

Proactive Career Behavior Among University Students: The Roles of Future Work Self-Salience, Gender, Internship Experience, and Academic Background

Intania Bungan Apui¹, Ahmad Rusdi²

¹⁻² Psychology Study Program, Islamic University of Indonesia, Yogyakarta, Indonesia

Jalan Kaliurang Km 14,5 Sleman, Yogyakarta

Received: Juli 2024	Accepted: Oktober 2024	Published: Oktober 2024
---------------------	------------------------	-------------------------

(*) Penulis korespondensi: intaniabungan00@gmail.com

Abstract

The issue of rising unemployment rates is becoming increasingly concerning, compounded by findings that some university students exhibit low levels of proactive career behavior. This study therefore aims to examine whether future work self-salience (FWSS), gender, self-initiated internship experience, and academic background can significantly predict proactive career behavior (PCB). The study involved 309 final-year students from various universities in Indonesia, with data collected using purposive sampling. Multiple linear regression analysis was used to test the predictive capacity of predictors on PCB. The results indicate that FWSS significantly predicts PCB ($B = 0.3174$, $p < 0.001$), with a clear FWSS cut-off point ($FWSS > 4.009137$) for predicting high PCB scores. Self-initiated internship experience also contributes significantly to PCB ($B = 0.1315$, $p = 0.01$), while gender ($B = -0.0441$, $p = 0.391$) and academic background ($B = 0.0218$, $p = 0.67$) do not show significant contributions to PCB. These findings emphasize the important role of FWSS and self-initiated internship experience in enhancing proactive career behavior among final-year students.

Keywords: Future Work Self-Salience, Proactive Career Behavior, Students, Career

Introduction

In an increasingly competitive labor market, recent graduates are expected not only to rely on academic knowledge but also to actively manage their careers, particularly during the transition from education to employment (Helyer & Lee, 2014; Tomlinson, 2012). At this stage, final-year students are ideally expected to demonstrate proactive career behavior (PCB), which involves future-oriented initiatives such as career planning, skill development, and networking (Claes & Ruiz-Quintanilla, 1998). This transitional phase demands students to take personal responsibility for career preparation and to differentiate themselves in the job market (Smith, 2010; Sullivan & Baruch, 2009).

Work-ready students tend to actively plan their careers, continuously enhance their competencies, and seek opportunities (Layton et al., 2022; Pambajeng et al., 2024; Swingler et al., 2022). PCB has been shown to increase subjective career success, perceived employability, and job acquisition opportunities (Jiang et al., 2024; Park et al., 2022), and even supports successful job search outcomes during periods of unemployment (Ślebarska & Flakus, 2020).

Problems arise when final-year students are not sufficiently engaged in proactive career behavior. Interviews with two students (V and K) revealed a lack of career planning, absence of long-term goals, and an exclusive focus on academic assignments. Although they were aware of their limited skills and lack of work readiness, they had not taken proactive steps

such as self-development, seeking guidance, or building professional networks (e.g., through LinkedIn).

This lack of PCB may hinder graduates' preparedness and competitiveness in the job market (Clements & Kamau, 2018). More broadly, it may contribute to the rise of educated unemployment. Previous studies have highlighted that inadequate career preparation (Lin & Kang, 2023), the lack of career-related training and orientation (Alam et al., 2022), and weak networking at various levels (Ngoma & Dithan Ntale, 2016) are key contributing factors. Data from the Badan Pusat Statistik (2025) shows a rise in the number of unemployed tertiary graduates, from 673,485 in August 2022 to 842,378 in August 2024, underscoring the urgency of research on the challenges faced by graduates, particularly final-year students.

Various studies have identified key antecedents of PCB, such as proactive personality (Crant, 2000), self-efficacy (Bandura, 1977, 2002; Doğanülkü & Korkmaz, 2023), passion and resilience (Bernabé et al., 2024), as well as cultural values (Claes & Ruiz-Quintanilla, 1998). However, future work self salience (FWSS) has been introduced as a critical factor that can shape PCB. FWSS refers to the clarity and ease with which individuals can visualize themselves in future career roles, thereby activating motivational mechanisms that drive proactive behavior (Strauss et al., 2012). Compared to other factors, FWSS holds a theoretical advantage in that it can motivate PCB through three conceptual pathways: self-concept, self-regulation, and cognitive role frameworks (Strauss et al., 2012), making it particularly relevant for career interventions within academic settings.

FWSS plays a vital role in motivating students to proactively plan and develop their careers. Individuals with a salient future career image are more likely to engage in behaviors such as skill development, networking, and seeking relevant experiences (Bernabé et al., 2024; Chan, 2017; Yin et al., 2024). This clarity facilitates strategic planning and provides direction in the pursuit of career goals (Yang et al., 2023; Kleine et al., 2023), as well as encourages self-directed development (Hoyle & Sherrill, 2006; Taber & Blankemeyer, 2015).

This study also included gender, academic background, and self-initiated internship experience as additional predictors to explore other contributing factors to PCB. Gender was considered based on previous findings that suggest potential differences in proactivity between men and women (Harry & Malepane, 2021), including disparities in career planning (Aini et al., 2024), task selection and opportunity-seeking (De Pater et al., 2009), skill development, and exploration (Siddiky, 2020). Gender stereotypes are also believed to influence self-perception and proactive behavior over time (Ferris et al., 1991; Chen & Bargh, 1997).

Academic background has often been associated with varying levels of proactivity, with non-STEM students frequently exhibiting higher levels of proactive behavior than their STEM counterparts (Mondo et al., 2021; Victorino et al., 2022). On the other hand, it has also been found that non-STEM students are more engaged in personal development, communication with faculty/instructors, and literacy activities, whereas STEM students tend to focus primarily on the acquisition of knowledge and skills (Wilson, 2010). This indicates a difference in proactivity across academic background.

