

The Effect of Career Competence and Career Adaptability on Career Engagement Among Cadets in Aviation Vocational Higher Education

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ABSTRACT

This study aims to analyze the effects of career competence and career adaptability on career engagement among cadets in aviation vocational higher education. The study employed a quantitative approach with an explanatory research design. The results revealed that career competence had a positive and significant effect on career engagement ($\beta = 0.340$; $t = 6.636$; $p < 0.001$). Career adaptability also had a positive and significant effect on career engagement ($\beta = 0.376$; $t = 7.730$; $p < 0.001$). The R-square value of 0.372 indicates that career competence and career adaptability explained 37.2% of the variance in career engagement. These findings confirm that cadets' career engagement is shaped by their ability to understand and manage career development and their readiness to deal with career-related change and uncertainty. This study provides practical implications for aviation vocational higher education institutions to strengthen career services, adaptability development, industry networking, and structured self-development activities for cadets.

INTRODUCTION

The global world of work has produced career patterns that are increasingly complex, non-linear, and difficult to predict. The International Labour Organization (2024) explains that global labor market recovery remains uneven and is accompanied by various forms of employment vulnerability. At the same time, the World Economic Forum (2025) identifies analytical thinking, resilience, flexibility, agility, leadership, social influence, creative thinking, motivation, and self-awareness as core skills that are increasingly required in the labor market. These conditions indicate that the transition from education to employment is no longer determined solely by technical skills, but also by psychological readiness, adaptability, and individuals' active behavior in managing career development.

This challenge is particularly relevant to vocational higher education. Vocational education is designed to prepare learners for work through competencies that are closely aligned with industrial needs (Billett, 2011; Rauner & Maclean, 2008). However, rapid industrial development means that vocational education cannot focus only on technical aspects. Graduates need the capacity to read change, explore opportunities, manage barriers, build professional networks, and make career decisions independently. In this context, career engagement becomes an important construct because it describes the extent to which individuals actively perform career development behaviors.

The aviation sector is a highly standardized and high-risk work sector that is strongly affected by technological development and safety regulations. The International Civil Aviation Organization (2025), through the Next Generation of Aviation Professionals programme, emphasizes the importance of ensuring the availability of competent aviation professionals to operate, manage, and maintain the future air transport system. Cadets in aviation vocational higher education therefore need to be prepared not only as prospective workers with technical knowledge and skills, but also as individuals who are able to adapt, build career readiness, and actively engage in professional development during their education.

In aviation vocational higher education, especially among non-Polbit cadets, uncertainty in the school-to-work transition is a critical issue. Non-Polbit cadets do not always have guaranteed job placement after graduation, so they need to develop career choices more independently, competitively, and realistically. This phenomenon positions career engagement as a strategic aspect. Cadets who actively seek information about the aviation industry, understand job requirements, participate in competency development activities, build networks with alumni and industry, and prepare post-graduation work plans are likely to have better career readiness than cadets who passively wait for institutional direction.

Career engagement is defined as the degree to which individuals proactively develop their careers through career behaviors (Hirschi et al., 2014). The construct includes career planning, self-exploration, environmental exploration, networking, human capital development, and positioning behavior. Career engagement is not merely a positive attitude toward the future; it is a set

of concrete behaviors undertaken to clarify career direction and strengthen the chances of career success. In contemporary career literature, proactive career behavior is increasingly important because individuals are expected to manage their careers more independently (Akkermans & Hirschi, 2023; Wilhelm et al., 2024).

One factor that is expected to shape career engagement is career competence. Akkermans et al. (2013) define career competencies as knowledge, skills, and abilities that are central to career development and can be influenced and developed by the individual. Career competence includes reflective, communicative, and behavioral competencies. Individuals with high career competence tend to be better able to understand their motivations, personal qualities, career opportunities, and strategies needed to achieve career goals.

