools across Central Java, with a sample of 594 students from SMA Negeri 1 Jekulo Kudus, SMK Negeri 3 Pati, and MA Sabilul Ulum Jepara selected through purposive and total sampling. Data were collected using a Likert-scale questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results showed that self-efficacy had a positive and significant effect on career planning ($\beta = 0.350$; $t = 8.985$; $p < .001$), locus of control also had a positive and significant effect ($\beta = 0.156$; $t = 3.428$; $p = .001$), and both variables simultaneously had a significant effect on career planning ($F = 54.754$; $p < .001$), although together they explained only 16.3% of the variance in career planning ($R^2 = 0.163$). It is concluded that self-efficacy and locus of control are important psychological factors, with self-efficacy as the most dominant contributor, in supporting students' career planning. Schools are recommended to strengthen career guidance services that build students' self-confidence and internal control orientation, and future research should consider additional variables not covered in this model.

Keywords: self-efficacy, locus of control, career planning, senior high school students

INTRODUCTION

Career planning has become an increasingly important developmental task for senior high school students because it enables them to recognize their potential, establish career goals, and make informed educational and occupational decisions. Effective career planning facilitates students' transition from school to higher education or the workforce while preparing them to respond to increasingly dynamic labor market demands. Contemporary career development literature views career planning as a lifelong developmental process rather than a one-time occupational choice, involving continuous self-development, decision-making, and adaptation to changing career contexts (Quinlan & Renninger, 2022). Recent evidence further demonstrates that systematic career planning strengthens students' professional identity, employability, career confidence, and work readiness (Harris-reeves et al., 2025; Liu et al., 2024; Mentari & Musoli, 2025). Despite its importance, Sapitri & Syafiq, (2025) reported that many senior high school students still demonstrate only moderate levels of career planning, indicating that numerous students remain insufficiently prepared to make effective educational and occupational decisions. This condition is concerning in practical terms, because inadequate career planning during senior high school may lead to poorly matched study choices, prolonged

career indecision, and lower career satisfaction later in life underscoring the practical urgency of identifying psychological resources that school guidance and counseling programs can strengthen.

Among the psychological factors that may explain differences in students' career planning, self-efficacy has received considerable attention (Bandura, 1997), defines self-efficacy as individuals' beliefs in their capabilities to organize and execute the actions required to achieve desired outcomes. According to Bandura (1997), individuals with stronger self-efficacy tend to establish more challenging goals, invest greater effort, persist when encountering obstacles, and recover more quickly from setbacks because they believe they can influence their own success. Contemporary studies continue to support this theoretical perspective. Waddington, (2023) argues that self-efficacy functions as a multidimensional psychological resource that enhances motivation, resilience, adaptive behavior, and effective decision-making. Similarly, (Streufert et al., 2023) found that individuals with stronger self-efficacy demonstrate greater persistence and adaptability when responding to professional challenges, while Charitaki & Vretudaki, (2025) reported that higher self-efficacy promotes confidence, instructional effectiveness, and continuous professional development. Within the school context specifically, Sheng, (2024) in a study of Chinese senior high school students, found that students with higher career decision-making self-efficacy also reported stronger learning engagement, illustrating how self-belief translates into more active, career-oriented behavior. Extending this to career development more broadly, Kleine et al., (2023) demonstrated that career planning and self-efficacy jointly predict lower career-related worry among master's students, with self-efficacy serving as a key mediator that transforms planning behavior into confident, goal-directed action. Complementing these findings, Doğanülkü & Kırdök, (2025) showed that general self-efficacy significantly mediates the relationship between proactive personality and proactive career behavior, indicating that self-belief is the psychological mechanism through which personal initiative becomes sustained vocational action. Ran et al., (2023) further established that career decision-making self-efficacy enhances individuals' intrinsic motivation and proactive engagement in career exploration, enabling them to approach challenges positively and persist in their efforts. Collectively, these findings suggest that self-efficacy promotes confidence, persistence, and goal-directed behavior, making it an important psychological resource for students when exploring career opportunities and developing realistic career plans.