Internship experiences have been recognized as a formative context in shaping students' career-related behaviors. Individuals who are satisfied with their internship

experience are more likely to engage in proactive behaviors when they perceive a fair exchange for their contributions (Feng et al., 2023). In line with this, Mittal et al. (2024) argue that proactive engagement during internships may enhance career adaptability, which is commonly linked to job search behavior and other forms of proactive career-related action. Based on these theoretical assumptions, it can be posited that self-initiated internships may serve as a meaningful driver of PCB by encouraging individuals to take active control of their career development process.

Previous studies on PCB have predominantly focused on FWSS as a key predictor, with most research conducted in Western and East Asian contexts such as Australia (Strauss et al., 2012), the United States (Taber & Blankemeyer, 2015), Spain (Bernabé et al., 2024), and Taiwan (Lu, 2020). These studies frequently apply mediation or moderation models and emphasize the motivational role of FWSS in shaping proactive behaviors. However, limited attention has been paid to how FWSS and other individual-level factors simultaneously predict PCB, particularly within the Indonesian context.

In addition to FWSS, prior research has identified other important predictors of PCB, including gender, academic background (e.g., STEM vs. non-STEM), and self-initiated internship experience. These variables are especially relevant in contexts where access to career-related resources and opportunities varies substantially across demographic and educational lines.

This study specifically targets final-year undergraduate students, as they are in a critical phase of making career decisions while balancing academic demands, personal aspirations, and labor market expectations (Savugathali et al., 2025). Unlike first-year students who are still exploring and forming their academic identity, final-year students face an urgent need to act proactively toward their career goals. In this context, FWSS may play a crucial role in triggering PCB.

To address these issues, this study employs a multiple linear regression approach to explore the extent to which FWSS, gender, academic background, and self-initiated internship experience predict PCB among final-year students in Indonesia. By incorporating these four predictors, the study aims to provide a more comprehensive and context-sensitive understanding of the antecedents of proactive career behavior.

Methods

The study began with the development of a questionnaire based on the FWSS and PCB instruments by Strauss et al. (2012), which were translated and reviewed by the academic supervisor. Additionally, for the item regarding self-initiated internship experience, an explanatory note was included in parentheses to clarify that it referred to internships initiated independently, outside of university requirements.

Data were collected online via Google Forms using a purposive sampling technique, with inclusion criteria as follows: (1) active undergraduate (Bachelor's degree) students; (2) Indonesian citizens; (3) currently enrolled at a university in Indonesia; and (4) in their 7-14th semester. Of the initial 317 respondents, a total of 309 (97.48%) met all inclusion criteria and were included in the final analysis.

The participants came from various academic programs, which were categorized into

two main groups: STEM (Science, Technology, Engineering, and Mathematics) and non-STEM fields. STEM programs included majors such as Industrial Engineering, Architecture, Pharmacy, Informatics, Statistics, and other fields emphasizing technical, scientific, and quantitative skills. In contrast, non-STEM fields encompassed programs such as Psychology, Communication Studies, Management, Law, Economics, and other majors rooted in the social sciences, humanities, and business. This categorization enabled a more in-depth analysis of how academic background influences students' engagement in proactive career behavior.

The FWSS instrument was measured using a five-item scale developed by Strauss et al. (2012), which assesses the clarity of one's future self-image in the context of work. Responses were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The original scale demonstrated high reliability ($\alpha = 0.92$), and the Indonesian-translated version also showed good internal consistency ($\alpha = 0.857$), with acceptable item-total correlations ranging from 0.629 to 0.705 (George, 2003; Sufren, 2013). Furthermore, the scale is unidimensional, as confirmed by Ling et al. (2022), indicating that all items measure a single underlying construct.

Meanwhile, PCB was assessed using a 13-item scale developed by Strauss et al. (2012), covering four aspects: career planning, skill development, career consultation, and networking. Responses were recorded on a 5-point Likert scale. The translated version demonstrated good reliability ($\alpha = 0.866$), with adequate item-total correlations ranging from 0.365 to 0.682 (George, 2003; Sufren, 2013).

The data analysis began with the categorization of FWSS and PCB scores into percentiles (20th, 40th, 60th, and 80th) to identify the pattern of FWSS levels associated with high PCB. Prior to conducting regression analysis, a series of assumption tests were performed, including tests for normality, linearity, heteroscedasticity, autocorrelation, and multicollinearity. The hypotheses were tested using linear regression in Jamovi software, with FWSS, gender, academic background, and self-initiated internship experience as the predictors and PCB as the dependent variable. To assess the relative contribution of each predictor after controlling for others, additional analyses were conducted using the General Linear Model (GLM) framework, which provided effect size estimates (partial eta squared) for each variable.

To further explore the predictors that were found to be statistically significant, follow-up bivariate correlation analyses were carried out to examine the specific aspects of PCB most strongly associated with each predictor. Specifically, the relationship between FWSS and PCB aspects was analyzed using Pearson correlation, while the association between self-initiated internship experience (a dichotomous variable) and PCB aspects was examined using the rank biserial correlation coefficient. These additional analyses allowed for a more nuanced understanding of how each significant predictor differentially relates to the aspects of PCB.

Results

FWSS and PCB scores were categorized into quintiles using percentile cut-off points at the 20th, 40th, 60th, and 80th percentiles to facilitate interpretation and identify the level of FWSS associated with high PCB outcomes. The cut-off values and normative categories are detailed in Table 1.

Table 1. Percentile-Based Norm Categories

Norm Category	FWSS Score Range	PCB Score Range
Very High	$X > 4$	$X > 4.23$
High	$3.8 < X \leq 4$	$4 < X \leq 4.23$
Moderate	$3.4 < X \leq 3.8$	$3.77 < X \leq 4$
Low	$3 < X \leq 3.4$	$3.54 < X \leq 3.77$
Very Low	$X < 3$	$X < 3.54$

All assumptions for regression analysis were met, as summarized in Table 2. The residuals were normally distributed (Kolmogorov–Smirnov test, $p = 0.508$), residual variance was homogeneous (Breusch–Pagan test, $p = 0.406$), and there was no autocorrelation (Durbin–Watson = 2.1, $p = 0.35$). Linearity was confirmed ($F = 86.456$, $p < 0.000$), with no significant deviation from linearity ($p = 0.140$), and no multicollinearity was detected ($VIF < 10$; Tolerance > 0.10).