Another important factor is career adaptability. Career Construction Theory views career adaptability as a psychosocial resource that helps individuals deal with vocational development tasks, transitions, and occupational change (Savickas, 2005; Savickas & Porfeli, 2012). Career adaptability consists of career concern, career control, career curiosity, and career confidence. Cadets with high career adaptability are expected to be more able to think about the future, take responsibility for career choices, explore opportunities, and remain confident in facing selection processes and aviation industry dynamics.

Although research on career competence, career adaptability, and career engagement has developed, studies examining the effects of career competence and career adaptability on career engagement in the context of aviation vocational higher education remain limited. Many previous studies have been conducted among general university students, employees, or organizational contexts, whereas aviation vocational cadets have distinctive characteristics, including a disciplined educational culture, safety regulatory demands, certification requirements, and a competitive transition into work. Therefore, this study is important for expanding the understanding of factors that shape career engagement among aviation vocational higher education cadets.

Based on the preceding discussion, this study aims to analyze the effects of career competence and career adaptability on career engagement among cadets in aviation vocational higher education. Theoretically, the study strengthens the integration between the career competencies framework and Career Construction Theory in explaining proactive career behavior. Practically, the study is expected to provide a basis for aviation vocational higher education institutions to design career development programs that are more structured, adaptive, and relevant to industry needs.

THEORETICAL REVIEW

Career Competence

Career competence is a personal resource that helps individuals manage career development in an increasingly dynamic work environment. Akkermans et al. (2013) state that career competencies include knowledge, skills, and abilities that are central to career development and can be developed by individuals. This

definition emphasizes that career competence is not a static innate trait, but a capacity that can be shaped through education, career guidance, practical experience, self-reflection, and interaction with the work environment.

Akkermans et al. (2013) classify career competence into three main dimensions. First, reflective career competence includes reflection on motivation and reflection on personal qualities. This competence helps individuals understand their values, interests, strengths, weaknesses, and career goals. Second, communicative career competence includes networking and self-profiling. This competence enables individuals to build socio-professional relationships and present themselves appropriately to educational and industrial environments. Third, behavioral career competence includes work exploration and career control. This competence encourages individuals to take concrete action, seek job information, and manage career development steps.

In the context of aviation vocational higher education cadets, career competence has strong relevance. Cadets need to recognize their potential, understand the demands of aviation work, know certification requirements, build networks with supervisors, alumni, and industry practitioners, and prepare strategies for entering the labor market. These competencies help cadets become active agents in the transition from education to work. Thus, career competence not only helps individuals know what they want in their careers, but also encourages concrete actions to achieve those goals.

Career Adaptability

Career adaptability is a central construct in Career Construction Theory. Savickas (2005) explains that individuals construct careers through adaptation to developmental tasks, transitions, and changes in the work environment. Savickas and Porfeli (2012) define career adaptability as a psychosocial resource that helps individuals cope with occupational transitions, career development tasks, and work-related trauma. This construct is increasingly important in an unstable work era because individuals need to develop the ability to deal with change and uncertainty.

Savickas and Porfeli (2012) describe four dimensions of career adaptability. Career concern indicates individuals' future orientation and concern for their careers. Career control describes individuals' responsibility and control in making career decisions. Career curiosity reflects individuals' exploration of themselves and work opportunities. Career confidence describes individuals' belief in their ability to solve problems and deal with career challenges. These four dimensions operate as adaptive resources that enable individuals to plan, explore, and take action in career development.

The meta-analysis by Rudolph et al. (2017) shows that career adaptability is related to various career adaptation responses and outcomes. Johnston (2018) also confirms that career adaptability has developed into a significant area in vocational psychology. In the context of aviation vocational higher education cadets, career adaptability helps cadets deal with changing industry needs, aviation technology development, graduate competition, certification requirements, and uncertainty in employment opportunities. Adaptive cadets

are more prepared to explore and are more likely to engage in career development activities.

Career Engagement

Career engagement is a form of proactive behavior undertaken by individuals to develop their careers. Hirschi et al. (2014) developed the Career Engagement Scale and explain that career engagement reflects the degree to which individuals proactively develop their careers through various career behaviors. These behaviors include career planning, self-exploration, environmental exploration, networking, human capital development, and positioning behavior. The construct differs from career attitudes because it emphasizes observable actions in the career development process.