Another psychological factor closely associated with career development is locus of control, which refers to individuals' beliefs regarding the extent to which life outcomes are determined by their own actions rather than external circumstances. Hamzah & Othman, (2023) explain that individuals with an internal locus of control believe that success primarily results from personal effort and competence, whereas those with an external locus of control attribute outcomes to luck, fate, or environmental conditions. Consistent with this perspective, Tyara et al., (2023) reported that individuals with an internal locus of control tend to demonstrate greater responsibility, initiative, persistence, and confidence because they perceive a direct relationship between effort and outcomes. A meta-analytic study by Duru & SÖner, (2024) synthesizing findings from ten scientific databases, confirmed that locus of control is systematically associated with career decision-making self-efficacy across cultural contexts, reinforcing its role as a stable predictor of career-related confidence. Using path analysis among 2,700 high school students (Al-bahrani et al., 2021) further showed that an internal locus of control directly and positively predicts career aspiration, whereas attributing career outcomes to powerful others exerts a negative effect. Xu et al., (2026) additionally found that individuals possessing stronger internal locus of control adapt more effectively to changing environments by actively acquiring new knowledge and skills, whereas those with an external orientation tend to adopt more passive coping strategies. Within educational settings, Jacub & Basuki, (2025) demonstrated that students with stronger internal locus of control exhibit higher academic self-efficacy and lower academic procrastination because they believe that achievement depends primarily on their own efforts. These findings indicate that locus of control influences how students

interpret challenges, regulate their behavior, and make educational and career decisions, suggesting that students with stronger internal control orientations are more likely to engage in effective career planning.

Recent empirical studies consistently demonstrate that self-efficacy and locus of control contribute positively to students' career development. Self-efficacy has been shown to strengthen career maturity by increasing students' confidence in recognizing their abilities and pursuing career goals (I.A. Maharani, 2023) while students possessing both high self-efficacy and an internal locus of control demonstrate greater career readiness than those with lower levels of these psychological resources (Prayoga et al., 2024). In a structural model among working millennials, Yusuf & Muhtadin, (2025) further demonstrated that both self-efficacy and internal locus of control positively predict career adaptability through the mediating mechanism of self-regulation, while Zhu & Wu, (2026) in a study of undergraduate nursing students, found that career decision-making self-efficacy and locus of control jointly and significantly predict career maturity. In the Indonesian context, Salim et al., (2023) showed that career decision self-efficacy fully mediates the effect of external support on college students' career adaptability, indicating that internal psychological resources matter more than external support alone. Furthermore, Syah & Fadillah, (2025) found that locus of control strengthens the relationship between self-efficacy and career development, suggesting that students who believe they can influence career outcomes are more likely to translate confidence into concrete career preparation.

Taken together, prior studies have predominantly examined self-efficacy and locus of control in relation to career decision-making, career maturity, career readiness, career adaptability, and career aspiration (Al-bahrani et al., 2021; Duru & SÖner, 2024; Prayoga et al., 2024; Yusuf & Muhtadin, 2025; Zhu & Wu, 2026). Comparatively limited attention has been devoted to career planning as a distinct developmental outcome, and empirical studies that simultaneously examine the influence of self-efficacy and locus of control on career planning among Indonesian senior high school students remain scarce. Therefore, the mechanisms through which these two psychological resources jointly contribute to students' career planning are still insufficiently understood, both theoretically and in the Indonesian secondary-education context.

To address this gap, the present study investigates the influence of self-efficacy and locus of control on career planning among Indonesian senior high school students. Specifically, this study examines whether self-efficacy positively influences career planning (Hypothesis 1), whether locus of control positively influences career planning (Hypothesis 2), and whether self-efficacy and locus of control simultaneously influence career planning (Hypothesis 3). A quantitative cross-sectional design was employed, and the proposed relationships were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), a variance-based structural equation modeling approach suitable for testing predictive relationships among latent variables with relatively complex models and modest sample sizes. By positioning career planning as the primary outcome variable rather than career maturity, career readiness, or career adaptability, this study offers a novel contribution to the career development literature. Theoretically, it extends current understanding of how self-efficacy and locus of control jointly shape career planning as a distinct construct; practically, it provides empirical evidence to support the development of more effective school guidance and counseling interventions aimed at strengthening students' career planning.

METHODS

Design

This study employed a quantitative cross-sectional research design to examine the influence of self-efficacy and locus of control on senior high school students' career planning, consistent with Sugiyono, (2017) framework for quantitative research aimed at testing hypothesized relationships among variables within a defined population. Data on self-efficacy, locus of control, and career planning were collected at a single point

in time using a structured questionnaire administered to the same respondents for all three variables; because this single-source, single-occasion data collection procedure can introduce common method bias, this possibility was taken into account when interpreting the subsequent path coefficients (Podsakoff et al., 2003). A cross-sectional design was considered appropriate because the study aimed to examine the hypothesized relationships and direct effects among the variables without manipulating the research setting or observing changes over time (Sugiyono, 2017). The study adopted a correlational approach to test the proposed hypotheses, providing an appropriate framework for investigating the structural relationships among the study variables in accordance with the research objectives.

