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The Influence of Learning Motivation on Students' Career Planning

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ABSTRACT

Career planning is an important process that helps secondary school students recognize their potential, understand educational and occupational options, and plan steps toward their career goals. Learning motivation is assumed to be related to students' ability to plan their careers. This study aimed to examine the effect of learning motivation on career planning among senior high school students. A quantitative, correlational design was used. The sample consisted of 131 students in grades X, XI, and XII at SMA Muhammadiyah 4 Yogyakarta, drawn from a population of 194 using the Slovin formula (5% error) and simple random sampling. Data weyre collected with four-point Likert scales for learning motivation and career planning. A pilot test with 52 students using the Rasch Model (TAM package in RStudio) retained 35 of 40 items, with an EAP reliability of 0.951. Data were analyzed using descriptive statistics, simple linear regression, Pearson correlation, an independent-samples t-test, and one-way ANOVA. Learning motivation had a positive and significant effect on career planning ($F(1,129) = 48.177$; $p < 0.001$; $\beta = 0.489$), explaining 27.2% of the variance. Goal orientation was the indicator most strongly related to career planning ($\beta = 0.341$). Male students scored higher on career planning than female students ($p = 0.040$), while differences across grade levels were not significant. These findings highlight the need for guidance and counseling services that sustain learning motivation, clarify educational goals, and broaden career exploration.

1. INTRODUCTION

Career planning is a process of determining future directions through an understanding of one's potential, interests, and educational and occupational opportunities (Winkel and Hastuti 2013). During adolescence, career planning becomes particularly important as students begin to consider further education and career options that align with their abilities and potential (Wang et al. 2023). This process involves self-understanding, knowledge of the world of work, decision-making, and career exploration (Zhang, Yu, and Liu 2022). Furthermore, the ability to adapt to career changes is essential for preparing for the future (Nurfitriana, Hidayat, and Herdi 2021). However, some students still experience difficulties in career planning due to limited self-understanding, insufficient information, and low confidence in making career decisions (Hirschi 2018; Howard and Walsh 2010; Lent, Brown, and Hackett 2000). These challenges highlight the importance of guidance and counseling services that address students' needs. Such efforts may include information services based on experiential learning (Amelia, Dwiyono, and Muslifar 2024), group guidance using modeling techniques (Nuraeni, Fitriani, and Novianti 2025), and the development of career exploration media (Agustia and Rosada 2021). Research on career maturity also emphasizes the importance of providing services that are appropriate to students' needs (Saripah, Priliani, and Nadhirah 2023). One factor that is presumed to be associated with career planning is learning motivation. Learning motivation refers to the drive that encourages students to engage in learning activities and achieve learning goals (Ryan and Deci 2020b; Wena 2018). Motivation is also associated with goal orientation and self-regulation, which help individuals sustain their efforts toward achieving long-term goals (Eccles and Wigfield 2020; Schunk and DiBenedetto 2020). In the career context,

motivational factors and self-efficacy are also related to the career decision-making process (Chatterjee, Afshan, and Chhetri 2023). Several studies have examined the relationship between learning motivation and career planning (Apriandes, Adison, and Suryadi 2026; Vestalia and Wibowo 2021). Other studies have explored learning motivation in relation to work readiness and students' practical experiences (Naim 2022), as well as environmental factors associated with career planning (Meilinasari 2024). Differences in respondent characteristics and research contexts should also be considered when interpreting these findings (Erezka 2022). Recent studies have further highlighted the importance of career exploration and self-efficacy in students' career decision-making processes.(Susanto, Riasnugrahani, and Savitri 2024) examined career exploration training to improve career decision-making self-efficacy among high school students. (Simanjuntak 2024) emphasized that career exploration needs to be accompanied by confidence and the ability to process information. Meanwhile, (Gashi et al. 2023) investigated the effectiveness of career guidance workshops in improving adolescents' career self-efficacy, outcome expectations, and career goals. (Barusi and Suharso 2024) examined career exploration behavior as a mediator in the relationship between social support and career decision-making self-efficacy. (Khoeriyah, Sunawan, and Awalya 2022) also investigated the relationship between authoritative parenting and career exploration through career decision-making self-efficacy.

These findings indicate that career planning is associated with various personal and environmental factors. Recent research has also demonstrated the relevance of academic motivation and self-efficacy to adolescents' career development. (Deng et al. 2022) identified different career development profiles among adolescents and found that students with higher levels of career exploration and planning also tended to demonstrate stronger academic motivation and academic self-efficacy. Similarly, (Zhao, Zeng, and Deng 2024) reported a positive association between academic motivation, academic self-efficacy, and career development among high school students. These findings indicate that students' motivation in academic activities may be connected to their efforts to explore and plan their future careers. Nevertheless, academic motivation and learning motivation are related but not identical concepts. Therefore, the relationship between students' motivation to engage in learning activities and their ability to plan their careers requires further examination. Furthermore, previous studies have primarily focused on career exploration, career decision-making self-efficacy, social support, and other factors associated with career development (Barusi and Suharso 2024; Gashi et al. 2023; Simanjuntak 2024; Susanto et al. 2024). Although these studies provide valuable insights into students' career development, they do not fully explain how learning motivation is associated with the broader process of career planning. Career planning involves not only exploring occupational opportunities and making career decisions but also understanding personal abilities, identifying future goals, and preparing appropriate steps to achieve them. Thus, examining learning motivation in relation to career planning is important to obtain a more comprehensive understanding of students' career development. Another aspect that deserves attention is the educational context in which the relationship between these variables is examined. Findings from previous studies cannot automatically be generalized to students in different school environments because students may have different learning experiences, educational backgrounds, and career development needs. In this regard, SMA Muhammadiyah 4 Yogyakarta provides a specific educational context for examining the relationship between learning motivation and career planning. Investigating these variables in this school is important to understand whether students' motivation in pursuing learning activities is associated with their preparation for future educational and occupational choices. Based on these considerations, the research gap lies in the need to examine the relationship between learning motivation and career planning more specifically, particularly among Indonesian senior high school students within a particular school setting. Previous research has provided substantial discussion of academic motivation, career exploration, and career decision-

