

What Drives Career Engagement? The Predictive Role of Socioemotional Skills and Career Adaptability

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Abstract

In contemporary labour markets characterized by uncertainty and rapid change, psychological resources that support proactive career behaviour are increasingly important. Drawing on Career Construction Theory, this study examined the relationships between socioemotional skills, career adaptability, and career engagement among university students. Participants were 204 interns who completed measures of socioemotional skills, career adaptability, and career engagement. Correlational analyses revealed positive associations among all major variables. Hierarchical regression showed that socioemotional skills significantly predicted career engagement after controlling for sociodemographic factors ($\Delta R^2 = .31, p < .001$). However, the inclusion of career adaptability substantially increased explained variance ($\Delta R^2 = .26$), with the final model accounting for 59.6% of the variance in engagement. Concern ($\beta = .301, p < .001$), Confidence ($\beta = .204, p = .018$), and Curiosity ($\beta = .193, p = .030$) emerged as the strongest predictors. These findings suggest that while socioemotional skills provide a foundational basis, career adaptability represents a more proximal predictor of proactive career behaviour. The study contributes to the literature by clarifying the complementary roles of these constructs in fostering career engagement among university students.

Keywords: socioemotional skills, career adaptability, career engagement, university students, career development

In contemporary labour markets characterized by rapid technological, economic, and social change, individuals are increasingly required to continuously update their competencies and actively manage their career development. These dynamics marked by instability, frequent transitions, and increasing demands for adaptability are particularly salient for university students who, upon completing higher education, must confront uncertainties and challenges associated with the transition from university to work (Mancaniello & Lavanga, 2024; OECD, 2025).

In response to these challenges, higher education institutions have expanded their focus beyond technical training to include the development of broader competencies that support adaptability and lifelong career management, including the capacity to manage career transitions and pursue professional development. Experiences such as internships, research activities, and academic projects provide important opportunities for students to develop not only domain-specific knowledge but also socioemotional and career-related competencies that are critical for functioning effectively in dynamic labour markets. Such experiences are considered essential for preparing graduates to function effectively in the context of the so-called Fourth Industrial Revolution, which requires professionals capable of continuous learning, flexibility, and proactive career management (Al-Abri et al., 2024; Ingusci et al., 2026; Spurk et al., 2020).

Within vocational psychology, increasing attention has been directed toward psychological resources that facilitate proactive career behaviour. Among these, socioemotional skills, career adaptability, and career engagement have emerged as key constructs for understanding how individuals prepare for and navigate career transitions (Chen et al., 2024; Öztemel & Yıldız Akyol, 2025; Spurk et al., 2020). Although these constructs have often been studied separately, they represent complementary aspects of individuals' capacity to regulate behaviour, cope with uncertainty, and actively shape their career trajectories.

Socioemotional Skills

In response to the need to prepare students for broader professional challenges, educational programs have increasingly moved beyond purely cognitive and technical training to incorporate the development of social, emotional, and interpersonal competencies. As a result, research on socioemotional skills has grown

substantially across disciplines such as economics, psychology, and education (Algan & Huillery, 2025; OECD, 2024).

Socioemotional skills refer to relatively stable yet malleable individual characteristics that involve the integration of emotional, social, and behavioural processes. These competencies develop over time through the interaction between individual predispositions and environmental influences and are expressed in patterns of thinking, feeling, and behaving (De Fruyt et al., 2015). They have been associated with a wide range of outcomes, including academic achievement, employability, well-being, and adaptive functioning (Almund et al., 2011; Soto et al., 2022).

From an economic perspective, socioemotional skills have been associated with a variety of important life outcomes, including employability, income, educational attainment, and reduced exposure to risky behaviours (Almund et al., 2011). In psychology, these competencies have been linked to well-being, mental health, social functioning, and adaptive behaviour across life domains (De Fruyt et al., 2015; Soto et al., 2022). In this sense, socioemotional skills represent the interaction between cognitive, emotional, and social processes that support effective functioning in complex environments. Because these competencies can be developed and strengthened over time, they are often referred to as “soft skills.”

