Career development programs and career adaptability among students: A systematic literature review

Afda Lianti[1], Arif Sahin[2]
[1]Padang State University, Padang, Indonesia
[2]Indraprasta PGRI University, Jakarta, Indonesia
[1]afdhalianti@student.unp.ac.id, [2]sahinarif1928@gmail.com

Keywords:	**Abstract**
Ethical issues, intellectual property, plagiarism, plagiarism checking tools, research writing	Career adaptability (CA) is conceptualized within career construction theory (CCT) as a composite of four dimensions: concern, control, curiosity, and confidence. It serves as a critical psychosocial resource. It enables individuals, particularly university students, to navigate developmental tasks, career transitions, and emerging challenges within the rapidly evolving Industry 5.0 landscape. However, the gaps within the existing studies show the unidentified of the relationship between career development programs and students' CA. Therefore, this study was conducted using a systematic review framework employing thematic synthesis. It integrates evidence from 18 empirical studies published between 2019 and 2024 that focused on university and late-adolescent populations across diverse cultural and educational contexts. Findings revealed the structured career development programs incorporates experiential learning, reflective practice, and social support mechanisms. These consistently enhance students' adaptability, although the magnitude of effectiveness varies according to program design, duration, and contextual fit. The futher synthesis identified three overarching clusters of influencing factors: (1) personal motivational factors such as proactive personality, grit, and career self-efficacy; (2) socio-contextual factors including parental autonomy support and age-related stereotypes; and (3) digital behavioral factors, such as short-video overuse. By systematically integrating insights from both CCT and social cognitive career theory (SCCT), this review study advances prior literature that significantly treated these frameworks in isolation or focused on general populations without contextualizing interventions for students. Conceptually, this study maps the interaction of multilevel determinants in shaping adaptive career readiness; methodologically, it provides an evidence-based synthesis of program characteristics linked to measurable adaptability outcomes. Practically, the findings underscore the necessity of designing holistic, context-sensitive, and evidence-driven career development programs that address psychological, social, and digital dimensions of adaptability. Therefore, higher education institutions (HEIs) are encouraged to embed experiential, reflective, and digital-literacy components within career centers to foster sustainable adaptability aligned with the dynamic demands of the Industry 5.0 workforce.
*Corresponding Author:	
Arif Sahin Indraprasta PGRI University, Jakarta, Indonesia Email: sahinarif1928@gmail.com	

INTRODUCTION

The era of Industry 5.0 brings profound transformations to education and employment landscapes, characterized by the convergence of artificial intelligence (AI), machine learning, and blockchain technologies across industrial and service sectors (Khoiriah et al., 2023; Ramadhani & Masrina, 2023). These advancements reshape the competencies demanded by the workforce, emphasizing not only technical expertise but also soft skills such as problem-solving, critical thinking,

adaptability, and collaboration (Poláková et al., 2023). Consequently, university students face increasingly complex challenges in preparing for the transition from academia to the labor market challenges that require continuous learning, flexibility, and adaptive psychological resources.

In Indonesia, this urgency is reflected in persistent youth unemployment. Data from BPS-Statistics Indonesia (BPS, 2024) show the high-open-unemployment rate in February 2024 that reached 4.82%. The highest proportion of the rate belongs to the individuals aged 15-24 years, consisting of students and fresh graduates. This rate of unemployment is closely tied to career indecision and the lack of adaptability of most students to transform their mindset from the environment of academic study to professional life (M. Li et al., 2023; Xiang et al., 2024). Many students undertake workforce without adequate planning; this phenomenon causes the career mismatches between their fields of study and employment choices (Harahap, 2014). Such patterns underscore a critical problem: low career adaptability undermines students' readiness to navigate uncertainty, leverage opportunities, and sustain meaningful career growth in the rapidly evolving Industry 5.0 landscape.

Within this context, career adaptability (CA) emerges as a vital construct. Savickas & Porfeli, (2012) defined CA as a psychosocial capacity to manage developmental tasks, work transitions, and unexpected career challenges. This is the central to the career construction theory (CCT) (Savickas, 2013). CA comprises four interacting dimensions: concern, control, curiosity, and confidence, which determine how individuals respond adaptively to different corners of circumstances. For university students at a decisive stage of career development (Autin et al., 2017; Super, 1994), these capacities influence employability and long-term well-being. Without sufficient adaptability, students tend to experience career stress, uncertainty, and missed opportunities aligned with their aspirations (Bocciardi et al., 2017; M. Li et al., 2023).