making; however, further empirical evidence is needed to understand the contribution of learning motivation to students' career planning. Therefore, this study aims to examine the influence of learning motivation on career planning among students at SMA Muhammadiyah 4 Yogyakarta. The findings are expected to contribute to the development of career guidance and counseling services by providing information about the role of learning motivation in supporting students' career planning.

2. METHODS

This study employed a quantitative approach with a correlational design. It aimed to examine the relationship between learning motivation as the independent variable (X) and students' career planning as the dependent variable (Y) at SMA Muhammadiyah 4 Yogyakarta. Simple linear regression analysis was used to examine the predictive contribution of learning motivation to students' career planning. The study was conducted in October 2026, involving the entire population of 194 students in Grades X, XI, and XII at SMA Muhammadiyah 4 Yogyakarta. The sample size was determined using Slovin's formula with a 5% margin of error, resulting in a sample of 131 students. The sampling technique employed was simple random sampling, in which each member of the population had an equal chance of being selected as a respondent. This study involved two variables. Learning needs and motivation, learning persistence, goal orientation, and learning interest and engagement. It was measured using indicators of learning drive, persistence, hopes and future aspirations, and engagement in interesting learning activities, referring to (Wena 2018). Meanwhile, career planning was defined as the process of recognizing personal potential, obtaining educational and occupational information, making decisions, and developing steps to achieve career goals. Its measurement referred to the dimensions of career planning proposed by (Winkel and Hastuti 2013), with career exploration serving as a supporting theoretical perspective (Wang, Degol, and Henry 2021). Data were collected through questionnaires and documentation. The questionnaire instrument used a four-point Likert scale consisting of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). Positively worded statements were scored from 4 to 1, whereas negatively worded statements were reverse-scored. The scores for individual items were summed to obtain the total score for each variable. Before the main data collection, the research instrument was piloted with 52 students using the Rasch Model through RStudio software with the TAM package. The initial instrument consisted of 40 items, comprising 20 items measuring learning motivation and 20 items measuring career planning. Item validity was evaluated using Infit and Outfit Mean Square (MNSQ) statistics to examine the consistency of individual item responses with the Rasch measurement model.

The item fit evaluation used an MNSQ range of 0.5–1.5 as the reference for productive measurement. Values between 1.5 and 2.0 were considered less productive and required further examination, whereas values above 2.0 indicated a potential risk of distorting the measurement. Values below 0.5 were also examined because they could indicate an overfit response pattern. Decisions regarding item retention or elimination considered both Infit and Outfit statistics, as well as the relevance of each item to the measured construct. The initial analysis showed an Expected A Posteriori (EAP) reliability coefficient of 0.943. Five items demonstrated consistently elevated Infit and Outfit MNSQ values beyond the acceptable reference range. These items were item 13 from the learning motivation instrument and items 23, 28, 32, and 38 from the career planning instrument. Consequently, the five items were eliminated, reducing the instrument from 40 to 35 items. A second Rasch analysis was subsequently conducted on the remaining items. The results indicated an EAP reliability coefficient of 0.951, an increase from the initial value of 0.943. Some retained items showed Outfit MNSQ values slightly above 1.5, although their Infit MNSQ values remained within

the productive measurement range. These items were retained with further consideration of their fit statistics. The remaining instrument consisted of 19 learning motivation items and 16 career planning items.

Categorization of Research Variables

The levels of learning motivation and career planning were classified into three categories: low, moderate, and high. The categorization was based on the ideal mean (Mi) and ideal standard deviation (SDi), calculated from the theoretical minimum and maximum scores of each instrument. This approach provided a consistent basis for classifying respondents according to the possible score range of the retained items.

The formulas used were:

$$Mi = (Smax + Smin) / 2$$

$$SDi = (Smax - Smin) / 6$$

For the learning motivation variable, which consisted of 19 retained items, the minimum ideal score was 19 and the maximum ideal score was 76. The resulting ideal mean was 47.5, with an ideal standard deviation of 9.5. Therefore, scores below 38 were classified as low, scores from 38 to below 57 as moderate, and scores of 57 or higher as high.

Category	Score range
Low	$X < 38$
Moderate	$38 \leq X < 57$
High	$X \geq 57$

For the career planning variable, which consisted of 16 retained items, the minimum ideal score was 16 and the maximum ideal score was 64. The resulting ideal mean was 40, with an ideal standard deviation of 8. Accordingly, scores below 32 were classified as low, scores from 32 to below 48 as moderate, and scores of 48 or higher as high.

Category	Score range
Low	$X < 32$
Moderate	$32 \leq X < 48$
High	$X \geq 48$

These classification criteria were applied separately to each variable to describe the distribution of students' learning motivation and career planning levels.

3. RESULTS AND DISCUSSION

This study examined the relationship between learning motivation and career planning among 131 high school students. The results are presented in relation to the study questions: the learning-motivation indicators associated with career planning, the descriptive levels of learning motivation and career planning, the career-planning dimensions, the regression hypothesis, gender differences, and grade-level differences. Tables 1–8 summarize the processed results; Figure 1 presents the gender-group means.