These skills are particularly relevant for individuals’ long-term development, as they support the ability to cope with challenges, uncertainty, and complex life situations (Primi et al., 2016). From this perspective, socioemotional skills involve the capacity to respond adaptively and assertively to challenging situations through emotional regulation, responsible decision-making, and effective interpersonal functioning (Collaborative for Academic, Social, and Emotional Learning [CASEL], n.d.; OECD, 2021).

A widely adopted framework conceptualizes socioemotional skills based on the Big Five personality domains, organizing them into five broad dimensions: self-management, engaging with others, emotional resilience, amity, and open-mindedness (De Fruyt & Scheirlinckx, 2025; Walton et al., 2022). These competencies support goal-directed behaviour, interpersonal effectiveness, emotional regulation, and openness to new experiences, all of which are particularly relevant in contexts characterized by uncertainty and change.

Self-management refers to individuals’ ability to regulate behaviour, set goals, and persist in achieving them. Individuals with strong self-management competencies tend to demonstrate discipline, organization, and perseverance in the pursuit of objectives. Engaging with others involves social initiative and interpersonal competence, including the ability to communicate effectively, interact confidently, and establish meaningful relationships. Amity reflects empathy, trust, and cooperation in interpersonal relationships. It encompasses individuals’ ability to understand others’ perspectives and act collaboratively (Primi et al., 2021). Emotional resilience refers to the capacity to cope with adversity, regulate emotional reactions, and maintain psychological stability in the face of stress and challenges. Finally, open-mindedness refers to openness to new ideas, experiences, and perspectives, which fosters curiosity, creativity, and cognitive flexibility (Primi et al., 2021).

In the context of career development, socioemotional skills can be understood as foundational resources that enable individuals to regulate their behaviour, persist in the pursuit of goals, and respond adaptively to challenges. As such, they may play an important role in preparing university students to navigate the transition from education to work and to engage in activities that support their career development (Primi et al., 2021; Soto et al., 2022).

Career Adaptability

Career adaptability is a central construct in Career Construction Theory (Savickas, 2013) and refers to the psychosocial resources individuals use to cope with vocational tasks, transitions, and uncertainties. According to the Career Construction Adaptation Model, career development involves a sequence of processes including adaptive readiness, adaptability resources, adaptive responses, and adaptation outcomes (Savickas & Porfeli, 2012; Hirschi et al., 2015). Within this framework, psychological traits and competencies predispose individuals to respond adaptively to career challenges, while adaptability resources facilitate proactive behaviours that support career development.

In this context, career adaptability represents a set of resources—Concern, Control, Curiosity, and

Confidence—that enable individuals to anticipate future career tasks, take responsibility for their development, explore opportunities, and persist in achieving their goals (Savickas, 2013). Concern refers to future orientation and planning for one's career. Control reflects individuals' sense of responsibility for shaping their professional future. Curiosity involves exploring possible career opportunities and environments. Finally, Confidence represents individuals' belief in their ability to overcome obstacles and successfully pursue career goals.

Research has consistently shown that higher levels of career adaptability are associated with more positive career outcomes, including greater employability, career satisfaction, and proactive career behaviour (Rudolph et al., 2017; Spurk et al., 2020). For university students, career adaptability is particularly important, as it supports their ability to manage the transition from education to work by fostering planning, exploration, and persistence in career-related activities.

Career Engagement

Career engagement refers to the proactive behaviours individuals undertake to develop and manage their careers, such as career planning, self-exploration, environmental exploration, networking, and skill development (Hirschi et al., 2014). Unlike related constructs such as work engagement (a motivational state associated with involvement in one's job) or career commitment (attachment to a particular career path), career engagement emphasizes behavioural involvement in activities that promote career development over time and across contexts (Hirschi et al., 2014).