Career engagement is closely related to the concept of career self-management. Wilhelm et al. (2024) emphasize that career self-management behavior is multidimensional and is related to various aspects of employability. De Vos et al. (2020) also position active career management as an important part of sustainable careers. Thus, career engagement can be understood as a behavioral mechanism through which individuals' career resources are transformed into concrete action.

Among cadets in aviation vocational higher education, career engagement is reflected in activities such as seeking information about employment opportunities, participating in seminars or additional training, understanding aviation industry needs, discussing career options with supervisors and alumni, building industry networks, and preparing work plans after graduation. These behaviors are important because cadets are in a transition phase toward work that demands technical, psychological, and professional readiness.

Hypothesis Development

Career competence is expected to have a positive effect on career engagement. Theoretically, individuals with reflective, communicative, and behavioral competencies are more able to transform career understanding into career development activities. Reflective competence helps individuals establish clear career goals. Communicative competence helps individuals obtain support and information from socio-professional networks. Behavioral competence encourages work exploration and career control. Therefore, the higher the cadets' career competence, the higher their career engagement is expected to be.

H1: Career competence has a positive effect on career engagement.

Career adaptability is also expected to have a positive effect on career engagement. Cadets with career concern are more attentive to the future and therefore more motivated to develop career plans. Career control helps cadets take responsibility for work choices. Career curiosity encourages exploration of job opportunities and alternative career paths. Career confidence strengthens courage in facing selection, certification, and job competition. Thus, career adaptability is an important resource that encourages proactive behavior in career development.

H2: Career adaptability has a positive effect on career engagement.

METHODOLOGY

This research model positions career competence and career adaptability as exogenous variables, while career engagement is positioned as the endogenous variable. The model was developed based on the career competencies framework, Career Construction Theory, and the concept of career engagement as proactive career behavior.

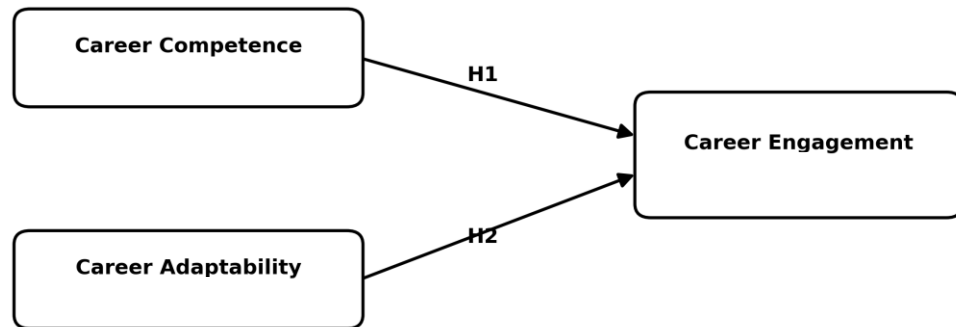


Figure 1. Research model

Research Design

This study used a quantitative approach with an explanatory research design. The explanatory design was used because the study aimed to test relationships among variables that had been formulated based on theory and previous research (Creswell & Creswell, 2018). The research model was tested using survey data collected through a closed-ended questionnaire.

Population and Sample

The population consisted of active non-Polbit Diploma III cadets in aviation vocational higher education institutions in East Java, namely Politeknik Penerbangan Surabaya and Akademi Penerbang Indonesia Banyuwangi. The population comprised 361 cadets. The sample consisted of 310 cadets selected using convenience sampling. This technique was used because data were collected from respondents who met the research criteria and were accessible during the data collection period (Etikan et al., 2016). The respondent criteria were active non-Polbit cadets in levels I, II, and III of Diploma III programs.