Learning-Motivation Indicators Associated with Career Planning

The classification of items for the learning motivation and career planning variables in this study was developed based on the theoretical foundations and instrument blueprint referring to (Winkel and Hastuti 2013) and (Wena 2018). The instrument blueprint was constructed by adapting the theoretical indicators to the characteristics of the variables and the objectives of the study. Learning motivation was classified into four indicators: (1) learning needs and motivation, (2) learning persistence, (3) goal orientation, and (4) learning interest and engagement. Meanwhile,

career planning was measured through four aspects: self-understanding, knowledge of the world of work, career decision-making, and the development of career planning steps. Based on this instrument blueprint, multiple linear regression analysis was conducted to examine the contribution of each learning motivation indicator to students' career planning. The results indicated that the regression model was statistically significant, $F(4, 126) = 14.603$, $p < .001$, with a coefficient of determination (R^2) of .317. This indicates that the four learning motivation indicators jointly explained 31.7% of the variance in students' career planning scores. As presented in Table 1, goal orientation had the largest standardized regression coefficient ($\beta = .341$, $p = .001$), followed by learning interest and engagement ($\beta = .236$, $p = .025$). Meanwhile, learning needs and motivation ($\beta = -.059$, $p = .555$) and learning persistence ($\beta = .119$, $p = .287$) did not demonstrate statistically significant partial contributions.

Table 1. Multiple regression results for learning-motivation indicators

Indicator	Standardized β	p	Result
learning needs and motivation	−.059	.555	Not significant
Learning persistence	.119	.287	Not significant
Goal orientation	.341	.001	Significant
Learning interest and engagement	.236	.025	Significant

These findings indicate that goal orientation and learning interest and engagement are significant indicators associated with students' career planning. Therefore, the interpretation of the findings is based on the indicators established in the instrument blueprint, which provides a theoretical and methodological foundation for examining the contribution of each learning motivation indicator to students' career planning.

Career-Planning Dimensions: Mean Scores and Associations

Table 2 presents the descriptive statistics and Pearson correlations between learning motivation and the four dimensions of career planning. The 16 career-planning items (K20–K35) were grouped into four dimensions for the purpose of the analysis: self-understanding, career exploration, career decision-making, and career planning/action.

Table 2. Descriptive means and correlations for career-planning dimensions

Dimension	Items	M	SD	r with motivation	p
Self-understanding	K20–K23	3.1698	NR	.513	< .001
Career exploration	K24–K27	3.1183	NR	.404	< .001
Career decision-making	K28–K31	3.1794	NR	.377	< .001
Career planning/action	K32–K35	3.2672	.41855	.434	< .001

Note. N = 131. M = Mean; SD = Standard Deviation; r = Pearson correlation coefficient.

Based on the descriptive analysis of 131 students, career planning/action obtained the highest mean score (M = 3.2672, SD = 0.41855), followed by career decision-making (M = 3.1794, SD = 0.44751), self-understanding (M = 3.1698, SD = 0.47865), and career exploration (M = 3.1183, SD

= 0.45397). These results indicate that career planning/action had the highest average score among the four dimensions. Furthermore, the Pearson correlation analysis revealed that learning motivation was positively and significantly correlated with all four dimensions of career planning. Self-understanding demonstrated the strongest correlation with learning motivation ($r = .513$, $p < .001$), followed by career planning/action ($r = .434$, $p < .001$), career exploration ($r = .404$, $p < .001$), and career decision-making ($r = .377$, $p < .001$). These findings indicate that the highest mean score and the strongest correlation represent two different statistical characteristics. Career planning/action reflects the dimension with the highest average score, whereas self-understanding exhibits the strongest relationship with learning motivation. Therefore, these two findings should be interpreted separately when examining students' career planning characteristics and their relationship with learning motivation.

Descriptive Profile of Learning Motivation

Learning-motivation scores among the 131 students ranged from 40 to 75 ($M = 59.11$, $SD = 6.37$). Based on the categorization used in the supplied analysis, 82 students (62.6%) were classified in the high category and 49 (37.4%) in the moderate category; no students were classified in the low category. The distribution is summarized in Table 3.

Table 3. Learning-motivation scores and category distribution

Statistic/category	Criterion	n	% / value
Minimum	—	—	40
Maximum	—	—	75
Mean (SD)	—	131	59.11 (6.37)
Low	< 38	0	0.0%
Moderate	38–56	49	37.4%
High	≥ 57	82	62.6%
Total	—	131	100.0%

These percentages describe the sample using the stated cut-off scores. The criteria and their rationale should also be explained in the Methods section.

Descriptive Profile of Career Planning

Career-planning scores ranged from 38 to 64 ($M = 50.94$, $SD = 5.98$). As presented in Table 4, 102 students (77.9%) were classified in the high category, 29 (22.1%) in the moderate category, and none in the low category.

Table 4. Career-planning scores and category distribution

Statistic/category	Criterion	n	% / value
Minimum	—	—	38
Maximum	—	—	64
Mean (SD)	—	131	50.94 (5.98)
Low	16–31	0	0.0%
Moderate	32–47	29	22.1%
High	48–64	102	77.9%
Total	—	131	100.0%

The category proportions should be interpreted in relation to the scoring thresholds rather than as a complete assessment of every aspect of career readiness.

Regression Diagnostics and Hypothesis Test

Regression diagnostics were conducted to evaluate the suitability of the data for simple linear regression analysis. The diagnostic results included residual normality, heteroscedasticity, residual distribution, influential cases, and linearity. The summary of the available diagnostic results is presented in Table 5.