Previous studies identified multiple factors influencing CA, including social support (Chan, 2020; Hadi & Aryani, 2023), intrinsic motivation (Douglass & Duffy, 2015), career self-efficacy (M. Li et al., 2023; Patel et al., 2008), and future orientation (Zhang et al., 2019). For example, Liu et al., (2024) found that students with meaningful career goals exhibit greater flexibility while Xiang et al., (2024) demonstrated that supportive learning environments promote adaptability. These findings suggest the development of adaptability through dynamic interaction among personal, motivational, and contextual factors. It indicates that career development programs should be tailored to specific social and cultural contexts rather than adopting one-fits-all models.

Despite the growing literature, significant gaps remain unaddressed. Earlier reviews (Rudolph et al., 2017) have examined CA broadly but not provided a contextualized and thematic synthesis focusing specifically on university students in the Industry 5.0 landscape. In contrast, few studies have systematically compared the design, delivery methods, duration, and technological integration of career development programs and how these features influence adaptability outcomes. The existing reviews

rely on narrative summaries rather than rigorous synthesis methods, which leads to the limitation of the students to inform evidence-based practice.

To address these gaps, this present study conducted a systematic literature review (SLR) employing a thematic synthesis approach to integrate empirical evidence on the relationship between career development programs and students' CA. The SLR method enables the structured identification, evaluation, and synthesis of relevant research, thereby producing transparent and replicable insights (Kitchenham & Charters, 2007). This approach ensures analytical rigor and allows the integration of diverse methodological evidence from quantitative to qualitative studies.

Guided by the framework of SLA, this study seeks to answer two primary research questions: (RQ1) What forms and characteristics of career development programs conducted were implemented to enhance students' CA? (RQ2) What factors influence the success and effectiveness of these programs in the student context? Through addressing these questions, this review contributes to the literature by: (1) offering a comprehensive, context-sensitive synthesis of CA interventions; (2) highlighting the multilevel determinants that shape adaptability among students, and (3) providing practical insights for designing holistic and technology-integrated career programs in higher education institutions to reach the evolving demands of the Industry 5.0 workforce.

METHOD

This study applied SLR method to identify, evaluate, and synthesize empirical evidence concerning the relationship between career development programs and CA in the higher education. The SLR method was selected for its ability to ensure a structured, transparent, and replicable synthesis process, thereby providing a comprehensive and evidence-based understanding of the research topic (Page et al., 2021).

The literature process was conducted from January to March 2024, involving studies published from 2019 to 2024 to capture the most recent empirical developments within the post-pandemic and Industry 5.0 context. Three major academic sources were consulted: Scopus, ScienceDirect, and Taylor & Francis Online. Although ScienceDirect and Taylor & Francis Online are publisher platforms rather than independent indexing databases, they were included to ensure broader coverage of psychology and education journals. Potential duplicate records were manually screened and removed to minimize redundancy and bias.

Search strategies employed Boolean operators and truncation across title, abstract, and keyword fields, with syntax tailored to each database's structure. A sample search string used in Scopus was: ("career adaptability" OR "career adapt-abilities") AND ("career development program" OR "career intervention" OR "career guidance" OR "career counseling") AND ("university student" OR "college student" OR "undergraduate"). Equivalent adjustments were applied across databases. Additional filters were used to restrict results to English-language, peer-reviewed journal articles, and relevant subject

areas (psychology and education). The complete search strategies and filter syntax are presented in Appendix A to ensure methodological transparency and reproducibility.

The target population comprised undergraduate and diploma-level students in the academic-to-workforce transition phase. Although identifying in the preliminary search studies involving late adolescents (≥17 years), we only involved articles explicitly focusing on university students that were retained in the final synthesis to maintain population homogeneity. The inclusion criteria encompassed empirical studies quantitative, qualitative, or mixed-methods that investigated CA within the context of career development programs. In addition, the exclusion criteria included theoretical or conceptual papers, editorials, opinion pieces, studies involving non-student populations, and publications without full-text access.

Article screening followed a three-stage process consistent with PRISMA 2020 guidelines: (1) title and abstract screening; (2) full-text eligibility assessment; and (3) final inclusion based on established criteria. The screening was performed by two independent reviewers working in parallel. Discrepancies in inclusion decisions or quality ratings were resolved through consensus discussions, and, when necessary, arbitration by a third reviewer to ensure reliability and reduce subjective bias.

To evaluate methodological quality, all studies that qualify the inclusion criteria were appraised using the mixed methods appraisal tool (MMAT) 2018. It provides a unified framework for assessing quantitative, qualitative, and mixed-method designs. Each study was independently rated by two reviewers, and disagreements were discussed in advanced of a consensus, ensuring inter-rater consistency and transparency in quality assessment.