Data Collection Technique

Data were collected using a closed-ended questionnaire with a 1-6 Likert scale. The six-point scale was used to encourage respondents to indicate clearer response tendencies. The questionnaire measured three main variables: career

competence, career adaptability, and career engagement. All items were developed based on the theoretical dimensions of each construct and adapted to the context of aviation vocational higher education cadets.

Operational Definition of Variables

Career competence is defined as cadets' ability to understand, communicate, and actively manage their career development. This variable was measured through three dimensions: reflective, communicative, and behavioral competencies (Akkermans et al., 2013).

Career adaptability is defined as cadets' psychosocial readiness to face career development tasks, the transition from education to work, and changes in the aviation labor market. This variable was measured through four dimensions: career concern, career control, career curiosity, and career confidence (Savickas & Porfeli, 2012).

Career engagement is defined as cadets' proactive behavior in developing their careers, including career planning, self-exploration, environmental exploration, networking, human capital development, and positioning behavior (Hirschi et al., 2014).

Data Analysis Technique

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was used because the study aimed to explain predictive relationships among latent variables and evaluate both the measurement and structural models (Hair et al., 2022). Measurement model testing included convergent validity, discriminant validity, and construct reliability. Convergent validity was evaluated using loading factor and Average Variance Extracted (AVE). Construct reliability was evaluated using Cronbach alpha and composite reliability. Discriminant validity was evaluated using the Fornell-Larcker criterion (Fornell & Larcker, 1981). Structural model testing included R-square, F-square, Q-square predict, SRMR, path coefficients, t-statistics, and p-values.

RESULTS

Descriptive Statistics

Descriptive statistics were used to describe respondents' response tendencies for each research variable. The descriptive results showed that all three variables were in the high category.

Table 1. Descriptive statistics of research variables

Variable	N	Items	Min.	Max.	Mean	SD	Category
Career competence	310	22	1.18	6.00	4.78	1.03	High
Career adaptability	310	23	1.70	6.00	4.77	1.04	High
Career engagement	310	16	1.06	6.00	4.73	1.05	High

Based on Table 1, career competence had a mean of 4.78 with a standard deviation of 1.03. Career adaptability had a mean of 4.77 with a standard deviation of 1.04. Career engagement had a mean of 4.73 with a standard deviation of 1.05. These results indicate that, in general, cadets have high career competence, career adaptability, and career engagement. However, the standard deviation values close to one also indicate variation across respondents, so strengthening career development remains necessary.

Measurement Model Testing

Measurement model testing showed that the research constructs met validity and reliability criteria. The AVE values of all variables were above 0.50, indicating adequate convergent validity. The Cronbach alpha and composite reliability values of all variables were above 0.70, indicating that the constructs were reliable.

Table 2. Construct validity and reliability

Variable	AVE	Cronbach alpha	Composite reliability	Description
Career competence	0.670	0.976	0.978	Valid and reliable
Career adaptability	0.639	0.974	0.975	Valid and reliable
Career engagement	0.651	0.964	0.965	Valid and reliable

Discriminant validity also met the Fornell-Larcker criterion. The square root of the AVE of each construct was greater than the correlations between constructs. This indicates that each construct has adequate empirical distinctiveness.

Table 3. Fornell-Larcker criterion

Variable	Career competence	Career adaptability	Career engagement
Career competence	0.818		

Career adaptability	0.452	0.799	
Career engagement	0.510	0.529	0.807

Structural Model Testing

Structural model testing was conducted to assess the model's ability to explain career engagement and to test the research hypotheses. The R-square value for career engagement was 0.372, indicating that career competence and career adaptability explained 37.2% of the variance in career engagement.

Table 4. R-square and Q-square predict values

Endogenous variable	R-square	Q-square predict	Description
Career engagement	0.372	0.360	Has explanatory power and predictive relevance

The Q-square predict value of 0.360 indicates that the model has predictive relevance because the value is greater than zero. The SRMR value of 0.038 indicates an adequate descriptive model fit. Furthermore, the F-square values showed that the contribution of career competence to career engagement was 0.147, while the contribution of career adaptability to career engagement was 0.179.