Table 2. Assumption Tests

Assumption Test	Statistic	p-value	Interpretation
Normality of Residuals (Kolmogorov–Smirnov)	0.0468	0.508	Assumption met
Heteroskedasticity (Breusch–Pagan Test)	4	0.406	Assumption met
Autocorrelation (Durbin–Watson)	2.1	0.35	Assumption met
Assumption Test	F	p-value	Interpretation
Linearity	86.456	0.000	Assumption met
Deviation from Linearity	1.413	0.140	Assumption met
Assumption Test	VIF	Tolerance	Interpretation
Multicollinearity (FWSS)	1.03	0.973	Assumption met
Multicollinearity (gender)	1.06	0.939	Assumption met
Multicollinearity (academic background)	1.06	0.941	Assumption met
Multicollinearity (self-initiated internship experience)	1.04	0.961	Assumption met

Table 3 presents the regression analysis predicting PCB from FWSS, gender, academic background, and self-initiated internship experience. The regression coefficient for FWSS was 0.3174 with $p < 0.001$, indicating that FWSS significantly predicted PCB. The constant ($\beta_0 = 2.7275$) represents the baseline PCB score when FWSS is zero. Therefore, the regression model is expressed as: $Y = 2.7275 + 0.3174X$

Table 3. Linear Regression Results Based on FWSS, Gender, Academic background, and Self-Initiated Internship Experience

Predictor	Coefficient (B)	SE	t	p-value	Standardized Coefficient (β)	Partial η^2
Intercept	2.7275	0.1412	19.32	$< .001$	—	—
FWSS	0.3174	0.0362	8.779	$< .001$	0.4459	0.231

Gender (Female – Male)	–0.0441	0.0513	–0.859	0.391	–0.0891	0.003
Academic background (STEM – Non-STEM)	0.0218	0.051	0.426	0.67	0.044	0.000
Self-Initiated Internship Experience (Undertaken – Not Undertaken)	0.1315	0.0505	2.603	0.01	0.2658	0.018

The regression equation can also be used to estimate the minimum FWSS score required to achieve a high level of PCB. In this model, Y represents the predicted PCB score, and X represents the FWSS score. By setting Y to 4, which is the threshold for the "high" PCB category, and solving for X, the following is obtained:

$$Y = 2.7275 + 0.3174X$$

$$4 = 2.7275 + 0.3174X$$

$$X = 4.009137$$

Thus, a FWSS score of greater than 4.009137 is required to reach the "high" category of proactive career behavior.

Table 3 also shows that neither gender ($B = -0.0441$, $p = 0.391$, $\eta^2_p = 0.003$) nor academic background ($B = 0.0218$, $p = 0.670$, $\eta^2_p = 0.000$) significantly predicted PCB. These variables show small and negligible effect sizes, respectively. In contrast, self-initiated internship experience emerged as a significant predictor ($B = 0.1315$, $p = 0.010$), indicating a difference in PCB between students who had and had not participated in internships. This predictor accounted for 1.8% of the variance in PCB ($\eta^2_p = 0.018$), classified as a small effect size.

Among all predictors, FWSS demonstrated the strongest predictive power ($\beta = 0.4459$), compared to self-initiated internship experience ($\beta = 0.2658$). FWSS accounted for 23.1% of the variance in proactive career behavior ($\eta^2_p = 0.231$), indicating a large effect size, and highlighting its central role in shaping students' proactive engagement in their career development.

Table 4. Correlation Between FWSS and PCB Aspects

	FWSS	CP	SD	CS	N
FWSS	—				
Career Planning	0.496***	—			
Skill Development	0.365***	0.596***	—		
Career Consultation	0.249***	0.345***	0.409***	—	
Networking	0.290***	0.373***	0.448***	0.439***	—

Note: *** $p < 0.001$; CP= Career Planning; SD = Skill Development; CS = Career Consultation; N = Networking.

Pearson correlation analysis (Table 4) revealed significant positive relationships between FWSS and all aspects of PCB ($p < .001$). The strongest correlation was observed with career planning (CP) ($r = 0.496$), followed by skill development (SD), networking (N), and career consultation (CS).

Table 5
The Correlation Between Self-Initiated Internship Experience and PCB Aspects

PCB Aspects	Mean		Rank Biserial Correlation (r_{rb})	Interpretation
	Internship Experience	No Internship Experience		
Career Planning	4.097	3.898	0.192**	Significant (small effect size)
Skill Development	4.072	3.804	0.218***	Significant (small effect size)
Career Consultation	3.622	3.517	0.095	Not significant
Networking	4.145	3.96	0.130*	Significant (small effect size)

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; CP = Career Planning; SD = Skill Development; CS = Career Consultation; N = Networking

The results of the rank biserial correlation presented in Table 5 indicate statistically significant differences in career planning ($p = 0.003$, $r_{rb} = 0.192$), skill development ($p < 0.001$, $r_{rb} = 0.218$), and networking ($p = 0.041$, $r_{rb} = 0.130$) between students who had participated in internships and those who had not. Among these aspects, skill development demonstrated the largest effect size; however, all aspects variables reflected small effect sizes based on the rank-biserial correlation values. Conversely, no significant difference was found in career consultation between the two groups, with a trivial effect size ($p = 0.145$, $r_{rb} = 0.095$).