Data extraction was conducted using a standardized coding form that captured key study characteristics, including authorship, year of publication, country, research design, sample size, participant demographics, type and duration of intervention, measurement tools for CA, theoretical framework, and main findings. The synthesis followed a thematic synthesis approach (Thomas & Harden, 2008), involving open coding of extracted data, grouping of related codes into subthemes, and integration of subthemes into overarching analytical themes. Coding was performed manually and iteratively refined by both reviewers to enhance interpretive coherence and depth of analysis.

While this review was not preregistered in PROSPERO or the open science framework (OSF), the method strictly adhered to PRISMA 2020 guidelines to ensure transparency and replicability. The study selection process (such as identification, screening, eligibility assessment, and inclusion) is illustrated in the PRISMA flow diagram (Figure 1). By employing this systematic approach, this study aims to generate robust, evidence-based insights into the influence of career development programs on students' CA and to offer research-informed recommendations for future program design and policy within higher education.
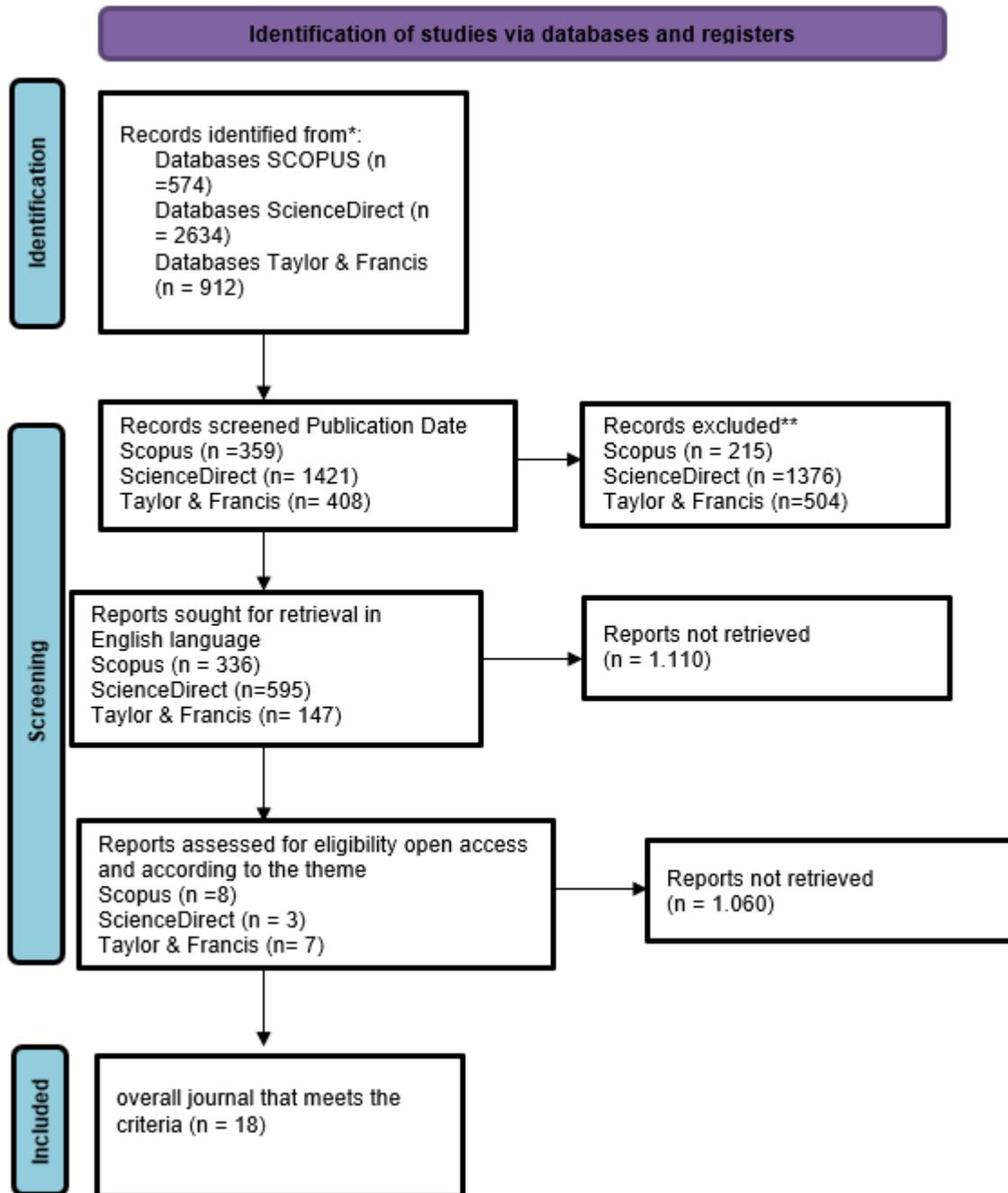
Figure 1. Flowchart of the study

RESULTS AND DISCUSSION

The following table provides brief information of the final list of 18 articles published between 2019 and 2024. This table aims to provide a brief overview of the topics covered and the contribution of each article in its field.