Table 5. F-square values for career engagement

Relationship	F-square	Interpretation
Career competence -> Career engagement	0.147	Weak to moderate
Career adaptability -> Career engagement	0.179	Moderate

Hypothesis testing showed that all tested relationships were positive and significant. Career competence had a positive and significant effect on career engagement. Career adaptability also had a positive and significant effect on career engagement.

Table 6. Hypothesis testing results

Hypothesis	Relationship	Path coefficient	T-statistic	P-value	Decision
H1	Career competence -> Career engagement	0.340	6.636	< 0.001	Accepted
H2	Career adaptability -> Career engagement	0.376	7.730	< 0.001	Accepted

Based on Table 6, the path coefficient of career competence on career engagement was 0.340 with a t-statistic of 6.636 and $p < 0.001$. This value indicates that H1 was accepted. The path coefficient of career adaptability on career engagement was 0.376 with a t-statistic of 7.730 and $p < 0.001$. This value indicates that H2 was accepted. Compared with career competence, career adaptability had a slightly stronger direct effect on career engagement.

DISCUSSION

The Effect of Career Competence on Career Engagement

The results show that career competence has a positive and significant effect on career engagement. This finding means that the higher the cadets' career competence, the higher their engagement in career development activities. Career competence helps cadets understand their motivations and personal qualities, build networks, present themselves, explore job opportunities, and manage career direction. These abilities encourage cadets not only to understand careers, but also to take concrete actions in career development.

This finding supports the framework of Akkermans et al. (2013), who explain that career competence consists of reflective, communicative, and behavioral competencies. In aviation vocational education, reflective competence helps cadets recognize their interests, strengths, weaknesses, and career goals. Communicative competence helps cadets interact with lecturers, supervisors, alumni, and industry practitioners. Behavioral competence helps cadets seek employment information, participate in competency development activities, and prepare strategies for entering the labor market. Thus, career competence becomes a personal resource that encourages career engagement behavior.

The positive effect of career competence on career engagement is also consistent with the idea of career self-management. De Vos et al. (2011) emphasize that competency development can support employability and career success. Fugate et al. (2004) view employability as a psychosocial construct related to career identity, personal adaptability, and social capital. In this study, career competence can be understood as a resource that strengthens cadets' ability to manage career identity and social capital through career engagement behavior.

For non-Polbit cadets, this result has strong practical meaning. Because they do not always have guaranteed job placement, non-Polbit cadets need to develop the ability to actively seek employment opportunities, understand industry needs, and prepare for selection processes. Career competence helps cadets move away from passive patterns and encourages engagement in activities such as career seminars, recruitment information searches, additional certification, discussions with alumni, and industry networking. Therefore, aviation vocational higher education institutions need to integrate career competence development into learning, academic mentoring, and campus career services.

The F-square value of 0.147 indicates that the effect of career competence on career engagement is in the weak-to-moderate category. This shows that career competence contributes to career engagement but is not the only determining factor. Cadets' career engagement may also be influenced by social support, internship experience, career services, industry information, and the institutional climate of guidance. Thus, strengthening career competence needs to be

accompanied by an institutional ecosystem that encourages cadets to transform competencies into concrete action.

The Effect of Career Adaptability on Career Engagement

The results show that career adaptability has a positive and significant effect on career engagement. This finding means that cadets who have future orientation, self-control, curiosity, and confidence in dealing with careers tend to be more active in career development activities. Career adaptability provides psychosocial encouragement that makes cadets more prepared to face change and uncertainty in the aviation labor market.

This finding supports Career Construction Theory, which positions career adaptability as an important resource for dealing with developmental tasks, transitions, and work changes (Savickas, 2005; Savickas & Porfeli, 2012). Career concern encourages cadets to think about the future and prepare career plans. Career control helps cadets feel responsible for their career decisions. Career curiosity encourages cadets to seek information about job opportunities, certification, professional pathways, and alternative careers in aviation and related sectors. Career confidence helps cadets feel capable of facing selection, competition, and job demands.