Discussion

The findings indicate that FWSS significantly predicts PCB, suggesting that final-year students who possess a clear vision of their future careers are more likely to engage in proactive career planning. This result aligns with previous studies (Arakeri, 2013; Lu, 2020) and underscores that FWSS is not merely a motivational drive for success, but reflects the internalization of future career roles as part of one's self-concept (Strauss, 2024). Thus, FWSS can serve as a 'compass' that directs individuals to consistently focus and invest their resources in behaviors that support the attainment of their future career goals (He et al., 2022). When individuals perceive their future career as an extension of their identity, they are more inclined to take action. FWSS also facilitates self-exploration and the formation of a career identity that aligns with personal values (Strauss et al., 2012).

This study also included gender, academic background, and self-initiated internship experience as additional predictors to explore other contributing factors to PCB. However, the current analysis did not find gender to be a significant predictor of PCB. This may reflect increased awareness and participation of women in the workforce (International Labour Organization, 2024; Pal et al., 2024; Pennings, 2022). These findings align with prior studies reporting no gender differences in proactive tendencies (Jiang, 2017; Satwika & Suhariadi, 2024; Shirandula et al., 2017), including feedback-seeking (Roberson et al., 2003), networking behaviors (Woehler et al., 2021), and career development (Sauter & Fischer, 2011).

Academic background has often been associated with levels of proactivity, with non-STEM students frequently demonstrating higher levels of proactive behavior than their STEM counterparts (Mondo et al., 2021). However, the present study did not find a significant effect

of academic background on PCB. This suggests that final-year students across various disciplines face similar career transition challenges (Fahadayna et al., 2025), largely due to increasing competition in the labor market. As a result, both STEM and non-STEM students appear to engage equally in career preparation activities. The growing demand for transferable skills across industries (Yuliyanto et al., 2024; Bennett, 2002) further blurs the distinction between academic background in fostering PCB, regardless of students' educational backgrounds.

This study also found that internship experience contributes significantly to PCB. This finding aligns with Amalia et al. (2021), who indicated that internships can strengthen career intention through indicators reflecting one's vision of future career goals and the professional identity they aim to build, thereby representing a clearer image of one's future career self. Within internship environments, students have the opportunity to interact more closely and exchange information with fellow interns (Gonzalez, 2024), which facilitates professional self-development and supports ongoing career growth (Lee & Branford, 2024). Such experiences help align personal goals, knowledge, and skills, thereby encouraging proactive behavior in the pursuit of meaningful career-related experiences (Gonzalez, 2024). As a result, internship experiences may cultivate a stronger sense of agency and entitlement in shaping and managing one's future career path (Lee & Branford, 2024).

The findings also indicate a noticeable difference in PCB between students who have internship experience and those who do not. This difference appears to be more pronounced in the domain of skill development behavior compared to career planning and networking aspects. One possible explanation for this difference is the learning opportunities commonly present in internship settings, which often expose students to task variety, constructive feedback, and opportunities to interact with and manage people (Gamboa et al., 2013). When these elements are present, internships may support the crystallization of self-concept, which is essential in fostering proactive engagement. In this regard, internship experiences may particularly enhance skill development behavior, as they provide a conducive environment for students to strengthen both interpersonal and technical or job-related skills (Alharethi et al., 2025; Di Pietro, 2022; Gutiérrez-Pulido & Orozco-Rodríguez, 2025; Nurrahman & Bachtiar, 2019). Additionally, internships enable students to apply academic knowledge in real-world professional contexts (Anjum, 2020), which further promotes active involvement in developing career-related competencies.

Additional correlation analyses revealed that career planning showed the strongest association with FWSS at a moderate level, while the other three aspects of PCB demonstrated weaker correlations. This result is consistent with previous research (Bernabé et al., 2024; Taber & Blankemeyer, 2015), confirming that FWSS is highly related to engagement in career planning activities. Kleine et al. (2023) explain that having a clear career image provides direction and purpose in career development. Setting direction and goals is one of the core components of career planning, which includes establishing short- and long-term objectives as well as identifying the competencies and skills required to achieve them (Jiang et al., 2023; Panggabean, 2023). In this regard, FWSS serves as the foundation for mental simulation, which enables individuals to recognize their capabilities, potential obstacles, and future challenges (Strauss et al., 2012). This form of mental simulation allows individuals to project themselves into the future and experience events cognitively before they actually occur. Thus, through this mechanism,

FWSS can influence career planning by helping individuals anticipate future barriers and devise strategic steps to prepare themselves more effectively.

The relationship between FWSS and career planning is stronger compared to other aspects of PCB, as both constructs are future-oriented, although they differ in their underlying characteristics and functional roles. FWSS reflects the extent to which individuals can vividly imagine themselves in future work roles, primarily through mental visualization without necessarily involving strategic action. In contrast, career planning entails active engagement in processes that support career development, including self-assessment, conducting research, decision-making, and taking concrete actions (Hill, 1987; Kostadinova-Maslarova, 2019; Zhang & Perey, 2024). Although both involve cognitive processes, career planning is inherently more strategic and action-oriented. Therefore, FWSS may influence career planning first before individuals engage in other forms of proactive career behavior.

Career planning serves as an initial stage before individuals develop professional skills, build networks, and participate in career consultation. This phase allows individuals to first gain self-understanding, set goals, and explore the experiences required to achieve those goals (Aryee & Debrah, 1992; Panggabean, 2023). Typically, it involves the formulation of a structured plan, including timelines, strategic steps, skills to be developed, and anticipations of potential career-related challenges (Antoniou, 2010; Jiang et al., 2023). Accordingly, FWSS plays a vital role in fostering individuals' early engagement in career planning, which serves as a foundation for subsequent proactive actions.

Based on the explanation above, it is important to note that not all individuals possess clearly defined career aspirations, which may lead to uncertainty when making career-related decisions. A low level of clarity regarding future career goals can increase psychological pressure and difficulty in decision-making, as well as heightened career anxiety, which may ultimately reduce overall life satisfaction (Gerçek & Özveren, 2025; Li et al., 2023; Zhang et al., 2022). Boo and Kim (2020) emphasized that individuals exhibiting career indecision tend to experience higher levels of stress and hesitation in choosing a career path. Furthermore, career anxiety has been shown to reduce career exploration behavior and weaken vocational identity, which refers to a clear and stable perception of one's goals, interests, and abilities (Vidal-Brown & Thompson, 2001).