Participants

The population in this study consisted of all Grade 10 and Grade 11 students enrolled in senior high schools (SMA), vocational high schools (SMK), and Islamic senior high schools (MA) in Central Java Province, with a total population of 1,294,706 students based on data from the Basic and Secondary Education Data System (Dapodikdasmen). The sample size was determined using the Slovin formula with a 5% error tolerance, resulting in a minimum required sample of 494 respondents, which was then rounded up to 594 respondents to facilitate data processing. Sampling was conducted using purposive sampling to select schools representing the characteristics of SMA, SMK, and MA education in the Pati Residency area of Central Java, namely SMA Negeri 1 Jekulo Kudus, SMK Negeri 3 Pati, and MA Sabilul Ulum Jepara. This was followed by total sampling, in which all Grade 10 and Grade 11 students from each selected school were included as respondents. The inclusion criteria were students who were actively enrolled in Grade 10 or Grade 11 at one of the three selected schools and who agreed to complete the research questionnaire, whereas students who did not meet these criteria were excluded from the sample. Data were collected online using Google Forms while maintaining the principles of confidentiality, voluntary participation, and objectivity in respondents' answers. Through this process, a total of 594 respondents were obtained, consisting of students from the three selected schools, with female respondents outnumbering male respondents. The demographic characteristics of the respondents based on school of origin and gender are presented in Table 1.

Table 1. Demographic Characteristics of Participants by School, Gender, and Grade (N = 594)

Variable	Category	n	%
School	MA Sabilul Ulum Jepara	284	47.81
	SMA Negeri 1 Jekulo Kudus	166	27.95
	SMK Negeri 3 Pati	144	24.24
Gender	Female	407	68.52
	Male	187	31.48
Grade	Grade X	210	35.35
	Grade XI	384	64.65
Total		594	100.00

Instruments

Three constructs were measured using self-report questionnaires administered via Google Forms, each developed from established theoretical indicators and rated on a four-point Likert scale (Strongly Agree, Agree, Disagree, Strongly Disagree). Favorable items were scored 4 to 1 and unfavorable items were reverse-scored, so that higher totals consistently reflected higher standing on each construct. Self-efficacy was

measured with a 30-item scale developed from Bandura's (1997) framework and informed by more recent conceptual accounts of self-efficacy's role in academic achievement and motivation (Carmona, 2022), covering magnitude, generality, and strength, together with students' confidence in managing academic demands, persistence, strategy use, self-regulation under stress, and adaptability to change; the scale comprised 15 favorable and 15 unfavorable items. Locus of control was measured with a 30-item scale based on (Rotter, 1966) and (Lefcourt, 2001) covering internal and external orientation, the perceived contingency between behavior and outcomes, chance, and powerful others, comprising 14 favorable and 16 unfavorable items. Career planning was measured with a 30-item scale developed from Patton & McMahon, (2014) and Lent, Robert & Steven, (2013) career self-management framework, covering self-awareness, environmental exploration, career decision-making, career adaptability, active engagement in career planning, career Self-efficacy, career goals, and planning actions, comprising 15 favorable and 15 unfavorable items. As all three instruments were newly constructed for this study rather than adopted from previously validated Indonesian-language scales, their psychometric properties were examined before the main analysis: item-level screening was conducted in Microsoft Excel, followed by convergent validity, discriminant validity, and construct reliability testing within the SEM-PLS measurement model, ensuring that the retained indicators were appropriate for this population of Indonesian senior high school students.

Procedure

The research instruments were developed based on established theoretical frameworks and validated by expert reviewers to ensure the relevance, clarity, and appropriateness of each questionnaire item. After the instruments had been finalized, permission to conduct the study was obtained from the participating schools. Eligible Grade X and XI students were invited to participate. They received information regarding the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. Written informed consent was obtained from all participants before data collection.