Table 1. Brief information table of studies included in the systematic review

No	Author/Year	Population	Method	Type of Intervention / Study Focus	Key Findings
1	Wang et al., (2022)	12 maritime navigation students	Qualitative	Exploration of factors influencing seafarers' career outcomes	Mental health issues, certification challenges, and expectation gaps were identified as major barriers to career success. CA is shaped by both internal and external factors.
2	Tian et al., (2022)	30 MTI students	Quantitative	Chinese Interpretation Training	Participants showed improvements in career concern, curiosity, and confidence. Skill-based training programs can enhance key dimensions of CA.
3	Fang et al., (2024)	476 university students	Quantitative	Relationship between proactive personality and college experience	Proactive personality and positive college experiences significantly correlate with CA, highlighting the role of personal and academic factors.
4	Atitsogbe et al., (2019)	34 students & 216 job seekers in Togo	Quantitative	Career adaptability and self-efficacy survey	Individuals with high CA and self-efficacy tend to perceive better employability, emphasizing the psychological competencies needed for labor market readiness.
5	Peters et al., (2019)	98 supermarket workers	Quantitative	Impact of age stereotypes	Negative stereotypes toward older workers reduce perceived employability, showing how social factors hinder CA.
6	H. Li et al., (2021)	839 university students	Quantitative	Relationship between grit and career adaptability	High grit levels are associated with better career planning, exploration, and confidence, underscoring the role of personality traits in adaptability.
7	Chen & Zhang, (2023)	388 university students	Quantitative	Career vocation and learning engagement	Career vocation influences learning engagement directly

					and indirectly through CA, showing how long-term goals enhance learning processes.
8	Chuang et al., (2022)	Taiwanese university students	Quantitative	Motivation, self-efficacy, and fear of failure	Motivation and self-efficacy positively affect CA, while fear of failure inhibits it, highlighting the importance of motivational and emotional factors.
9	Jiang et al., (2022)	1,930 students	Quantitative	Parental autonomy support	Parental autonomy support enhances academic engagement directly and indirectly via CA and decision-making self-efficacy, showing family support as foundational.
10	Lee & Jung, (2022)	357 South Korean university students	Quantitative	Cognitive emotion regulation and decision-making self-efficacy	Adaptive emotion regulation strategies improve decision-making self-efficacy through CA, while maladaptive strategies reduce it.
11	L. Li et al., (2024)	931 university students	Quantitative	Impact of short video addiction	Addiction to short videos correlates with reduced CA, poor sleep quality, and increased depressive symptoms, showing lifestyle impacts on career readiness.
12	Adegbite, (2024)	375 university students	Quantitative	Work-integrated learning	Work-based learning programs enhance job-relevant skills and strengthen CA, demonstrating the effectiveness of contextual learning.
13	Ran et al., (2023)	1,077 university students	Quantitative	Career exploration and self-reflection	Career exploration predicts increased adaptability and subjective well-being, with career vocation strengthening this relationship.
14	Jemini Gashi et al., (2023)	47 Kosovar adolescents	Quantitative	Career guidance workshop	Career guidance workshops significantly improve self-efficacy and career goal clarity,

No	Author	Sample	Method	Focus	Findings
					showing the impact of structured interventions.
15	Maree & Magere, (2023)	35 Tanzanian adolescents	Qualitative	Group-based career construction counseling	Career construction counseling helps students overcome career path confusion and strengthens adaptability, highlighting the value of participatory counseling.
16	Damodar et al., (2024)	76 rural adolescents	Qualitative	Transformative career maturity training	Participants experienced increased aspirations and confidence in career decision-making, reflecting the effectiveness of reflective and practical learning programs.
17	Su et al., (2024)	660 NEET adolescents	Quantitative	Experiential career support services	The program enhanced psychosocial resources such as confidence and social skills, supporting CA and overcoming career barriers.
18	Tung & Huong, (2023)	336 IT graduates in Vietnam	Quantitative	Social self-efficacy and psychological capital	Social self-efficacy and psychological capital contribute to increased competitiveness and subjective career success, showing psychological resources as key to adaptability and success.