The findings of this study highlight the potential of FWSS and self-initiated internship experience in fostering PCB. However, several limitations should be acknowledged. First, the relationship between proactivity and internship experience may be reciprocal, as proactivity also tends to influence internship experience (Rose, 2016); therefore, this dynamic needs to be examined further. Second, the FWSS and PCB instruments were not adopted from established measurement adaptation research; the scales were only translated by the author and reviewed by a supervisor. Thus, future research should implement proper scale adaptation procedures to improve the validity and reliability of the FWSS and PCB instruments. Third, this study was limited to final-year students. Future research is recommended to investigate the relationship between FWSS and PCB among first-year students, as the early years of university are a critical period for identity formation, exploration, and career planning. Early career interventions have the potential to make a greater impact in supporting students' PCB and career readiness.

Conclusion

FWSS was found to be a significant predictor of PCB, with a cut-off score of FWSS > 4.009137 to attain a high level of PCB. In addition to FWSS, self-initiated internship experience also contributed positively to PCB. Among the aspects of PCB, career planning exhibited the strongest association with FWSS, showing a moderate correlation. Furthermore, significant differences were observed in the aspects of career planning, skill development, and networking between students who had undertaken self-initiated internships and those who had not. The most notable difference was found in the aspect of skill development, although the effect size was small. These findings suggest that students are expected to develop a clear vision of their future careers, which can be supported through internship experiences to foster proactive behavior.

Future research is encouraged to explore the potential reciprocal relationship between PCB and self-initiated internship experiences by employing alternative research methods that better capture the mutual influence between these variables. It is also recommended that future studies utilize psychometrically validated instruments and implement appropriate scale adaptation procedures to ensure cultural validity and measurement reliability. Additionally, future research may include first-year university students to examine how PCB can be developed early in the academic journey.

For students, it is recommended to enhance FWSS through Best Possible Self visualization worksheets by imagining personal achievements over the next 5–10 years, engaging in reflective journaling to track progress and challenges, and applying the SMART (Specific, Measurable, Achievable, Relevant, Time-bound) framework to structure and clarify career goals. For higher education institutions, it is recommended to integrate career competencies into the curriculum, such as through project-based learning, work-integrated learning, and career-related assignments like CV writing or conducting interviews with professionals. Universities may also expand experiential learning opportunities by offering optional 3–6 months internships or part-time project placements, and provide incentives such as academic credit to promote student participation and overcome time-related constraints.

References

- Aini, S., Putri, B. N. D., & Putra, F. (2024). Differences in career planning for class XI students in view of gender at SMA Negeri 16 Padang. *Holistic Science*, 4(3), 523–530. <https://doi.org/10.56495/hs.v4i3.704>
- Alam, M. J., Ogawa, K., & Islam, S. R. B. (2022). Importance of skills development for ensuring graduates employability: The case of Bangladesh. *Social Sciences*, 11(8), 360. <https://doi.org/10.3390/socsci11080360>
- Alharethi, T., Awan, M. I., & Saleem, M. S. (2025, May). Investigating the impact of internship experience on work readiness among hospitality program students: the moderating role of student mindfulness. In *Frontiers in Education* (Vol. 10, p. 1497721). Frontiers Media SA. <https://doi.org/10.3389/feduc.2025.1497721>
- Amalia, D., Mayasari, M., & Ogundajo, G. O. (2021). Does the influence of internship experience on career intentions as a professional accountant. *AKRUAL: Jurnal Akuntansi*, 12(2), 217-229. <https://doi.org/10.26740/jaj.v12n2.p217-229>

- Anjum, S. (2020). Impact of internship programs on professional and personal development of business students: a case study from Pakistan. *Future business journal*, 6(1), 2. <https://doi.org/10.1186/s43093-019-0007-3>
- Antoniou, E. (2010). Career planning process and its role in human resource development. *Annals of the University of Petrosani, Economics*, 10(2), 13-22. <https://www.upet.ro/annals/economics/pdf/2010/20100202.pdf>
- Arakeri, S. (2013). *Forthcoming work selves and work-related outcomes: The role of perceived supervisor support* (Master's thesis). The Faculty of the Department of Psychology, San Jose State University, California U.S. Washington. <https://doi.org/10.31979/etd.2fkq-jg7>
- Aryee, S., & Debrah, Y. A. (1992). Career planning an examination of individual non-work and work determinants. *The International Journal of Human Resource Management*, 3(1), 85-104. <https://doi.org/10.1080/09585199200000132>
- Badan Pusat Statistik. (2025). *Pengangguran terbuka menurut pendidikan tertinggi yang ditamatkan 1986 - 2024*. Badan Pusat Statistik Indonesia. Retrieved February 2, 2025, from <https://www.bps.go.id/id/statistics-table/1/OTcylzE=/pengangguran-terbuka-menurut-pendidikan-tertinggi-yang-ditamatkan-1986---2023.html>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.
- Bandura, A. (2002). Social foundations of thought and action. In D. F. Marks (Ed.), *Social foundations of thought and action* (pp. 94–106). SAGE Publications Ltd. <https://doi.org/10.4135/9781446221129.n6>
- Bennett, R. (2002). Employers' demands for personal transferable skills in graduates: A content analysis of 1000 job advertisements and an associated empirical study. *Journal of Vocational Education and training*, 54(4), 457-476. <https://doi.org/10.1080/13636820200200209>
- Bernabé, M., Merhi, R., Lisbona, A., & Palací, F. (2024). Future work self and proactive career behavior, the serial mediating effect of academic passion and resilience. *Revista de Psicodidáctica (English Ed.)*, 29(1), 39-46. <https://doi.org/10.1016/j.psicoe.2023.10.002>
- Boo, S., & Kim, S. H. (2020). Career indecision and coping strategies among undergraduate students. *Journal of Hospitality & Tourism Education*, 32(2), 63-76. <http://dx.doi.org/10.1080/10963758.2020.1730860>
- Chan, M. (2017). The importance of career clarity and proactive career behaviours in predicting positive student outcomes: Evidence across two cohorts of secondary students in Singapore. *Asia Pacific Journal of Education*, 37(4), 601-614. <https://doi.org/10.1080/02188791.2017.1388214>
- Chen, M., & Bargh, J. A. (1997). Nonconscious behavioral confirmation processes: The self-fulfilling consequences of automatic stereotype activation. *Journal of Experimental Social Psychology*, 33(5), 541–560. <https://doi.org/10.1006/jesp.1997.1329>
- Claes, R., & Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *Journal of Vocational behavior*, 52(3), 357-378. <https://doi.org/10.1006/jvbe.1997.1626>
- Clements, A. J., & Kamau, C. (2018). Understanding students' motivation towards proactive