The questionnaire was then administered online through Google Forms to students who met the inclusion criteria. After the data collection period had ended, all completed questionnaires were screened for completeness, and responses with incomplete data were excluded from the analysis. The valid responses were subsequently exported from Google Forms to Microsoft Excel, where the data were coded according to the four-point Likert scoring system used in this study before being prepared for analysis. Finally, the processed dataset was imported into SmartPLS 4 to analyze the measurement and structural models and to test the proposed hypotheses regarding the relationships among Self-efficacy, locus of control, and career planning.

Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was selected because it is well suited for examining complex relationships among multiple latent constructs while simultaneously evaluating both the measurement model and the structural model (Hair et al., 2022). Before the main analysis, responses collected through Google Forms were exported to Microsoft Excel for data screening, coding according to the four-point Likert scoring system, and preliminary item validity testing using Pearson product-moment correlation. Only fully completed questionnaires were retained for analysis; therefore, no missing-data imputation was required. Items that did not satisfy the required validity criterion were excluded before the dataset was imported into SmartPLS 4. The analysis followed a two-stage procedure (Hair et al., 2022). First, the measurement model (outer model) was evaluated to assess indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Internal consistency reliability was assessed using Cronbach's alpha and composite reliability, whereas

convergent validity was evaluated using outer loadings and the Average Variance Extracted (AVE) (Hair et al., 2022; Setiabudhi et al., 2025). Discriminant validity was assessed using the Heterotrait–Monotrait Ratio (HTMT), the Fornell–Larcker criterion, and cross-loadings (Hair et al., 2022). Indicators that did not satisfy the recommended validity criteria were removed before the structural model was evaluated. Second, the structural model (inner model) was evaluated to examine the hypothesized relationships among self-efficacy, locus of control, and career planning. The evaluation included the assessment of the coefficient of determination (R^2) to determine the proportion of variance in career planning explained by the exogenous variables, the effect size (f^2) to evaluate the contribution of each predictor, and predictive relevance (Q^2) to assess the model's predictive capability (Hair et al., 2022). Hypothesis testing was conducted using the bootstrapping procedure, with statistical significance evaluated based on the path coefficients, t-values, and p-values (Hair et al., 2022; Setiabudhi et al., 2025). In addition, a simultaneous significance test (F-test) was performed using the Linear Regression procedure in SmartPLS 4 to examine whether Self-efficacy and locus of control jointly had a significant effect on career planning (Setiabudhi et al., 2025). Overall, the analytical procedure enabled a comprehensive evaluation of both the measurement model and the structural model to test the proposed research hypotheses.

RESULTS AND DISCUSSION

Results

Evaluation of the measurement model showed that all retained indicators for the Self-efficacy, locus of control, and career planning constructs exceeded the recommended outer loading threshold, with loadings ranging from 0.705 to 0.805 for Self-efficacy, 0.712 to 0.790 for locus of control, and 0.704 to 0.804 for career planning. Average Variance Extracted (AVE) values were 0.550, 0.559, and 0.546 for Self-efficacy, locus of control, and career planning, respectively, and Composite Reliability and Cronbach's Alpha values for all three constructs exceeded 0.84 (Table 2), indicating that convergent validity and construct reliability were established for the measurement model.

Table 2. Convergent Validity and Construct Reliability.

Construct	Outer Loading Range	AVE	CR (α)
Self-efficacy	0.705–0.805	0.550	0.931 (0.918)
Locus of control	0.712–0.790	0.559	0.884 (0.843)
Career planning	0.704–0.804	0.546	0.923 (0.908)

Discriminant validity was assessed using the Heterotrait–Monotrait Ratio (HTMT). All HTMT values among the three constructs were below 0.41, well under the conservative 0.85 threshold (Table 3), indicating that Self-efficacy, locus of control, and career planning were empirically distinct constructs.

Table 3. Discriminant Validity (Heterotrait–Monotrait Ratio)

Construct	LC	PK	SE
LC	–	–	–
PK	0.235	–	–
SE	0.164	0.401	–

Figure 1 presents the path coefficients obtained through the bootstrapping procedure. Locus of control had a positive and statistically significant relationship with career planning ($\beta = 0.156$, $t = 3.428$, $p =$

0.001), supporting Hypothesis 1. Self-efficacy also had a positive and statistically significant relationship with career planning ($\beta = 0.350$, $t = 8.985$, $p < 0.001$), supporting Hypothesis 2 (Table 4).