In an era defined by globalization and rapid transformation within the global labor market, CA has emerged as an essential psychosocial competency, enabling individuals to navigate uncertainty, transitions, and evolving professional demands. While prior research indicates that students' career decision-making self-efficacy typically remains at a moderate level (Rahmi, 2019), individuals with higher self-efficacy demonstrate significantly greater adaptability in managing their career paths (Sahin et al., 2024). This highlights the critical need for structured interventions which particularly career development programs to foster such adaptability. In addition, this review synthesizes findings from 18 high-quality empirical studies, selected for their methodological rigor and thematic relevance, to elucidate how these programs enhance student readiness for a dynamic workforce.

4.1 Overview of Research Findings

The synthesis of 18 studies (see Table 1) revealed that CA is a multidimensional construct, encompassing cognitive, affective, and behavioral capacities. Furthermore, it is shaped by the dynamic interaction of personal, motivational, social, and environmental factors. The reviewed studies involved diverse populations: predominantly university students, but also vocational learners, job seekers, and NEET youth (Not in Education, Employment, or Training) across Asia, Africa, and Europe. While this diversity enriches understanding of adaptability, it introduces methodological heterogeneity, which limits direct generalization of findings.

Most studies employed quantitative designs using standardized instruments (e.g., Career Adaptabilities Scale (CAS)), whereas qualitative studies offered in-depth narratives of the participants' life experiences. Sample sizes ranged from 30 to over 1,900 participants. In addition, the intervention durations varied from a few hours to several months. With this variation, including the various cultural contexts, influences both the effectiveness of the programs and the predictive strength of influencing variables.

Two central patterns emerged consistently across studies. First, interventions that effectively engaged all four dimensions of CCT tend to produce sustained adaptability growth rather than short-term skill gains. Second, as articulated in social cognitive career theory (SCCT), self-efficacy, outcome expectations, and social support operated as core mechanisms linking individual traits with adaptive behavior. Integrating both frameworks provides a more complete explanatory model: CCT highlights what dimensions are developed, while SCCT clarifies how psychosocial processes enable adaptability.

4.2 Effectiveness of Intervention Programs to Enhance CA (RQ1)

Findings across studies consistently indicate the multi-component interventions that integrates experiential learning, self-reflection, and social support as the most effective strategy to enhance CA. For instance, the Chinese interpretation training program (Fang et al., 2024) significantly improved students' concern, curiosity, and confidence; it illustrates how skill-based learning tied to individual's field of study be able to strengthen adaptability. Within CCT, these improvements reflect the development of career future orientation, exploratory motivation, and confidence in competence key adaptive resources.

Comparatively, a work-integrated learning (WIL) program in Africa (Adegbite, 2024) enhanced self-efficacy and job-relevant skills. This is due to the alignment of the program goals with local industry demands. Furthermore, similar programs in technologically advanced countries emphasized innovation and professional networking; it suggests the mediation of the program effectiveness based on the cultural and labor market contexts. This cross-cultural comparison demonstrates the context-sensitive adaptability interventions, not universally transferable.

Other interventions, such as group-based career construction counseling (Maree & Magere, 2023) and transformative career maturity training (Damodar et al., 2024), were particularly beneficial for individuals with career decision-making struggles. From a CCT perspective, these programs enable participants to reconstruct and reinterpret students' career narratives, integrating past experiences into meaningful future plans. From an SCCT lens, the same process enhances self-efficacy through mastery experiences and vicarious learning, facilitated by counselors as supportive models.

Programs targeting vulnerable groups, such as NEET youth (Su et al., 2024), also demonstrated measurable improvements in confidence and social competence. However, the lack of structured post-program follow-up resulted in diminishing long-term effects, emphsizing the critical need for sustainability and reinforcement mechanisms. In conclusion, the distinct pattern emerged: short-term interventions primarily enhanced awareness and exploratory behaviors while long-term or iterative interventions fostered deeper and more persistent adaptive capacity. This distinction highlights a significant gap in the longitudinal evidence available across the reviewed studies.

4.3 Factors Influencing CA (RQ2)

Beyond intervention design, the findings indicated the four interrelated domains personal which involves CA such as: motivational-emotional, social, and environmental-lifestyle factors operating synergistically across both CCT and SCCT frameworks

Personal factors such as proactive personality (Fang et al., 2024), grit (H. Li et al., 2021), and career self-efficacy (Atitsogbe et al., 2019) foster persistence, exploration, and confidence dimensions corresponding to curiosity, concern, and control in CCT. Other than that, SCCT extends this by showing the literal fact of mediation of high self-efficacy for proactive engagement in adaptive career behaviors.