Table 5. Summary of available regression diagnostics

Diagnostic	Reported result	Interpretation
Residual normality	Formal test $p < .05$; P–P plot has deviations	Normality not fully supported by formal test
Glejser test	$p = .689$	No significant evidence of heteroscedasticity from this test
Residual scatterplot	No strong systematic pattern reported	No pronounced heteroscedasticity pattern
Standardized residual	−2.32477 to 3.98717	Extreme residual requires further examination
Cook's distance	Maximum = 0.71756	Potentially influential case requires review
Linearity	Test results not yet available	Linearity assumption cannot yet be confirmed

Source: Primary data processed using SPSS (2026).

The diagnostic results indicated that the Glejser test was not statistically significant ($p = .689$), suggesting no significant evidence of heteroscedasticity. However, the formal residual-normality test was significant ($p < .05$), and the maximum standardized residual reached 3.98717. The maximum Cook's distance was 0.71756, indicating the presence of a potentially influential observation that required further examination. The linearity-test results were not available in the analyzed output; therefore, the linearity assumption could not yet be established. The primary regression analysis retained all 131 respondents. A sensitivity analysis, temporarily excluding the potentially influential case, showed an increase in R^2 from .272 to .352 and an increase in the unstandardized regression coefficient from .489 to .570. Although the estimated values changed, the positive association remained statistically significant. This comparison was used to evaluate the stability of the regression estimates and did not automatically justify excluding the observation. The simple linear regression analysis was conducted to examine the relationship between learning motivation and career planning. The regression model was statistically significant, $F(1, 129) = 48.177$, $p < .001$. Learning motivation had a positive regression coefficient ($\beta = .489$, $t = 6.941$, $p < .001$). The coefficient of determination (R^2) was .272, indicating that learning motivation accounted for 27.2% of the variance in students' career-planning scores. The remaining 72.8% was associated with other factors not included in the regression model. The regression results are presented in Table 6.

Table 6. Simple linear regression predicting career planning

Statistical Indicator	Result
Number of respondents (N)	131
F-value	48.177
Degrees of freedom	(1, 129)
Model significance	< .001
Regression coefficient (B)	.489
t-value	6.941
Significance of regression coefficient	< .001
Coefficient of determination (R^2)	.272
Explained variance	27.2%
Unexplained variance	72.8%

Source: Primary data processed using SPSS (2026).

Source: Primary data processed using SPSS (2026).

The regression equation was expressed as follows:

$$\hat{Y} = 22.006 + 0.489X$$

In addition to the overall regression analysis, the contribution of each learning-motivation indicator was examined to identify which indicators significantly predicted career planning. The results are presented in Table 7.

Table 7. Regression Coefficients of Learning Motivation Indicators

Indicator	Standardized β	p	Result
Learning needs and drive	−.059	.555	Not significant
Learning persistence	.119	.287	Not significant
Goal orientation	.341	.001	Significant
Learning interest and engagement	.236	.025	Significant

Source: Primary data processed using SPSS (2026).

As presented in Table 7, goal orientation had the strongest standardized coefficient (β = .341, p = .001), followed by learning interest and engagement (β = .236, p = .025). Meanwhile, learning needs and drive (β = −.059, p = .555) and learning persistence (β = .119, p = .287) did not show statistically significant individual contributions. Overall, the regression findings demonstrated a positive and statistically significant relationship between learning motivation and career planning. However, because the study employed an observational correlational design, these findings should be interpreted as statistical prediction rather than definitive evidence of causation. The diagnostic findings, particularly residual normality, the potentially influential observation, and the unconfirmed linearity assumption, should also be considered when interpreting the regression results.

Gender Differences in Career Planning

Male students (n = 66, M = 52.00, SD = 6.03) had a higher mean career-planning score than female students (n = 65, M = 49.86, SD = 5.77). Levene's test was not significant (p = .333). The independent-samples t-test indicated a statistically significant mean difference, t(129) = 2.073, p = .040, with a mean difference of 2.138 points and a 95% confidence interval of [0.097, 4.180]. Table 7 presents the group statistics and test results; Figure 1 visualizes the mean scores.

Table 7. Career-planning scores and gender comparison

Gender	n	M	SD
Male	66	52.00	6.03
Female	65	49.86	5.77

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Test statistic	Result
Levene's test p	.333
t(df)	2.073 (129)
Two-tailed p	.040
Mean difference (male − female)	2.138
95% CI	[0.097, 4.180]

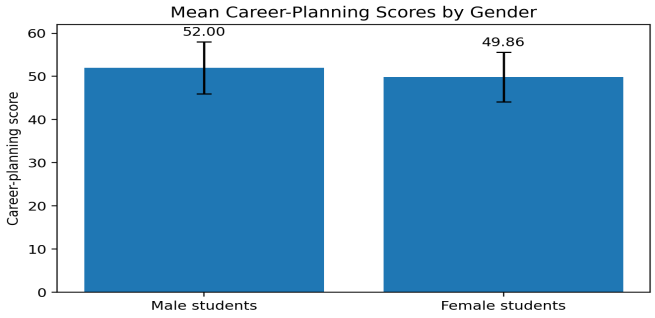


Figure 1. Mean career-planning scores by gender; error bars represent one standard deviation.

The finding indicates a difference between the two sample means, not that gender causes differences in career planning or that the result applies to all students. Possible explanations such as occupational expectations, access to career information, and social support were not tested.

Differences by Grade Level

The sample comprised 25 Grade X students (19.1%), 32 Grade XI students (24.4%), and 74 Grade XII students (56.5%). As shown in Table 8, one-way ANOVA found no statistically significant grade-level difference in learning motivation, $F(2, 128) = 1.301$, $p = .276$, or career planning, $F(2, 128) = 0.222$, $p = .801$.