- career behaviours through goal-setting theory and the job demands–resources model. *Studies in Higher Education*, 43(12), 2279-2293. <https://doi.org/10.1080/03075079.2017.1326022>
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management*, 26(3), 435-462. <https://doi.org/10.1177/014920630002600304>
- De Pater, I. E., Van Vianen, A. E., Fischer, A. H., & Van Ginkel, W. P. (2009). Challenging experiences: Gender differences in task choice. *Journal of Managerial Psychology*, 24(1), 4-28. <https://doi.org/10.1108/02683940910922519>
- Di Pietro, G. (2022). International internships and skill development: A systematic review. *Review of Education*, 10(2). <https://doi.org/10.1002/rev3.3363>
- Doğanülkü, H. A., & Korkmaz, O. (2023). The role of proactive personality and general self-efficacy in proactive career behavior: a mediation model. *International Journal for Educational and Vocational Guidance*, 1-25. <https://doi.org/10.1007/s10775-023-09597-9>
- Fahadayna, A. C., Widodo, A. S., Adila, I., Brata, A. H., & Panjaitan, M. A. P. (2025). The stage of adolescence transition: Analysing the competitiveness and employability of Generation Z in Indonesia. *International Journal of Adolescence and Youth*, 30(1), 2458709. <https://doi.org/10.1080/02673843.2025.2458709>
- Feng, Y., Zhang, Z., Zeng, X., & Liu, Y. (2023). The influence of internship satisfaction and the psychological contract on the career identity behavior of fresh graduates. *Frontiers in psychology*, 14, 1294799. <https://doi.org/10.3389/fpsyg.2023.1294799>
- Ferris, G. R., Judge, T. A., Chachere, J. G., & Liden, R. C. (1991). The age context of performance-evaluation decisions. *Psychology and Aging*, 6(4), 616. <https://psycnet.apa.org/doi/10.1037/0882-7974.6.4.616>
- Gamboa, V., Paixão, M. P., & De Jesus, S. N. (2013). Internship quality predicts career exploration of high school students. *Journal of Vocational Behavior*, 83(1), 78-87. <https://doi.org/10.1016/j.jvb.2013.02.009>
- George, D. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update. *Allyn & Bacon*.
- Gerçek, M., & Özveren, C. G. (2025). From self and career perceptions to life satisfaction: A sequential mediation approach to general self-efficacy, future work self, career anxiety, and life satisfaction in the emerging workforce. *International Journal for Educational and Vocational Guidance*, 1-25. <https://doi.org/10.1007/s10775-024-09721-3>
- Gonzalez, I. V. D. P. (2024). The contributions of extracurricular internship activities in terms of learning potential for administration training. *Avaliação: Revista da Avaliação da Educação Superior (Campinas)*, 29. <https://doi.org/10.1590/1982-57652024v29id28242524>
- Gutiérrez-Pulido, H., & Orozco-Rodríguez, C. (2025, May). The contribution of professional internships to the academic development of engineering and science students: a case study. In *Frontiers in Education* (Vol. 10, p. 1563361). Frontiers Media SA. <https://doi.org/10.3389/feduc.2025.1563361>
- Harry, N., & Malepane, T. (2021). Gender and emotional intelligence as predictors of career