Motivational and emotional factors also play a central role in CA. Chuang et al., (2022) found that motivation and self-efficacy enhance adaptability, while fear of failure inhibits it. While CCT appreciate such fear undermines control by reducing individual's perceived agency, SCCT believes that it diminishes positive outcome expectations. Notably, the operation of motivational drivers varies culturally collectivist contexts emphasize family-driven motivation, whereas individualist contexts prioritize personal goal orientation.

Social factors, including parental autonomy support (Jiang et al., 2022), enhance both academic engagement and CA by strengthening decision-making self-efficacy. While CCT underscores the social construction of positive career narratives within this support, SCCT sees this as confidence through perceived social support. Conversely, negative age stereotypes (Peters et al., 2019) reduce employability perceptions, particularly among older or returning learners, by undermining confidence and self-belief.

Environmental and lifestyle factors, such as short-video overuse (L. Li et al., 2024), negatively affect adaptability by disrupting concern and control, reducing focus on long-term planning, and

contributing to sleep disturbance and depressive symptoms. Within SCCT, such digital distractions function as internal barriers that restrict exploratory and goal-directed behaviors.

Collectively, these findings affirm that adaptability is not a static trait, but rather a dynamic outcome of the continuous interaction among individual capacities, social systems, and environmental conditions. Integrating CCT and SCCT offers a holistic interpretation: CCT identifies the structural components of adaptability, whereas SCCT elucidates the cognitive and contextual mechanisms that sustain it.

While this synthesis provides comprehensive insights, several limitations warrant acknowledgment. First, the inclusion of only 18 studies may constrain the generalizability of the findings. Additionally, the inherent heterogeneity in research methods, participant demographics, and program formats complicates direct comparisons across the literature. There is also a notable paucity of longitudinal designs, which limits our understanding of the long-term sustainability of CA outcomes. Furthermore, the exclusion of unpublished or non-English studies introduces a possible language and publication bias. Finally, while cross-cultural nuances were addressed, systematic comparative analyses remain underdeveloped and should be prioritized in future research.

Addressing both RQ1 and RQ2, this review study underscores the factors of effective CA development which from integrated, context-aware interventions grounded in both CCT and SCCT. Programs that combine experiential learning, self-reflection, and social support, supported by continuous reinforcement and digital literacy components, are most likely to yield sustainable improvements. For higher education institutions, embedding such interventions within career centers and curricula can build adaptive, future-ready graduates capable of navigating the complex demands of Industry 5.0 landscape.

CONCLUSION

The findings of this review study demonstrate that CA serves as a core psychosocial resource that enables university students to manage developmental tasks, navigate transitions, and respond to emerging career challenges. This capability is effectively bolstered by structured and evidence-based interventions that operationalize CCT framework, specifically concern, control, curiosity, and confidence. Such interventions are most effective when situated within experiential, reflective, and socially supported learning environments. While these approaches generally enhance adaptability, their efficacy depends on program design, duration, and alignment with specific cultural and labor market conditions.

Importantly, the synthesis shows that CA develops through the interaction of multiple determinants, rather than isolated influences. Personal resources, such as proactive personality, grit, and self-efficacy, interact with motivational-emotional factors, social support systems, and situational conditions to jointly shape students' readiness for adaptive career behaviors. Therefore, effective

program design should adopt a systemic and integrative perspective, fostering not only cognitive and behavioral adaptability but also digital discipline, emotional resilience, and social connectedness.

For higher education institutions and policymakers, these insights call for embedding CA training within broader frameworks of employability, digital literacy, and well-being. Programs that combine experiential learning, reflective guidance, and sustained mentoring are particularly relevant for promoting long-term adaptability defined as the ability to self-regulate, reorient goals, and remain resilient across career stages and transitions.

While this review provides a comprehensive synthesis, it acknowledges several limitations, including methodological heterogeneity, predominance of cross-sectional studies, and potential language bias due to the inclusion of English-only publications. Future research should employ longitudinal and cross-cultural designs to evaluate sustained program effects and explore digital-era challenges that influence adaptability, particularly within the evolving Industry 5.0 landscape. In summary, cultivating CA requires interventions that are context-aware, theoretically grounded, and future-oriented, ensuring that students are not only employable but also capable of thriving amid continuous change.