Table 8. Grade-level distribution and ANOVA results

Analysis	Grade/outcome	n or F	p / %	Conclusion
Distribution	Grade X	25	19.1%	—
Distribution	Grade XI	32	24.4%	—
Distribution	Grade XII	74	56.5%	—
ANOVA	Learning motivation	F = 1.301	.276	Not significant
ANOVA	Career planning	F = 0.222	.801	Not significant

These non-significant tests indicate that the sample did not provide sufficient evidence of differences between grade-level means at the .05 level; they do not prove that the means are identical.

DISCUSSION

The principal finding of this study is that learning motivation was positively and statistically significantly associated with students' career planning. The simple linear regression model was statistically significant, $F(1, 129) = 48.177$, $p < .001$, with a regression coefficient of $\beta = .489$. The coefficient of determination ($R^2 = .272$) indicates that learning motivation accounted for 27.2% of

the variance in students' career-planning scores. This finding suggests that students who demonstrate stronger motivation in learning activities also tend to report better career-planning characteristics. However, because this study employed a correlational design, the result should be interpreted as a statistical association and predictive contribution rather than evidence that learning motivation directly causes improvements in career planning. This finding is consistent with previous studies highlighting the relationship between academic motivation and adolescents' career development. (Yuliana and Sudarno 2026) reported a contribution of learning motivation to students' future career expectations, while (Zhao et al. 2024) identified positive associations among academic motivation, academic self-efficacy, and career development. Similarly,(Zulvarina 2023) reported a relationship between learning motivation and career-planning awareness among Indonesian vocational students. Although these studies involved different educational contexts and measurement approaches, their findings collectively indicate that motivational characteristics are relevant to students' consideration of future educational and occupational pathways. The relationship between learning motivation and career planning can be understood through the role of goal orientation, learning interest, and engagement in educational activities. Students with clear learning goals may be more likely to connect their present educational experiences with their future aspirations. Goal orientation can provide a framework for identifying personal objectives, evaluating available opportunities, and considering the educational qualifications required for particular occupations. In this regard, learning goals may be associated with the development of more purposeful career exploration and decision-making.

The indicator-level regression results provide further information about this relationship. Goal orientation demonstrated the largest standardized regression coefficient ($\beta = .341$, $p = .001$), followed by learning interest and engagement ($\beta = .236$, $p = .025$). These findings indicate that both indicators had statistically significant partial associations with career planning when considered alongside the other learning-motivation indicators. Students who show greater interest in learning and participate more actively in educational activities may have more opportunities to recognize their interests, develop knowledge, and explore possible educational and occupational pathways. Such experiences are relevant to career planning because understanding different fields of knowledge can help students consider how their interests and academic experiences relate to future career alternatives. These findings are consistent with motivational perspectives emphasizing the importance of goals, engagement, and autonomous motivation in sustaining learning activities (Ryan and Deci 2020a). (Eccles and Wigfield 2020) also emphasize the relevance of individuals' expectations and the value they assign to activities when explaining their motivation and engagement. In the context of career development, these motivational characteristics may be associated with students' willingness to seek information, evaluate alternatives, and consider the steps necessary to pursue their future aspirations. Nevertheless, the relationships identified in this study do not establish that learning motivation independently determines students' career decisions. In contrast, learning needs and drive ($\beta = -.059$, $p = .555$) and learning persistence ($\beta = .119$, $p = .287$) did not demonstrate statistically significant partial associations with career planning in the multiple regression model. This does not necessarily indicate that these indicators are irrelevant to career development. Rather, their individual contributions were not statistically distinguishable from zero after the other indicators were considered in the same model. The findings therefore suggest that goal orientation and learning interest and engagement showed stronger unique statistical associations with career planning within the present sample. Further research is needed to examine how these indicators interact with other personal and environmental characteristics. Regarding the dimensions of career planning, career planning/action obtained the highest mean score ($M = 3.2672$, $SD = 0.41855$), followed by career decision-making ($M = 3.1794$, $SD = 0.44751$), self-understanding ($M = 3.1698$, $SD = 0.47865$), and career exploration ($M = 3.1183$, $SD = 0.45397$). These results indicate that students reported

relatively higher scores on activities related to preparing and organizing career plans, whereas career exploration had the lowest average score among the four dimensions. However, the highest mean score should be distinguished from the strength of the relationship between each dimension and learning motivation. Pearson correlation analysis showed that self-understanding had the strongest positive association with learning motivation ($r = .513$, $p < .001$), followed by career planning/action ($r = .434$, $p < .001$), career exploration ($r = .404$, $p < .001$), and career decision-making ($r = .377$, $p < .001$). Thus, career planning/action represented the dimension with the highest average score, whereas self-understanding demonstrated the strongest association with learning motivation. These findings describe different statistical characteristics and should not be interpreted as contradictory.