- adaptability in the Department of Water and Sanitation in South Africa. *SA Journal of Industrial Psychology*, 47(1), 1-7. <http://dx.doi.org/10.4102/sajip.v47i0.1828>
- He, K., Wang, J., & Sun, M. (2022). Is job insecurity harmful to all types of proactivity? The moderating role of future work self salience and socioeconomic status. *Frontiers in Psychology*, 13, 839497. <https://doi.org/10.3389/fpsyg.2022.839497>
- Helyer, R., & Lee, D. (2014). The role of work experience in the future employability of higher education graduates. *Higher Education Quarterly*, 68(3), 348-372. <https://doi.org/10.1111/hequ.12055>
- Hill, R. E. (1987). [Review of the book *Career development in organizations*, by D. T. Hall & Associates]. *Human Resource Management*, 26(2), 301.
- Hoyle, R. H., & Sherrill, M. R. (2006). Future orientation in the self-system: Possible selves, self-regulation, and behavior. *Journal of personality*, 74(6), 1673-1696. <https://doi.org/10.1111/j.1467-6494.2006.00424.x>
- International Labour Organization. (2024). *Female employment improves in numbers and quality in this century*. Retrieved May 15, 2025, from <https://www.ilo.org/resource/news/female-employment-improves-numbers-and-quality-century>
- Jiang, X., Qu, J., Lei, M., & Zhou, W. (2024). How do proactive career behaviors translate into subjective career success and perceived employability? The role of thriving at work and humble leadership. *Journal of Management & Organization*, 30(6), 2088-2104. <https://doi.org/10.1017/jmo.2023.67>
- Jiang, Z. (2017). Proactive personality and career adaptability: The role of thriving at work. *Journal of Vocational Behavior*, 98, 85-97. <https://doi.org/10.1016/j.jvb.2016.10.003>
- Jiang, Z., Wang, Y., Li, W., Peng, K. Z., & Wu, C. H. (2023). Career proactivity: A bibliometric literature review and a future research agenda. *Applied Psychology*, 72(1), 144-184. <https://doi.org/10.1111/apps.12442>
- Kleine, A. K., Schmitt, A., & Keller, A. C. (2023). Career planning and self-efficacy as predictors of students' career-related worry: Direct and mediated pathways. *Journal of Career Development*, 50(1), 185-199. <https://doi.org/10.1177/08948453221078950>
- Korkmaz, O. (2023). Visions about future: Hope, optimism, and pessimism as predictor of university students' proactive career behavior. *International Academic Social Resources Journal*, 8(45), 1914-1922. <http://dx.doi.org/10.29228/ASRJOURNAL.67583>
- Kostadinova-Maslarova, M. (2019). Career planning. *Science, Engineering and Education*, 4(1), 74-86. <http://dx.doi.org/10.59957/see.v4.i1.2019.12>
- Layton, R. L., Solberg, V. S. H., Jahangir, A. E., Hall, J. D., Ponder, C. A., Micoli, K. J., & Vanderford, N. L. (2022). Career planning courses increase career readiness of graduate and postdoctoral trainees. *F1000Research*, 9, 1230. <https://doi.org/10.12688/f1000research.26025.2>
- Lee, J., & Branford, A. (2024). Internship crafting: Transposing the concept of job crafting for students undertaking work-integrated learning. *International Journal of Work-Integrated Learning*, 25(2), 235-244. https://www.ijwil.org/files/IJWIL_25_2_235_244.pdf
- Li, H., Ngo, H. Y., & Chui, H. (2023). The impact of future work self on perceived employability

- and career distress. *Australian Journal of Career Development*, 32(1), 5-13. <http://dx.doi.org/10.1177/10384162221140338>
- Lin, Y. L., & Kang, C. Y. (2023). The impact of labor market risk on youth career preparation for sustainable development: Evidence from Taiwan. *Sustainability*, 15(8), 6857. <https://doi.org/10.3390/su15086857>
- Ling, H., Teng, S., Liu, X., Wu, J., & Gu, X. (2022). Future work self salience and future time perspective as serial mediators between proactive personality and career adaptability. *Frontiers in Psychology*, 13, 824198. <https://doi.org/10.3389/fpsyg.2022.824198>
- Lu, W. C. (2020). Future work-self salience and proactive career behavior among college student-athletes in Taiwan: A career construction model of adaptation. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 27, 100259. <https://doi.org/10.1016/j.jhlste.2020.100259>
- Mertler, C. A. (2024). *Introduction to educational research*. Sage publications.
- Mittal, S., Kumar, S., & Ahmadi, M. H. (2024). Role of Internship quality and Proactive Personality in Job Search Success: a moderated-mediation model through career adaptability. *Advances in Decision Sciences*, 28(2), 137-164. <https://doi.org/10.47654/v28y2024i2p137-164>
- Mondo, M., Barbieri, B., De Simone, S., Bonaiuto, F., Usai, L., & Agus, M. (2021). Measuring career adaptability in a sample of Italian university students: Psychometric properties and relations with the age, gender, and STEM/no STEM Courses. *Social Sciences*, 10(10), 372. <https://doi.org/10.3390/socsci10100372>
- Ngoma, M., & Dithan Ntale, P. (2016). Psychological capital, career identity and graduate employability in Uganda: the mediating role of social capital. *International Journal of Training and Development*, 20(2), 124-139. <http://dx.doi.org/10.1111/ijtd.12073>
- Nurrahman, K. A., & Bachtiar, E. (2019, July). The impact of university learning and internship learning on the relevant outcomes based on the international education standard–3 case study: accounting students of the faculty of economics and business, university of Indonesia. In *Asia Pacific Business and Economics Conference (APBEC 2018)* (pp. 189-195). Atlantis Press. <https://doi.org/10.2991/apbec-18.2019.25>
- Pal, K. K., Piaget, K., Zahidi, S., & Baller, S. (2024). *Global gender gap report 2024*. World Economic Forum. Retrieved May 7, 2025, from <https://www.weforum.org/publications/global-gender-gap-report-2024/>
- Pambajeng, A. P., Sumartik, S., & Kumala, H. M. (2024). Pengaruh pengalaman magang, motivasi kerja, dan soft skill terhadap kesiapan kerja mahasiswa dalam memasuki dunia kerja. *Journal of Economic, Business and Accounting (COSTING)*, 7(2), 2864-2875. <https://doi.org/10.31539/costing.v7i2.7338>
- Panggabean, K. (2023). Future career planning. *International Journal of Curriculum Development, Teaching and Learning Innovation*, 2(1), 1-5. <http://dx.doi.org/10.35335/curriculum.v2i1.143>
- Park, Y., Lee, J. G., Jeong, H. J., Lim, M. S., & Oh, M. R. (2022). How does the protean career attitude influence external employability? The roles of career resilience and proactive career behavior. *Industrial and Commercial Training*, 54(2), 317-332. <https://doi.org/10.1108/ICT-06-2021-0045>