These behaviours play a critical role in facilitating successful school-to-work transitions. Students who actively engage in career-related activities during their university years tend to be better prepared for labour market entry and more likely to achieve positive career outcomes (Okumoto et al., 2022; Spurk et al., 2020).

Relationships Between Socioemotional Skills and Career Development Variables

Although socioemotional skills and career development variables have been widely studied, research examining their joint relationships remains limited. Existing studies have primarily focused on personality traits or related constructs, showing that dispositional characteristics are associated with both career adaptability and proactive career behaviours (Nilforooshan & Salimi, 2016; Sou et al., 2022). In particular, career adaptability has been identified as an important mechanism linking individual characteristics to career engagement.

Previous research has consistently highlighted the central role of career adaptability in linking individual and contextual resources to proactive career behaviour. For instance, studies have shown that career adaptability is positively associated with both personality traits and career engagement, and may mediate these relationships (Nilforooshan & Salimi, 2016). Similarly, evidence suggests that career adaptability also mediates the association between contextual factors, such as social capital, and career engagement, reinforcing its function as a key mechanism underlying proactive career development (Sou et al., 2022).

However, fewer studies have directly examined the role of socioemotional skills in this process, especially in the context of university students. Understanding how these competencies relate to both adaptability resources and career engagement may provide important insights into the psychological mechanisms that support proactive career development.

Present Study

The present study aims to examine the relationships between socioemotional skills, career adaptability, and career engagement among university students engaged in internships. Drawing on Career Construction Theory, we adopt a hierarchical perspective in which socioemotional skills represent indicators of adaptive readiness, career adaptability reflects adaptability resources, and career engagement corresponds to an adapting response expressed through proactive career behaviours.

Based on this framework, three hypotheses were tested:

H1: Socioemotional skills will be positively associated with career adaptability and career engagement.

H2: Socioemotional skills will significantly predict career engagement after controlling for sociodemographic variables.

H3: Career adaptability will explain additional variance in career engagement beyond sociodemographic variables and socioemotional skills.

To test these hypotheses, correlational analyses and hierarchical regression models were conducted. This analytical strategy allows for the examination of the incremental contribution of socioemotional skills and career adaptability resources in explaining career engagement, consistent with the theoretical ordering proposed by the Career Construction Adaptation Model.

Method

This study is part of a broader research project on socioemotional and career skills and employed a cross-sectional survey design. Statistical analyses were conducted to examine relationships among the study variables.

Participants

This was a non-probabilistic and convenience sample, since the criteria used to recruit participants were their availability and ease of access (Etikan & Bala, 2017). Thus, the study consisted of 204 higher education interns from the municipality of Campinas, in the state of São Paulo, and within the region, between ages 18 and 45 ($M = 23.61$; $SD = 4.75$). There was a predominance of students in their first undergraduate program (80.39%), in their first internship (59.31%), and in the final half of their program (50.98%). Participants were predominantly women (58.82%), from private universities (71.07%), from humanities programs (58.33%), and from economic class B (52.45%).

Instruments

Sociodemographic Questionnaire

Data were also collected on participants' institutions, undergraduate programs, whether they were enrolled in their first undergraduate program, and their stage of internship at the time of the research. This questionnaire also included the 2018 Brazil Economic Classification Criteria from the Brazilian Association of Research Companies (ABEP).