The relationship between learning motivation and self-understanding is particularly relevant because recognizing personal interests, abilities, and potential is an important part of career development. Students who are engaged in learning activities may have more opportunities to identify academic interests and evaluate their strengths. This information may be relevant when considering educational pathways and occupational alternatives. Nevertheless, the observed correlation does not establish that learning motivation produces greater self-understanding. Career development is also associated with other factors, including self-efficacy, social support, and access to career information (Gati, Krausz, and Osipow 1996; Savickas 2013). The relatively lower mean score for career exploration also deserves attention. Although students may report relatively high levels of career planning/action, this does not necessarily mean that they have sufficient information about available educational and occupational alternatives. Career exploration involves seeking, obtaining, and evaluating information about personal characteristics and the world of work. Previous research has emphasized the relevance of exploration behavior and self-efficacy in students' career decision-making processes (Barusi and Suharso 2024; Susanto et al. 2024). Therefore, the difference in mean scores suggests that guidance and counseling services may need to provide more opportunities for students to explore occupations, educational pathways, and the requirements associated with different career alternatives. The gender comparison revealed that male students ($M = 52.00$, $SD = 6.03$) obtained a higher mean career-planning score than female students ($M = 49.86$, $SD = 5.77$). The independent-samples t-test indicated a statistically significant difference, $t(129) = 2.073$, $p = .040$, with a mean difference of 2.138 points and a 95% confidence interval of [0.097, 4.180]. Although this result indicates a difference between the two groups in the present sample, it should not be interpreted as evidence that male students inherently possess better career-planning abilities than female students. Differences in career planning may be associated with social and environmental conditions that influence students' career-related experiences. Family expectations, social norms concerning occupational roles, the availability of career role models, and opportunities to obtain educational and occupational information may contribute to differences in how students explore and prepare for their futures. For example, differences in exposure to occupational information or encouragement to consider particular career pathways may influence students' confidence and willingness to explore available alternatives. These factors are possible explanations that require further investigation, rather than conclusions that can be established from the present statistical comparison.

Furthermore, the present study did not directly measure gender-related expectations, parental support, career self-efficacy, access to role models, or exposure to career information. Consequently, these factors cannot be identified as explanations for the observed difference based on the available data. Future research should investigate how social support, family expectations, educational opportunities, and access to career information are associated with career planning across gender groups. From a guidance and counseling perspective, this finding highlights the importance of providing equitable career information and support for all students. Counselors should avoid developing interventions based on assumptions about gender-specific abilities or occupational

preferences. Instead, career guidance activities should provide equal opportunities for students to recognize their potential, explore diverse occupational alternatives, and make informed educational and career decisions. The analysis of grade-level differences showed no statistically significant differences in learning motivation, $F(2, 128) = 1.301$, $p = .276$, or career planning, $F(2, 128) = 0.222$, $p = .801$. These results indicate that the available sample did not provide sufficient statistical evidence of differences in the mean scores across Grades X, XI, and XII. However, non-significant findings should not be interpreted as proof that students across grade levels have identical motivational characteristics or career-planning experiences. One consideration in interpreting these findings is the unequal distribution of respondents across grade levels. Grade XII students represented 56.5% of the sample, whereas Grade X and Grade XI students represented 19.1% and 24.4%, respectively. This imbalance may limit the precision of comparisons between grade groups. In addition, students at different educational stages may have different career-related needs even when their overall mean scores do not differ significantly. Future research could employ more balanced samples and report effect sizes and confidence intervals to provide a more comprehensive assessment of grade-level differences. The regression diagnostics also require consideration when interpreting the principal findings. The formal residual-normality test was statistically significant ($p < .05$), the maximum standardized residual reached 3.98717, and the maximum Cook's distance was 0.71756. In addition, the linearity-test results were unavailable. Although the Glejser test was not statistically significant ($p = .689$), these results do not establish that all regression assumptions were fully satisfied. The sensitivity analysis further indicated that the potentially influential observation affected the estimated magnitude of the regression relationship. After temporarily excluding this observation, the coefficient of determination increased from .272 to .352, while the unstandardized regression coefficient increased from .489 to .570. Nevertheless, the positive association remained statistically significant. This comparison suggests that the estimated strength of the relationship may be sensitive to individual observations. Therefore, the original observation should not be excluded automatically, and the regression findings should be interpreted cautiously. Further examination of the original SPSS output and, where appropriate, supplementary robust or bootstrap analyses would strengthen the reliability of the statistical interpretation.

Theoretical and Practical Implications for Guidance and Counseling

Theoretically, the findings provide additional empirical evidence regarding the relationship between learning motivation and career planning among senior high school students. The positive and statistically significant association suggests that motivational characteristics, particularly goal orientation and learning interest and engagement, are relevant to understanding students' career-planning characteristics. However, learning motivation should be considered one of several factors associated with career planning rather than its sole determinant. Personal characteristics, family support, social environments, career self-efficacy, and access to occupational information may also be relevant to students' career development. Practically, the findings provide considerations for the development of school Guidance and Counseling (BK) services. Counselors may integrate learning-goal reflection with career exploration activities to help students connect their current educational experiences with future aspirations. These activities may include identifying personal interests and strengths, exploring educational and occupational information, comparing available career alternatives, and developing realistic action plans. Such activities can provide opportunities for students to relate their learning experiences to their future educational and occupational considerations. The findings concerning career-planning dimensions also suggest the importance of balancing self-understanding and concrete career-planning activities. Although career planning/action had the highest mean score, self-understanding demonstrated the strongest association with learning motivation, while career exploration had the lowest mean score.

Accordingly, BK services may combine reflective activities that help students recognize their potential with structured opportunities to obtain and evaluate career information. Furthermore, career guidance should be inclusive and responsive to students' different social and educational circumstances. The observed gender difference should encourage counselors to evaluate whether students have equitable access to career information, occupational role models, and educational opportunities. Similarly, although no statistically significant grade-level differences were identified, counselors may organize developmentally appropriate activities, including self-exploration in Grade X, comparison of educational and occupational alternatives in Grade XI, and consolidation of career decisions and transition planning in Grade XII. These activities should be evaluated according to students' actual needs and the educational context rather than assumed to produce particular outcomes.