- Pennings, S. M. (2022). *A gender employment gap index (GEGI) A simple measure of the economic gains from closing gender employment gaps, with an application to the Pacific Islands* (Policy research working paper No. 9942). Washington DC: World Bank Group. <http://hdl.handle.net/10986/37062>
- Roberson, L., Deitch, E. A., Brief, A. P., & Block, C. J. (2003). Stereotype threat and feedback seeking in the workplace. *Journal of Vocational Behavior*, 62(1), 176-188. [https://psycnet.apa.org/doi/10.1016/S0001-8791\(02\)00056-8](https://psycnet.apa.org/doi/10.1016/S0001-8791(02)00056-8)
- Sauter, B., & Fischer, S. (2011). The relationship between gender and college students' career development. *Journal of Student Research Individual Research*. <http://digital.library.wisc.edu/1793/53254>
- Satwika, P. A., & Suhariadi, F. (2024). Proactive work behavior in generation z employees. In *ISPsy 2023: Proceedings of the 6th International Seminar on Psychology, ISPsy 2023, 18-19 July 2023, Purwokerto, Central Java, Indonesia*. European Alliance for Innovation. <https://doi.org/10.4108/eai.18-7-2023.2343408>
- Savugathali, A. F., Mustafa, M. B., & Jusoh, A. J. (2025). Self-Efficacy in Career Decision Making and Outcome Expectation among Final Year Students. *International Journal of Academic Research in Business and Social Sciences*, 15(01), 40–49. <http://dx.doi.org/10.6007/IJARBS/v15-i01/23624>
- Shirandula, D., Cheloti-Mapelu, I., & Sepula, M. (2017). Relationship between gender and proactive work behaviour in the Kenya's hotel industry. *Ir.mksu.ac.ke*. <http://ir.mksu.ac.ke/handle/123456780/4419>
- Siddiky, M. R. (2020). Does soft skill development vary among the students? A gender perspective. *Turkish Journal of Education*, 9(3), 205-221. <https://doi.org/10.19128/turje.658198>
- Ślebarska, K., & Flakus, M. (2020). Career self-management of unemployed workers: The role of proactive coping in job-to-job transition. *Baltic Journal of Management*. <https://doi.org/10.1108/bjm-06-2020-0189>
- Smith, V. (2010). Enhancing employability: Human, cultural, and social capital in an era of turbulent unpredictability. *Human relations*, 63(2), 279-300. <https://psycnet.apa.org/doi/10.1177/0018726709353639>
- Strauss, K. (2024). Future work selves. In M. P. Bal (Ed.), *Elgar encyclopedia of organizational psychology* (pp. 271–273). Edward Elgar Publishing. <http://dx.doi.org/10.4337/9781803921761.00059>
- Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology*, 97(3), 580. <https://psycnet.apa.org/doi/10.1037/a0026423>
- Sullivan, S. E., & Baruch, Y. (2009). Advances in career theory and research: A critical review and agenda for future exploration. *Journal of management*, 35(6), 1542-1571. <http://dx.doi.org/10.1177/0149206309350082>
- Sufren, Y. N. (2013). *Mahir menggunakan SPSS secara otodidak*. Elex Media Komputindo.
- Swingler, M., Roy, A., Manoli, A., Hasty, W., Macfarlane, D., Kapoor, A., & Kokkinidis, G. (2022). Bridging the gap: skill development in curricular, co-curricular and extra-curricular activities and the impact on readiness for employment. *EdArXiv*,

<https://doi.org/10.35542/osf.io/dvhmf>

- Taber, B. J., & Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *Journal of Vocational Behavior*, 86, 20-27. <https://psycnet.apa.org/doi/10.1016/j.jvb.2014.10.005>
- Tomlinson, M. (2012). Graduate employability: A review of conceptual and empirical themes. *Higher education policy*, 25, 407-431. <https://doi.org/10.1057/hep.2011.26>
- Vidal-Brown, S. A., & Thompson, B. (2001). The career assessment diagnostic inventory: A new career indecision assessment tool. *Journal of Career Assessment*, 9(2), 185-202. <https://psycnet.apa.org/doi/10.1177/106907270100900206>
- Victorino, C., Denson, N., Ing, M., & Nylund-Gibson, K. (2022). Comparing STEM majors by examining the relationship between student perceptions of campus climate and classroom engagement. *Journal of Hispanic Higher Education*, 21(1), 33-48. <https://psycnet.apa.org/doi/10.1177/1538192719896343>
- Walker, M., & Fongwa, S. (2017). *Universities, employability and human development*. Springer. <http://dx.doi.org/10.1057/978-1-137-58452-6>
- Wilson, E. C. A. (2010). *Factors that predict students' educational experience at a Midwestern research university: A comparative study of STEM and non-STEM majors*. Iowa State University. <https://dr.lib.iastate.edu/bitstreams/274b82dd-5127-4dd9-8f97-44592f7e1dd3/download>
- Woehler, M. L., Cullen-Lester, K. L., Porter, C. M., & Frear, K. A. (2021). Whether, how, and why networks influence men's and women's career success: Review and research agenda. *Journal of Management*, 47(1), 207-236. <https://doi.org/10.1177/0149206320960529>
- Yang, C. L., Li, Y., & Qiao, K. (2023). Impact of FWSS on proactive behaviors: An integrative and comparative study of multiple proactive behaviors. *Sustainability*, 15(20), 14912. <http://dx.doi.org/10.3390/su152014912>
- Yin, X., Liang, Z., & Liu, S. (2024). Exploring careers for a clearer future work-self: The influence of proactive personality as a moderator. *Journal of Psychological Research*, 6(1), 1-8. <https://journals.bilpubgroup.com/index.php/jpr>
- Yuliyanto, R., Susilaningsih, S., & Indriayu, M. (2024). Systematic literature review application of transferable skills as a key factor for vocational school graduates. *Journal of Economics Education and Entrepreneurship*. <https://doi.org/10.20527/jee.v5i1.11891>.
- Zhang, Y., & Perey, G. M. (2024). Career Planning: Its implementation and impact. *Deleted Journal*, 1(1), 16–19. <https://doi.org/10.54097/xwwiwsoy>
- Zhang, Z., Yu, X., & Liu, X. (2022). Do I decide my career? Linking career stress, career exploration, and future work self to career planning or indecision. *Frontiers in Psychology*, 13, 997984. <https://doi.org/10.3389/fpsyg.2022.997984>