Inventory for the Assessment of Social and Emotional Skills (Senna 2.0)

The Inventory for the Assessment of Social and Emotional Skills (Senna 2.0) is an instrument developed by Primi, Santos, John, and De Fruyt (2021). The Senna 2.0 is used in the educational field on a large scale, aiming to contribute to the development of public policies for education. This instrument is based on the five dimensions of the Big Five Personality Theory, or domains, which are macro skills in a broad model that organizes five core dimensions with 17 more specific concepts, called facets. In Senna 2.0 the domains/factors are: (a) Self-management [facets: determination, organization, focus, persistence, responsibility]; (b) Engaging with others [facets: social initiative, assertiveness, enthusiasm]; (c) Amity [facets: compassion/empathy, respect, trust]; (d) Emotional resilience [facets: stress modulation, self-confidence, frustration tolerance]; and (e) Open-mindedness [facets: curiosity to learn, creative imagination, artistic interest]. Each

facet is composed of items that address issues of identity and self-efficacy, such as “Trusting people,” “Noticing when someone you know is upset,” “I can’t stop thinking about negative things,” and “I am very cheerful and excited.” There are two versions of Senna 2.0, one with 162 items (complete) and another with 54 items. In this study, the 54-item version was used, since it has the same psychometric values as the full version and because the study already uses other instruments to assess the other variables.

The internal consistency coefficients for each skill with samples over the age of 18 are as follows: open-mindedness, 0.91; self-management, 0.94; engaging with others, 0.86; amity, 0.86; and emotional resilience, 0.90 (Primi et al., 2021). All five domains scored very good levels of reliability ($r \geq .85$) (Primi et al., 2021). Scores are made individually from the categories: to be developed, emerging, capable, and very capable. The research group relies on technical assistance from the group of researchers who developed the aforementioned instrument, since the creation of SENNA 1.0. The Ayrton Senna Institute formally authorized the use of the instrument.

Career Adapt-abilities Scale (CAAS)

The Career Adapt-abilities Scale (CAAS) is an instrument developed by Savickas and Porfeli (2012), and which has been internationally validated. The adaptation of the items to Brazilian Portuguese was made by Teixeira et al. (2012). The present study used the latest version of the instrument by Audibert and Teixeira (2015), which consists of 24 items that respondents rate using a 5-point Likert scale, in which “1” indicates “I developed little or nothing” and “5” indicates “I developed extremely well”. The scale aims to assess the career adaptability construct in university students. The items involve statements such as “Planning how to achieve my goals,” “Believing in my ability to direct my own life,” “Being curious about new opportunities,” and “Learning new skills.” The trustworthiness and reliability of the instrument showed excellent internal consistency both in the total scale and in the four subscales. Cronbach’s alphas were 0.94 on the total scale, 0.88 on the concern subscale, 0.83 on the control scale, 0.88 on the curiosity scale, and 0.89 on the confidence subscale (Audibert & Teixeira, 2015). The values obtained were slightly higher than the first Brazilian version of the CAAS (Teixeira et al., 2012) and close to the best values of samples from other countries (Savickas & Porfeli, 2012).

Career Engagement Scale (CES)

The Career Engagement Scale (CES) is an instrument developed by Hirschi, Freund, and Hermann (2014), using the version validated for Brazil by Marques et al. (2019). The CES consists of a one-dimensional scale containing nine items, including “Solving problems,” “Building plans and defined goals for a career,” and “Assuming responsibilities or positions that could help career progress.” Items 1 to 3 more generally assess *career engagement* behaviours, covering several categories. The other items (4 to 9) represent different categories of *career engagement* behaviour. They are: (a) Career Planning; (b) Career Self-Exploration; (c) Environmental Career Exploration; (d) Networking; (e) Voluntary Human Capital/Skill Development; and (f) Positioning Behaviour. The items are answered using a Likert scale, with ratings ranging from 1 to 5, where 1 corresponds to the answer “Not much” and 5 corresponds to the answer “Always.” Participants rate each item on a scale from 1 to 5, with ratings of 1 or 2 indicating that the subject is minimally engaged, a rating of 3 indicating that the subject is reasonably engaged, and ratings of 4 or 5 indicating that the subject is well-engaged.

Both the original scale and the version adapted to Brazil provide support for construct validity. They are convergent and have positive relationships with other career constructs, such as identity, clarity of professional identity, and career exploration among university students. This scale can be used both in a university context and with adults working in the labour market (Hirschi et al., 2014). The Brazilian adapted scale has a Cronbach’s alpha of 0.89, indicating a high level of scale reliability (Marques et al., 2019).