4. CONCLUSION

This study examined the relationship between learning motivation and career planning among 131 students at SMA Muhammadiyah 4 Yogyakarta. The findings indicate a positive and statistically significant relationship between learning motivation and students' career planning ($F(1, 129) = 48.177$, $p < .001$, $\beta = 0.489$). The coefficient of determination ($R^2 = 0.272$) indicates that learning motivation statistically accounts for 27.2% of the variance in career-planning scores. These results demonstrate that higher learning motivation is associated with higher levels of career planning among the students in this study. In the multiple regression analysis, goal orientation showed the strongest statistically significant partial association with career planning ($\beta = 0.341$, $p = .001$), followed by learning interest and engagement ($\beta = 0.236$, $p = .025$). Regarding career-planning dimensions, career planning/action obtained the highest mean score, whereas career exploration had the lowest mean score ($M = 3.1183$). The gender comparison also revealed a statistically significant difference in career-planning scores, with male students obtaining a higher mean score than female students ($p = .040$). However, no statistically significant differences were identified across Grades X, XI, and XII in either learning motivation or career planning. These findings should be interpreted in consideration of the study's limitations. The research involved students from only one school, relied primarily on questionnaire data, and employed a correlational design that does not establish causal relationships. Furthermore, deviations from residual normality and the presence of an extreme residual indicate that the regression estimates require cautious interpretation. Therefore, the findings should not be generalized beyond the characteristics of the study sample without further investigation. Future research is recommended to involve students from multiple schools with more diverse characteristics and to consider longitudinal or mixed-methods approaches to obtain a more comprehensive understanding of the relationship between learning motivation and career planning. Further studies may also examine other relevant factors, including career decision-making self-efficacy, parental support, career maturity, and access to career information, particularly in understanding differences in career planning across gender groups. Additional diagnostic examinations and robust or bootstrap analyses may also be considered to strengthen the reliability of future statistical findings.

5. REFERENCES

Agustia, N. A. E., and U. D. Rosada. 2021. "Pengembangan Media Permainan Uno Stacko Dalam Bimbingan Karir Tentang Pemahaman Eksplorasi Karir." Konseling Edukasi: Journal of Guidance and Counseling 5(2):141–56. https://10.21043/konseling.v5i2.1083.

Amelia, N. P., Y. Dwiyono, and R. Muslifar. 2024. "The Influence of Career Information Service by Experiential Learning Technique on the Career Planning of XI Grade High School Students." PEDAGOGIA 22(3). https://ejournal.upi.edu/index.php/pedagogia/article/view/74964.

Apriandes, E., J. Adison, and Suryadi. 2026. "Hubungan Motivasi Belajar Dengan Perencanaan Karir Kelas Fase F (Kelas XI) Di SMA N 1 Sikabau." Pendas: Jurnal Ilmiah Pendidikan Dasar 11(3). https://10.23969/jp.v11i03.62555.

Barusi, A. R. E., and P. L. Suharso. 2024. "The Role of Career Exploration Behavior as a Mediator in the Relationship between Social Support and Career Decision Self-Efficacy among High School Students." Jurnal Kependidikan 10(1):12–21. https://10.33394/jk.v10i1.10245.

Chatterjee, Srabasti, Nikhat Afshan, and Prerna Chhetri. 2023. "Career Decisiveness: The Role of Motivational Factors and Career Planning Attitudes." Journal of Applied Research in Higher Education 15(4):1095–1110. https://10.1108/JARHE-03-2022-0107.

Deng, X., H. Zeng, M. Liang, and J. Qiu. 2022. "Relations between Different Career-Development Profiles, Academic Self-Efficacy and Academic Motivation in Adolescents." Educational Psychology 42(2):259–74. https://10.1080/01443410.2021.2007853.

Eccles, J. S., and A. Wigfield. 2020. "From Expectancy–Value Theory to Situated Expectancy–Value Theory." Contemporary Educational Psychology 61:101859. https://10.1016/j.cedpsych.2020.101859.

Erezka, R. 2022. "Motivasi Siswa Memilih Sekolah, Prestasi Belajar Dan Perencanaan Arah Karier Siswa Sekolah Menengah Atas." Indonesian Journal of Counseling and Development 4(1):18–30. https://10.32939/ijcd.v4i1.1249.

Gashi, L. J., D. Bërxulli, J. Konjufca, and L. Cakolli. 2023. "Effectiveness of Career Guidance Workshops on the Career Self-Efficacy, Outcome Expectations, and Career Goals of Adolescents: An Intervention Study." International Journal of Adolescence and Youth 28(1):Article 2281421. https://10.1080/02673843.2023.2281421.

Gati, I., M. Krausz, and S. H. Osipow. 1996. "A Taxonomy of Difficulties in Career Decision Making." Journal of Counseling Psychology 43(4):510–26. https://10.1037/0022-0167.43.4.510.

Hirschi, A. 2018. "The Fourth Industrial Revolution: Issues and Implications for Career Research and Practice." The Career Development Quarterly 66(3):192–204. https://10.1002/cdq.12142.

Howard, K. A. S., and M. E. Walsh. 2010. "Children's Conceptions of Career Choice and Attainment." Journal of Vocational Behavior 77(2):212–19. https://10.1016/j.jvb.2009.10.010.

Khoeriyah, A., S. Sunawan, and A. Awalya. 2022. "The Effects of Authoritative Parenting on Career Exploration: A Mediation Analysis of Career Decision Self-Efficacy." Jurnal Bimbingan Konseling 11(4):287–93. https://10.15294/jubk.v11i4.63739.

Lent, R. W., S. D. Brown, and G. Hackett. 2000. "Contextual Supports and Barriers to Career Choice." Journal of Counseling Psychology 47(1):36–49. https://10.1037/0022-0167.47.1.36.