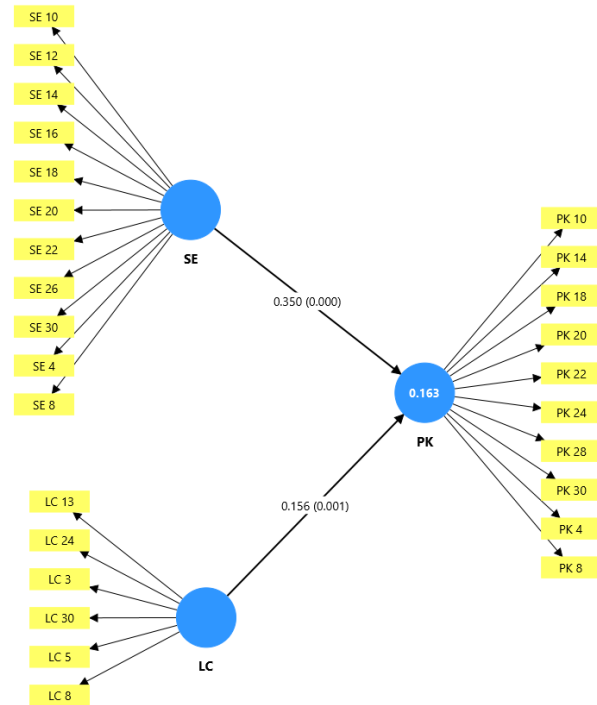


Figure 1. Structural Model Path Coefficients from the Bootstrapping Procedure (SmartPLS 4)

Table 4. Hypothesis Testing Results (Bootstrapping)

Hypothesis / Path	β (Path Coefficient)	t-statistic	p-value
H1: Locus of control $\rightarrow$ Career planning	0.156	3.428	0.001
H2: Self-efficacy $\rightarrow$ Career planning	0.350	8.985	0.000
Hypothesis / Path	β (Path Coefficient)	t-statistic	p-value

Having established the significance of each path, the combined explanatory and predictive strength of the structural model was then examined. Self-efficacy and locus of control jointly accounted for 16.3% of the variance in career planning ($R^2 = 0.163$; adjusted $R^2 = 0.161$), with effect size (f^2) values indicating a small-to-moderate contribution from Self-efficacy ($f^2 = 0.143$) and a small contribution from locus of control ($f^2 = 0.029$), and a predictive relevance value greater than zero ($Q^2 = 0.148$), indicating that the structural model had adequate predictive relevance (Table 5).

Table 5. Structural Model: R^2 , f^2 , and Q^2

Metric	Relationship / Construct	Value	Interpretation
R^2	Career planning (adj. $R^2 = 0.161$)	0.163	Weak
f^2	Self-efficacy $\rightarrow$ Career planning	0.143	Small–moderate
f^2	Locus of control $\rightarrow$ Career planning	0.029	Small

An F-test was then conducted to determine whether Self-efficacy and locus of control, considered together, had a statistically significant simultaneous relationship with career planning. The regression model was statistically significant, $F(2, 591) = 54.754$, $p < .001$ (Table 6), supporting Hypothesis 3 and confirming that the structural model as a whole was appropriate for explaining students' career planning.

This significant simultaneous effect was further supported by the R^2 value of the inner model ($R^2 = 0.163$; Table 5), indicating that Self-efficacy and locus of control jointly explained a modest proportion of the variance in career planning, while the remaining variance was attributable to factors outside the scope of the present model, such as social support, work experience, economic conditions, or other psychological variables not examined here. Although the R^2 value was relatively low, the significant F-test result confirmed that the structural model tested had valid statistical predictive capability for career planning, even though the proportion of explained variance remained limited, indicating that career planning is a complex construct influenced by many factors beyond Self-efficacy and locus of control.

Table 6. F-test Results for the Simultaneous Effect of Self-efficacy and Locus of Control on Career Planning

Source	Sum of Squares	df	F (p-value)
Regression	4235.979	2	54.754 (p < .001)
Residual	22861.006	591	—
Total	27096.985	593	—

Discussion

This discussion interprets the study's findings on the influence of self-efficacy and locus of control on senior high school students' career planning, structured around three hypotheses and organized into five parts. Part 1 addresses the influence of self-efficacy on career planning; Part 2 addresses the influence of locus of control; Part 3 examines the simultaneous influence of both predictors together with alternative explanations for the findings; Part 4 outlines the theoretical and practical implications of the study; and Part 5 discusses the study's limitations and offers suggestions for future research.