Data Collection Procedures

The larger project was submitted to and approved by the Research Ethics Committee of the University of São Paulo (CAAE no 15273119.0.0000.5407). The questionnaire and other assessment instruments were prepared and inserted into the Google Form platform. When accessing the form, participants had access and responded to the Informed Consent (IC) and, subsequently, to the complete survey. All data were collected during the SARS-CoV-2 virus pandemic and social isolation measures. Once the collection was completed, preparation for data analysis began.

Data Analysis

After collection, the form with the Senna 2.0 responses was sent to the team of the Ayrton Senna Institute. The team carried out the Item Response Theory (IRT) correlations of the instrument scores, polytomic (Likert scale), using the partial credits model and with individual scores for the dimensions (five), according to the categories: *to be developed*, *emerging*, *capable*, and *very capable*. After the Senna 2.0 analysis, data were transferred, along with the other instruments and sociodemographic data, to an Excel spreadsheet and coded for the IBM Statistical Package for the Social Sciences (SPSS) Software version 27 (Chicago, Illinois, USA). Reliability of the scales, descriptive statistics and Pearson correlations were initially calculated to explore the relationships between variables. To test the main research hypotheses, a three-stage hierarchical multiple regression was conducted with Career Engagement as the dependent variable. This method was chosen to determine the incremental variance (ΔR^2) explained by each successive set of predictors after controlling for the influence of previously entered variables. The analysis was organized into three distinct steps: Step 1 included sociodemographic variables (e.g., Age, Gender, and Academic Year) to control for individual background characteristics. Step 2 introduced five socioemotional skills—Openness, Self-management, Agreeableness, Engaging with others, and Emotional Resilience—to assess the impact of relatively stable individual characteristics. Step 3 added the specific career adaptability dimensions of Concern, Control, Curiosity, and Confidence. The primary objective of this hierarchical approach was to verify whether career-specific adaptability resources provide a significant unique contribution to career engagement over and above the influence of presumably more stable socioemotional conditions and demographic factors.

The assumptions for linear regression were verified prior to interpretation. Multicollinearity was assessed using Tolerance and the Variance Inflation Factor (VIF), with values below 5 generally indicating the absence of severe redundant information among predictors. Additionally, a Collinearity Diagnostic was performed, monitoring the Condition Index across the dimensions of the final model. The incremental contribution of each block of variables was evaluated based on the change in the coefficient of determination (ΔR^2) and the significance of the F-change statistic. Statistical significance for all analyses was set at $p < .05$.

This hierarchical approach was guided by the Career Construction Adaptation Model, which conceptualizes career development as a sequence from adaptive readiness (socioemotional skills) to adaptability resources (career adaptability), and finally to adaptive responses (career engagement). Accordingly, variables were entered in blocks reflecting this theoretical ordering. Hierarchical regression was selected to examine the incremental contribution of conceptually ordered predictors, consistent with the proposed theoretical model.

Results

Table 1 presents the descriptive statistics for the study variables, including socioemotional skills, career adaptability resources, and career engagement. The means and standard deviations provide an overview of the levels of these psychological resources within the sample and serve as a basis for the subsequent correlational and regression analyses.