REFERENCES

Adegbite, W. M. (2024). Unpacking mediation and moderating effect of digital literacy and life-career knowledge in the relationship between work-integrated learning and graduate employability. *Social Sciences and Humanities Open*, *10*(August), 101161. https://doi.org/10.1016/j.ssaho.2024.101161

Atitsogbe, K. A., Mama, N. P., Sovet, L., Pari, P., & Rossier, J. (2019). Perceived employability and entrepreneurial intentions across university students and job seekers in Togo: The effect of career adaptability and self-efficacy. *Frontiers in Psychology*, *10*(FEB), 1–14. https://doi.org/10.3389/fpsyg.2019.00180

Autin, K. L., Douglass, R. P., Duffy, R. D., England, J. W., & Allan, B. A. (2017). Subjective social status, work volition, and career adaptability: A longitudinal study. *Journal of Vocational Behavior*, *99*, 1–10. https://doi.org/https://doi.org/10.1016/j.jvb.2016.11.007

Bocciardi, F., Caputo, A., Fregonese, C., Langher, V., & Sartori, R. (2017). Career adaptability as a strategic competence for career development: An exploratory study of its key predictors. *European Journal of Training and Development*, *41*(1), 67–82. https://doi.org/10.1108/EJTD-07-2016-0049

Chan, C.-C. (2020). Social support, career beliefs, and career self-efficacy in determination of Taiwanese college athletes' career development. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *26*, 100232.

Chen, J., & Zhang, X. (2023). The impact of career calling on higher vocational nursing students' learning engagement: The mediating roles of career adaptability and career commitment. *Frontiers in Psychology*, *14*(March), 1–9. https://doi.org/10.3389/fpsyg.2023.1111842

Chuang, Y., Huang, T., Lin, S., & Lin, S. (2022). The influence of motivation , self-efficacy , and fear of failure on the career adaptability of vocational school students : Moderated by meaning in life. *September*, 1–15. https://doi.org/10.3389/fpsyg.2022.958334

Chuang, Y. T., Huang, T. H., Lin, S. Y., & Chen, B. C. (2022). The influence of motivation, self-efficacy, and fear of failure on the career adaptability of vocational school students: Moderated

by meaning in life. *Frontiers in Psychology*, *13*(September), 1–15. https://doi.org/10.3389/fpsyg.2022.958334

Damodar, P., Shetty, A., Prakash, A., & Dsouza, K. J. (2024). Transformative career maturity training for rural adolescents: an exploratory approach. *International Journal of Adolescence and Youth*, *29*(1). https://doi.org/10.1080/02673843.2024.2398044

Douglass, R. P., & Duffy, R. D. (2015). Calling and career adaptability among undergraduate students. *Journal of Vocational Behavior*, *86*, 58–65. https://doi.org/https://doi.org/10.1016/j.jvb.2014.11.003

Fang, M., Pan, R., Ding, R., Hou, Z., & Wang, D. (2024). Effect of proactive personality on career adaptability of higher vocational college students: the mediating role of college experience. *Frontiers in Psychology*, *15*(May), 1–10. https://doi.org/10.3389/fpsyg.2024.1333677

Hadi, A., & Aryani, E. (2023). Navigating career decisions: The influence of gender perception among high school students. *Jurnal Bimbingan Dan Konseling Terapan*, *7*(2), 125. https://doi.org/10.30598/jbkt.v7i2.1794

Jemini Gashi, L., Bërxulli, D., Konjufca, J., & Cakolli, L. (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). https://doi.org/10.1080/02673843.2023.2281421

Jiang, R., Fan, R., Zhang, Y., & Li, Y. (2022). Understanding the serial mediating effects of career adaptability and career decision-making self-efficacy between parental autonomy support and academic engagement in Chinese secondary vocational students. *Frontiers in Psychology*, *13*(August), 1–11. https://doi.org/10.3389/fpsyg.2022.953550

Khoiriah, S. U., Lubis, L. K. L. U., & Anas, D. K. N. (2023). Analisis perkembangan sistem manajemen pendidikan di era society 5.0. *JISPENDIORA : Jurnal Ilmu Sosial, Pendidikan Dan Humaniora*, *2*(2), 117–132. https://doi.org/10.56910/jispendiora.v2i2.650

Kitchenham, B., & Charters, S. (2007). *Guidelines for performing systematic literature reviews in software engineering. 2.*

Lee, A., & Jung, E. (2022). University students' career adaptability as a mediator between cognitive emotion regulation and career decision-making self-efficacy. *Frontiers in Psychology*, *13*(October), 1–17. https://doi.org/10.3389/fpsyg.2022.896492

Li, H., Yu, X., Mei, Y., Liu, X., Li, L., & Luo, N. (2021). The effect of grit on career adaptability of chinese college students based on the self-regulatory processes. *Frontiers in Psychology*, *12*(December). https://doi.org/10.3389/fpsyg.2021.795153

Li, L., Li, X., Li, Y., Liu, X. ping, & Huang, L. (2024). Types of short video addiction among college freshmen: Effects on career adaptability, insomnia, and depressive symptoms. *Acta Psychologica*, *248*(July). https://doi.org/10.1016/j.actpsy.2024.104380