The Influence of Self-Efficacy on Students' Career Planning

Prior work has largely examined self-efficacy and locus of control as predictors of career maturity or readiness, rather than of career planning itself, and has rarely modeled both constructs simultaneously. This study confirmed that self-efficacy and locus of control are both significant, complementary predictors of students' career planning, with self-efficacy exerting the stronger influence of the two, thereby extending prior evidence on career maturity and readiness to this earlier, more actionable stage.

Self-efficacy proved to be the stronger of the two predictors, with a larger path coefficient and effect size than locus of control. This finding is consistent with Bandura's (1997) contention that self-referent beliefs shape the goals individuals set and the persistence with which they pursue them, and it aligns with the Social Cognitive Career Theory (SCCT) proposition that self-efficacy is a central determinant of career-related interests, choices, and actions (Lent et al., 1994). This finding also reinforces earlier results linking self-efficacy to career maturity and readiness among senior high school students (I.A. Maharani, 2023; Prayoga et al., 2024), indicating that students with higher confidence tend to be more active in exploring options, setting goals, and taking concrete planning steps. This pattern is broadly consistent with international evidence from Kleine et al., (2023), who found that career planning and career-related self-efficacy were closely and reciprocally related among students approaching graduation; although their longitudinal design showed that career planning actually drove subsequent self-efficacy (rather than the reverse), that finding still supports the

view that the two constructs mutually reinforce one another as proximal resources rather than as fixed, distal traits.

The Influence of Locus of Control on Students' Career Planning

Locus of control also showed a significant, though smaller, relationship with career planning, consistent with Rotter's (1966) proposition that individuals who attribute outcomes to their own effort tend to be more proactive in goal-directed action. This supports previous research linking internal locus of control to career readiness and maturity (Indriani & Handari, 2024; Prayoga et al., 2024), and reinforces the SCCT view that personal agency, not self-efficacy alone, shapes how students engage with career-related tasks. The comparatively smaller effect size of locus of control is also consistent with the findings of Al-bahrani et al., (2021) who, in a large sample of Grade 10–11 students ($N = 2,700$), found that internal locus of control predicted career aspiration primarily indirectly, through career decision-making self-efficacy, rather than through a strong direct path. Read together, this evidence suggests that the contribution of locus of control to career planning may only be partially captured through a direct path, and may operate more effectively through self-efficacy or self-regulation mechanisms that are proximal in nature and were not modeled in the present study.

The Simultaneous Influence of Self-Efficacy and Locus of Control, and Alternative Explanations

Beyond the individual paths tested for Hypotheses 1 and 2, the simultaneous influence of self-efficacy and locus of control on career planning was also tested through an F-test and found to be statistically significant, thereby supporting Hypothesis 3 and confirming that the two predictors, considered jointly, had a meaningful simultaneous relationship with career planning. Nevertheless, together the two predictors accounted for only 16.3% of the variance in career planning ($R^2 = 0.163$), a proportion classified as weak by conventional PLS-SEM benchmarks (Hair et al., 2022). By comparison, studies that also modeled a proximal mediating mechanism produced substantially larger explained variance for comparable outcomes; for instance, Yusuf & Muhtadin, (2025) reported an R^2 of 0.875 for career adaptability once self-regulation was modeled alongside self-efficacy and internal locus of control. This comparison suggests that career planning is shaped by a broader range of factors than internal beliefs alone, such as school-based career guidance, family and peer support, socioeconomic circumstances, and access to career information, none of which were modeled in this study. This gap between the strength of the individual paths and the modest explained variance indicates that career planning is a multidimensional construct, consistent with Syah & Fadillah, (2025) suggestion that locus of control may function more as a mediator than as a direct predictor in this relationship.

Several alternative explanations for these findings should also be considered alongside the substantive interpretation above. First, because both predictors and the outcome variable were measured concurrently through a single self-report instrument, part of the observed relationship may reflect common method bias rather than a genuine underlying effect (Podsakoff et al., 2003) students who tend to agree with positive statements about themselves could obtain elevated scores on all three constructs regardless of whether a true relationship exists. Second, the cross-sectional design cannot rule out the possibility of reverse or reciprocal causality: rather than self-efficacy and locus of control simply producing better career planning, engagement in career planning activities itself may build students' confidence and sense of control over time, a bidirectional pattern explicitly recommended for testing with longitudinal data by Kleine et al., (2023) Third, the low R^2 value raises the possibility that the observed direct paths are partly a proxy for unmeasured contextual factors; evidence from (Al-bahrani et al., 2021) and Kukreja & Mahapatra, (2024), who each found that parental and family support shape both self-efficacy and locus of control as well as career-related

outcomes, suggests that some of the variance attributed here to students' internal beliefs may in fact be influenced by, or channeled through, environmental support that was not included in this study's structural model.