Overall, the descriptive statistics indicate moderate to relatively high levels of socioemotional skills, career adaptability, and career engagement within the sample. Among socioemotional competencies, self-management and open-mindedness showed comparatively higher mean scores, suggesting that participants

Table 1

Descriptive Statistics

Variable	<i>N</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
Agreeableness	204	2	4	3.03	0.44
Self-management	204	2	4	3.34	0.56
Engagement with others	204	1	4	2.83	0.66
Emotional resilience	204	1	4	3.11	0.72
Openness	204	1	4	3.15	0.84
Concern	204	1	5	3.71	0.83
Control	204	1.17	5	3.81	0.77
Curiosity	204	1.67	5	3.63	0.82
Confidence	204	1.67	5	3.90	0.72
Career engagement	204	1.33	5	3.71	0.76

generally reported strong capacities for goal-directed behaviour and openness to new experiences. Similarly, career adaptability dimensions were rated above the midpoint, with Confidence and Control presenting the highest means, indicating a generally positive perception of personal resources for managing career-related tasks. Career engagement also displayed a relatively elevated mean, suggesting that participants were moderately to actively involved in behaviours supporting their career development. These patterns provide initial support for the presence of relevant psychological resources in the sample, which are further examined in the correlational and regression analyses.

In order to assess the relationships between the study variables, socioemotional skills, career adaptability, and career engagement, Pearson correlations were performed. Correlation values can be seen in Table 2. Correlation values were interpreted as follows, according to their level: $r = 0.10$ to 0.30 (weak); $r = 0.40$ to 0.60 (moderate); and $r = 0.65$ to 1 (strong).

Consistent with Hypothesis 1, most variables were positively correlated, supporting the expected pattern of associations (Table 2). An exception was amity, which showed no significant relationships with engaging with others, key dimensions of career adaptability (Concern and Curiosity), or career engagement, and generally exhibited weak associations with other variables. In contrast, correlations among career adaptability dimensions and between adaptability and career engagement were consistently positive and comparatively stronger. The strongest associations with career engagement were observed for Concern ($r = .657, p < .001$) and Curiosity ($r = .659, p < .001$), while Control showed a moderate correlation ($r = .581, p < .001$). Among socioemotional skills, self-management was moderately associated with Confidence ($r = .573, p < .001$).

Following the correlational analysis, a three-step hierarchical regression analysis was conducted to examine the incremental contribution of sociodemographic variables, socioemotional skills, and career adaptability in predicting career engagement (See Table 3).

In Step 1, sociodemographic variables (i.e., age, gender, type of institution, academic status, internship experience, area of study, and socioeconomic status) were entered as controls. This model was not statistically significant, $F(8, 195) = 0.65, p = .733$, explaining 2.6% of the variance in career engagement, indicating that these variables did not meaningfully contribute to the outcome.

In Step 2, socioemotional skills were added, resulting in a significant improvement in the model, $\Delta R^2 = .31, \Delta F(5, 190) = 17.67, p < .001$. This model explained 33.5% of the variance in career engagement, $F(13, 190) = 7.37, p < .001$. At this stage, self-management ($\beta = .236, p = .001$), engaging with others ($\beta = .202, p = .004$), and open-mindedness ($\beta = .262, p < .001$) were significant positive predictors, supporting Hypothesis 2.

Table 2

Correlations Between Socioemotional Skills, Career Adaptability and Career Engagement

	1	2	3	4	5	6	7	8	9	10
1. Amity	—									
2. Self-management	0.237***	—								
3. Engaging with others	0.101	0.315***	—							
4. Emotional resilience	0.238***	0.393***	0.363***	—						
5. Open-mindedness	0.243***	0.196**	0.361***	0.315***	—					
6. Concern	0.126	0.447***	0.336***	0.349***	0.300***	—				
7. Control	0.175 *	0.392***	0.472***	0.459***	0.408***	0.642***	—			
8. Curiosity	0.114	0.419***	0.393***	0.411***	0.453***	0.684***	0.720***	—		
9. Confidence	0.159 *	0.573***	0.394***	0.425***	0.311***	0.657***	0.678***	0.756***	—	
10. Career engagement	0.128	0.392***	0.402***	0.345***	0.389***	0.657***	0.581***	0.659***	0.644***	—