This result is also in line with the meta-analysis by Rudolph et al. (2017), which shows that career adaptability is associated with various career adaptation responses and outcomes. In a dynamic work environment, adaptive individuals are more likely to explore and take career development actions. Career adaptability is not merely a flexible attitude; it is a resource that enables individuals to interpret change as a manageable challenge. For cadets in aviation vocational higher education, this is highly relevant because the aviation sector demands the ability to adapt to technology, regulations, safety standards, and industry needs.

The coefficient value of career adaptability on career engagement was 0.376, indicating that career adaptability is a slightly stronger predictor than career competence. This can be understood because career engagement requires future orientation, courage in decision making, curiosity, and confidence. Cadets who have career competence but lack adaptability may understand the career steps that need to be taken, but may not necessarily have the courage or readiness to deal with uncertainty. Conversely, adaptive cadets are more likely to explore and take action even when facing barriers.

In aviation vocational higher education, career adaptability needs to be strengthened through programs that encourage cadets to think systematically about their future work, recognize alternative career opportunities, understand industry dynamics, and develop confidence in facing selection processes. Such programs may include career planning workshops, interview simulations, certification pathway mapping, industry visits, alumni mentoring, and discussions with aviation practitioners. In this way, career adaptability does not stop as psychological readiness, but is realized in concrete career engagement.

The F-square value of career adaptability on career engagement was 0.179, indicating a moderate effect. This means that career adaptability is an important

factor in shaping cadets' career engagement. Aviation vocational higher education institutions need to position career adaptability as part of cadet development strategy, rather than merely as an additional aspect of counseling services. Strengthening adaptability can help cadets face uncertainty in job placement and increase their readiness to actively take opportunities.

Synthesis of Discussion

Overall, the results show that career engagement among cadets in aviation vocational higher education is shaped by the combination of career competence and career adaptability. Career competence provides reflective, communicative, and behavioral abilities that help cadets understand and manage their careers. Career adaptability provides psychosocial readiness to face change and uncertainty. Career engagement emerges when these two resources are manifested in concrete actions such as planning, exploration, networking, skill development, and positioning behavior.

The R-square value of 0.372 indicates that career competence and career adaptability explain an important portion of the variance in career engagement. However, 62.8% of the variance in career engagement is still explained by factors outside the model. This opens opportunities for future studies to include variables such as career decision-making self-efficacy, family support, lecturer support, internship experience, quality of career services, academic achievement, and access to industry information. Thus, this research model can serve as a basis for developing a more comprehensive career model in aviation vocational higher education.

This study contributes theoretically by extending the application of the career competencies framework, Career Construction Theory, and the concept of career engagement to the context of aviation vocational higher education cadets. This context is important because cadets are educated in a disciplined, standardized environment close to a high-risk industry. The findings also emphasize that cadet career development cannot focus only on aviation technical competencies; it also needs to strengthen career competence and career adaptability as resources for building proactive career behavior.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results and discussion, it can be concluded that career competence has a positive and significant effect on career engagement among cadets in aviation vocational higher education. Cadets who are able to understand themselves, build networks, explore job opportunities, and manage their career steps tend to be more actively involved in career development activities.

Career adaptability also has a positive and significant effect on career engagement. Cadets who have concern for the future, control in decision making, curiosity about career opportunities, and confidence in facing challenges tend to show higher career engagement. Career adaptability has a slightly stronger effect than career competence in explaining career engagement.

In general, this study confirms that career engagement among aviation vocational higher education cadets can be strengthened through the development of career competence and career adaptability. The findings indicate the need for

career development strategies that do not focus only on technical competence, but also on strengthening psychological readiness, career exploration, professional networking, and cadets' proactive behavior in preparing for the transition to work.

FURTHER STUDY

This study has several limitations. First, the study used a quantitative design with data collected at one point in time, so it cannot explain longitudinal changes in career competence, career adaptability, and career engagement. Second, the study used convenience sampling; therefore, generalization of the results should be made carefully. Third, the study examined only two predictors of career engagement, namely career competence and career adaptability, so other relevant factors were not analyzed.