Li, M., Fan, W., & Zhang, L. (2023). Career adaptability and career choice satisfaction: Roles of career self-efficacy and socioeconomic status. *Career Development Quarterly*. https://doi.org/10.1002/cdq.12334

Liu, Y., Ling, B., & Chen, D. (2024). A network approach to the relationship between career adaptability and starting salary among graduates. *Current Psychology*, *43*(5), 4416–4430. https://doi.org/10.1007/s12144-023-04655-5

Maree, J. G., & Magere, G. M. (2023). The influence of group career construction counselling on Tanzanian high school students' career decision-making difficulties. *International Journal of Adolescence and Youth*, *28*(1), 2190809.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer,

L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ (Clinical Research Ed.)*, *372*, n71. https://doi.org/10.1136/bmj.n71

Patel, S. G., Salahuddin, N. M., & O'Brien, K. M. (2008). Career decision-making self-efficacy of Vietnamese adolescents: The role of acculturation, social support, socioeconomic status, and racism. *Journal of Career Development*, *34*(3), 218–240.

Peters, P., Van der Heijden, B. I. J. M., Spurk, D., De Vos, A., & Klaassen, R. (2019). Please don't look at me that way. An empirical study into the effects of age-based (Meta-)stereotyping on employability enhancement among older supermarket workers. *Frontiers in Psychology*, *10*(FEB), 1–14. https://doi.org/10.3389/fpsyg.2019.00249

Poláková, M., Suleimanová, J. H., Madzík, P., Copuš, L., Molnárová, I., & Polednová, J. (2023). Soft skills and their importance in the labour market under the conditions of Industry 5.0. *Heliyon*, *9*(8).

Rahmi, F. (2019). Efikasi diri dalam membuat keputusan karier pada mahasiswa. *Insight: Jurnal Ilmiah Psikologi*, *21*(1), 12. https://doi.org/10.26486/psikologi.v21i1.756

Ramadhani, D., & Masrina. (2023). Overview of financial services in the 5.0 era. *2*(2), 16–19. https://doi.org/10.35747/twz.v2i2.731

Ran, J., Liu, H., Yuan, Y., Yu, X., & Dong, T. (2023). Linking career exploration, self-reflection, career calling, career adaptability and subjective well-being: A self-regulation theory perspective. *Psychology Research and Behavior Management*, *16*, 2805–2817. https://doi.org/10.2147/PRBM.S420666

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.

Sahin, A., Ernawati, R., Amalia, R., Dalimunthe, R. Z., Pautina, A. R., Maghfur, S., Chairunnisa, D., & AlfayyadI, A. F. (2024). Self-efficacy pada siswa: Systematic literatur review. *G-Couns: Jurnal Bimbingan Dan Konseling*, *8*(2), 627–639.

Savickas, M. L. (2013). Career construction theory and practice. Career Development and Counseling: Putting Theory and Research to Work, *2*(1), 144–180.

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.

Su, X., Wong, V., & To, S. ming. (2024). Evaluation of experience-driven career support services for NEET youth in community contexts. *Child and Youth Services*, *45*(3), 495–519. https://doi.org/10.1080/0145935X.2023.2230863

Super, D. E. (1994). *A life span, life space perspective on convergence.*

Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, *8*, 45. https://doi.org/10.1186/1471-2288-8-45

Tian, S., Zhang, Z., & Jia, L. (2022). Career adaptability of interpreting students: A case study of its development and interactions with interpreter competences in three Chinese universities. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.974417

Tung, D. A. O., & Huong, B. T. T. (2023). The role of social self-efficacy and psychological capital in IT graduates' employability and subjective career success. *Cogent Social Sciences*, *9*(1). https://doi.org/10.1080/23311886.2023.2204630

Wang, L., Ye, J. H., Lee, Y. S., & Miao, C. J. (2022). Analysis of influencing factors of subjective

career unsuccessfulness of vocational college graduates from the Department of Navigation in China. *Frontiers in Psychology*, *13*(November), 1–15. https://doi.org/10.3389/fpsyg.2022.1015190

Xiang, Y., Li, L., Yang, Q., Fang, Y., Xu, W., Ding, X., & Yang, Q. (2024). Career adaptability and correlating factors among secondary vocational nursing students in China. *Frontiers in Public Health*, *12*. https://doi.org/10.3389/fpubh.2024.1377323

Zhang, W., Guan, X., Zhou, X., & Lu, J. (2019). The effect of career adaptability on career planning in reaction to automation technology. *Career Development International*, *24*(6), 545–559. https://doi.org/10.1108/CDI-05-2018-0135