Meilinasari, S. 2024. "Pengaruh Dukungan Orangtua, Bimbingan Guru, Dan Keterlibatan Orang Dewasa Terhadap Perencanaan Karier Pada Siswa SMA." Determinasi: Jurnal Penelitian Ekonomi Manajemen Dan Akuntansi 2(3). https://10.23917/determinasi.v2i3.258.

Naim. 2022. "Mata Pelajaran Produktif, Prakerin Dan Motivasi Belajar: Kesiapan Kerja Siswa." Jurnal Riset Pendidikan Ekonomi 7(2):204–10. https://10.21067/jrpe.v7i2.7401.

Nuraeni, S., N. Fitriani, and W. Novianti. 2025. "Penerapan Layanan Bimbingan Kelompok Dengan Teknik Modelling Untuk Meningkatkan Perencanaan Karir Siswa Kelas XI MA Al-Qomariah." FOKUS: Kajian Bimbingan Dan Konseling Dalam Pendidikan 8(3). https://10.22460/fokus.v8i3.24689.

Nurfitriana, S., D. R. Hidayat, and H. Herdi. 2021. "Adaptasi Dan Validasi Konstruk Career Adapt-Abilities Scale Versi Bahasa Indonesia Untuk SMA." TERAPUTIK: Jurnal Bimbingan Dan Konseling 5(2). https://10.26539/teraputik.52727.

Ryan, R. M., and E. L. Deci. 2020a. "Intrinsic and Extrinsic Motivation from a Self-Determination Theory Perspective: Definitions, Theory, Practices, and Future Directions." Contemporary Educational Psychology 61:Article 101860. https://10.1016/j.cedpsych.2020.101860.

Ryan, R. M., and E. L. Deci. 2020b. "Intrinsic and Extrinsic Motivation from a Self-Determination Theory Perspective." Contemporary Educational Psychology 61:101860. https://10.1016/j.cedpsych.2020.101860.

Saripah, I., D. R. Priliani, and N. A. Nadhirah. 2023. "Problematika Kematangan Karir Peserta Didik Sekolah Menengah Kejuruan: Implementasi Pada Layanan Bimbingan Dan Konseling Karir." Indonesian Journal of Guidance and Counseling: Theory and Application 12(1):95–118. https://10.15294/ijgc.v12i1.70437.

Savickas, M. L. 2013. "Career Construction Theory and Practice BT - Career Development and Counseling: Putting Theory and Research to Work." Pp. 147–83 in, edited by S. D. Brown and R. W. Lent. Hoboken, NJ: John Wiley & Sons.

Schunk, D. H., and M. K. DiBenedetto. 2020. "Motivation and Social Cognitive Theory." Contemporary Educational Psychology 60:101832. https://10.1016/j.cedpsych.2019.101832.

Simanjuntak, J. G. L. L. 2024. "Career Decision-Making Difficulties: Why Exploration Alone Is Not Enough for High School Students." Gadjah Mada Journal of Professional Psychology (GamaJPP) 10(2). https://10.22146/gamajpp.96302.

Susanto, K. B., M. Riasnugrahani, and J. Savitri. 2024. "Career Exploration Training to Improve Career Decision Making Self-Efficacy of High School Student in Bandung." Analitika: Jurnal Magister Psikologi UMA 16(1):41–48. https://10.31289/analitika.v16i1.10960.

Vestalia, D., and D. H. Wibowo. 2021. "Motivasi Belajar Dan Perencanaan Karier." Jurnal Psikologi Malahayati 3(2). https://10.33024/jpm.v3i2.4132.

Wang, M. T., J. L. Degol, and D. A. Henry. 2021. "Academic Engagement and Youth Development." Child Development 92(2):379–402. https://10.1111/cdev.13415.

Wang, P., T. Li, Z. Wu, X. Wang, J. Jing, J. Xin, X. Sang, and B. Dai. 2023. "The Development of Career Planning Scale for Junior High School Students Based on Cognitive Information Processing Theory." Frontiers in Psychology 14:Article 1106624. https://10.3389/fpsyg.2023.1106624.

Wena, M. 2018. Strategi Pembelajaran Inovatif Kontemporer. Jakarta: Bumi Aksara.

Winkel, W. S., and M. M. S. Hastuti. 2013. Bimbingan Dan Konseling Di Institusi Pendidikan. Edisi revisi, cetakan ke-9. Yogyakarta, Indonesia: Media Abadi.

Yuliana, A., and Sudarno. 2026. "Pengaruh Tingkat Kepedulian Siswa Pada Pendidikan, Motivasi Belajar Terhadap Harapan Karier Masa Depan Siswa Di SMA Negeri 7 Surakarta." Pendas: Jurnal Ilmiah Pendidikan Dasar 11(3):44–58. https://10.23969/jp.v11i03.63845.

Zhang, Z., X. Yu, and X. Liu. 2022. "Do I Decide My Career? Linking Career Stress, Career Exploration, and Future Work Self to Career Planning or Indecision." Frontiers in Psychology 13:Article 997984. https://10.3389/fpsyg.2022.997984.

Zhao, Y., H. Zeng, and X. Deng. 2024. "Chinese High School Students' Career Development: Associations with Academic Self-Efficacy and Motivation." Journal of Applied Developmental Psychology 91:Article 101629. https://10.1016/j.appdev.2023.101629.

Zulvarina, P. 2023. "The Relationship Level between Students' Learning Interests, Learning Motivation, and Career Planning Awareness on the Indonesian Vocational High School Majoring in Information Technology BT - Proceedings of the 8th International Conference on Sustainable Information Engineering and Technology." Pp. 386–92 in. Association for Computing Machinery.