Future studies are recommended to use longitudinal designs to examine the development of cadets' career engagement from the beginning to the end of their education. Future research may also use mixed methods to gain a deeper understanding of cadets' career experiences. In addition, future studies may include career decision-making self-efficacy, family support, institutional support, internship experience, quality of career services, socioeconomic status, and access to industry information. Comparative analysis based on study program, education level, organizational experience, or internship experience can also be conducted to obtain more detailed insights.

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REFERENCES

- Akkermans, J., & Hirschi, A. (2023). Career proactivity: Conceptual and theoretical reflections. *Applied Psychology*, 72(1), 199-204. <https://doi.org/10.1111/apps.12444>
- Akkermans, J., & Kubasch, S. (2017). #Trending topics in careers: A review and future research agenda. *Career Development International*, 22(6), 586-627. <https://doi.org/10.1108/CDI-08-2017-0143>
- Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the contemporary career: Development and preliminary validation of the Career Competencies Questionnaire. *Journal of Career Development*, 40(3), 245-267. <https://doi.org/10.1177/0894845312467501>
- Billett, S. (2011). *Vocational education: Purposes, traditions and prospects*. Springer.

- Brown, S. D., & Lent, R. W. (2016). Vocational psychology: Agency, equity, and well-being. *Annual Review of Psychology*, 67, 541-565. <https://doi.org/10.1146/annurev-psych-122414-033237>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- De Vos, A., De Hauw, S., & Van der Heijden, B. I. J. M. (2011). Competency development and career success: The mediating role of employability. *Journal of Vocational Behavior*, 79(2), 438-447. <https://doi.org/10.1016/j.jvb.2011.05.010>
- De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*, 117, 103196. <https://doi.org/10.1016/j.jvb.2018.06.011>
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The Psychology of Working Theory. *Journal of Counseling Psychology*, 63(2), 127-148. <https://doi.org/10.1037/cou0000140>
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14-38. <https://doi.org/10.1016/j.jvb.2003.10.005>
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hirschi, A., & Freund, P. A. (2014). Career engagement: Investigating intraindividual predictors of weekly fluctuations in proactive career behaviors. *The Career Development Quarterly*, 62(1), 5-20. <https://doi.org/10.1002/j.2161-0045.2014.00066.x>
- Hirschi, A., Freund, P. A., & Herrmann, A. (2014). The Career Engagement Scale: Development and validation of a measure of proactive career behaviors.

Journal of Career Assessment, 22(4), 575-594.
<https://doi.org/10.1177/1069072713514813>

International Civil Aviation Organization. (2025). Next Generation of Aviation Professionals programme. International Civil Aviation Organization.

International Labour Organization. (2024). World Employment and Social Outlook: Trends 2024. International Labour Office.

Johnston, C. S. (2018). A systematic review of the career adaptability literature and future outlook. *Journal of Career Assessment*, 26(1), 3-30.
<https://doi.org/10.1177/1069072716679921>

Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60(4), 557-568.
<https://doi.org/10.1037/a0033446>

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79-122. <https://doi.org/10.1006/jvbe.1994.1027>

Rauner, F., & Maclean, R. (Eds.). (2008). Handbook of technical and vocational education and training research. Springer.

Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98, 17-34.
<https://doi.org/10.1016/j.jvb.2016.09.002>

Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42-70). Wiley.

Savickas, M. L. (2013). Career construction theory and practice. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 147-183). Wiley.

Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661-673.
<https://doi.org/10.1016/j.jvb.2012.01.011>

Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, 45(3), 449-476.
<https://doi.org/10.1002/hrm.20119>

Wilhelm, F., Hirschi, A., & Schlaepfer, D. (2024). The multidimensional nature of career self-management behaviours and their relation to facets of employability. *Journal of Occupational and Organizational Psychology*, 97(1), 342-375. <https://doi.org/10.1111/joop.12474>

World Economic Forum. (2025). The Future of Jobs Report 2025. World Economic Forum.