Research Implications

Taken together, these findings carry both theoretical and practical implications. Theoretically, they extend Social Cognitive Career Theory (SCCT) beyond career maturity and readiness to the earlier, more actionable stage of career planning, treating self-efficacy and locus of control as complementary rather than competing predictors. The comparatively small effect size of locus of control, supported by convergent evidence from Al-bahrani et al., (2021) also points to a need for theoretical refinement: the contribution of locus of control to career planning may be more accurately represented in future models as an indirect or mediated path rather than solely as a direct effect.

Practically, school counseling programs aiming to strengthen students' career planning may benefit from combining confidence-building activities, such as structured goal-setting and mastery experiences, with strategies that foster a stronger internal sense of control, such as helping students recognize the link between effort and outcomes. Given that Kleine et al., (2023) found that lower self-efficacy in career planning was also associated with increased career-related worry, counseling interventions that build self-efficacy may offer the added benefit of reducing students' anxiety about their future, making such programs relevant to both career development and students' psychological well-being. Because internal beliefs explain only a small portion of career planning, school guidance programs should also be accompanied by concrete structural support, such as access to career information, parental involvement, and teacher mentoring, in line with (Kukreja & Mahapatra, 2024) finding that parental support is independently associated with stronger career self-efficacy among adolescents.

Limitations and Suggestions for Future Research

Several limitations should be noted. The cross-sectional design does not allow for causal conclusions; the self-report data are susceptible to common method bias Podsakoff et al., (2003) and the sample, drawn from three schools within a single former residency area of Central Java, may limit the generalizability of the findings. The low R^2 value also indicates that important predictors of career planning remain uncaptured in this study.

Future research could address these limitations in several ways. First, incorporating contextual variables such as family and peer support, school-based career guidance, or socioeconomic background would help clarify the extent to which career planning is shaped by students' internal beliefs versus environmental factors, following the approach used by Al-bahrani et al., (2021) and Kukreja & Mahapatra, (2024) Second, testing locus of control, and possibly self-efficacy as well, as antecedents of proximal mediating mechanisms such as self-regulation or career decision-making self-efficacy, as suggested by Syah & Fadillah, (2025) and demonstrated by Yusuf & Muhtadin, (2025), could substantially increase the variance in career planning that can be explained. Third, longitudinal or mixed-method designs, as recommended by Kleine et al. (2023), would allow researchers to disentangle the direction of influence between students' psychological beliefs and their career planning behavior over time. Finally, replicating this model across a broader range of regions, school types, and educational levels, both within Indonesia and internationally, would help establish the generalizability of these findings.

CONCLUSION

Students who trust their capabilities and attribute outcomes to their own effort are better positioned to plan their educational and occupational futures in a purposeful way, with self-efficacy carrying greater weight of the two beliefs examined here. This matters for school counselors, teachers, and parents because it points to concrete, malleable qualities—confidence in one's abilities and a sense of personal agency that can be nurtured through everyday guidance rather than treated as fixed traits some students simply have and others lack. By treating career planning as a distinct outcome rather than folding it into career maturity or readiness, this study clarifies that self-efficacy and locus of control operate as complementary, actionable resources at an earlier, more practical stage of adolescents' vocational development than most prior work has addressed. At the same time, because these two beliefs accounted for only a modest share of the variation in students' career planning, psychological readiness alone cannot substitute for accessible career guidance, informed family support, and genuine opportunities for students to explore their options. Helping adolescents plan their futures well therefore requires attention both to what students believe about themselves and to the support structures around them, and school guidance and counseling programs stand to benefit from addressing both in tandem.

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AUTHOR CONTRIBUTION STATEMENT

FR was responsible for the conception and design of the study, instrument development, data collection, data analysis, interpretation of the findings, and preparation of the original manuscript. DR contributed to the research methodology, supervised the study, provided critical revisions of the manuscript, and assisted in interpreting the research findings. AK contributed to the conceptual framework, supervised the research process, reviewed and edited the manuscript, and approved the final version for publication. All authors participated in the revision and finalization of the manuscript and approved the submitted version for publication.

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