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3

Hierarchical Regression Models Summary

Model	R	R^2	ΔR^2	F change	P
Sociodemographic variables (Model 1)	0.148	0.022	0.022	0.623	0.736
Socioemotional skills (Model 2)	0.579	0.335	0.313	18.002	< .001
Career adapt-abilities (Model 3)	0.772	0.596	0.261	30.186	< .001

In Step 3, career adaptability dimensions were introduced, leading to a further significant increase in explained variance, $\Delta R^2 = .26$, $\Delta F(4, 186) = 30.06$, $p < .001$. The final model accounted for 59.6% of the variance in career engagement, $F(17, 186) = 16.16$, $p < .001$, supporting Hypothesis 3. In this model, concern ($\beta = .301$, $p < .001$), confidence ($\beta = .204$, $p = .018$), and curiosity ($\beta = .193$, $p = .030$) emerged as significant positive predictors, while being in their first undergraduate degree was negatively associated with engagement ($\beta = -.118$, $p = .034$). Notably, the effects of socioemotional skills were no longer statistically significant after the inclusion of adaptability variables.

This pattern is consistent with the theoretical assumption that career adaptability may function as a proximal mechanism linking broader socioemotional competencies to career engagement. Collinearity diagnostics indicated no evidence of problematic multicollinearity among predictors.

Discussion

The present study aimed to examine the relationships between socioemotional skills, career adaptability, and career engagement among university students, adopting a hierarchical perspective grounded in Career Construction Theory. Overall, the findings support the proposed model and provide evidence that

career engagement is associated with a structured set of psychological resources operating at different levels of the career development process.

Integration of Findings Within the Theoretical Framework

Consistent with Hypothesis 1, the results revealed positive associations among socioemotional skills, career adaptability, and career engagement. These findings suggest that students with stronger socioemotional competencies are more likely to possess higher levels of adaptability resources and to engage in proactive career behaviours. This pattern aligns with previous research indicating that individual characteristics are linked to both adaptability and career engagement (Nilforooshan & Salimi, 2016; Sou et al., 2022).

More importantly, the hierarchical regression analysis provides insight into how these variables are related. Socioemotional skills significantly predicted career engagement when considered independently of career adaptability, supporting Hypothesis 2. However, their effects were no longer significant after the inclusion of career adaptability dimensions, while adaptability emerged as the strongest set of predictors. The addition of career adaptability substantially increased the explained variance, supporting Hypothesis 3 and highlighting its central role in explaining proactive career behaviour.

Taken together, this pattern is consistent with the theoretical assumption that socioemotional skills represent adaptive readiness, whereas career adaptability reflects more proximal regulatory resources that translate these competencies into behaviour. In this sense, career engagement can be understood as an adaptive response, expressed through proactive career-related activities.

Career Adaptability as a Proximal Predictor of Career Engagement

Among the predictors included in the final model, Concern, Confidence, and Curiosity emerged as significant contributors to career engagement. These findings underscore the importance of future orientation, exploratory behaviour, and self-efficacy in fostering proactive career development. Students who are oriented toward the future, actively explore opportunities, and believe in their ability to overcome challenges are more likely to engage in behaviours such as planning, networking, and skill development.

The strong associations between career adaptability dimensions and career engagement are consistent with prior research highlighting adaptability as a key driver of proactive career behaviour (Rudolph et al., 2017; Spurk et al., 2020). These results reinforce the view that adaptability resources play a central role in enabling individuals to navigate increasingly complex and uncertain career environments.

Role of Socioemotional Skills as Foundational Resources

Although socioemotional skills did not remain significant predictors in the final model, their role should not be interpreted as negligible. Rather, the results suggest that these competencies may operate indirectly by supporting the development of career adaptability resources. Skills such as self-management, emotional resilience, and openness to experience are likely to facilitate individuals' capacity to plan, explore, and persist in their career development.

This interpretation is consistent with the Career Construction Adaptation Model, which conceptualizes adaptive readiness as the foundation upon which adaptability resources are built. The observed pattern therefore supports a hierarchical understanding in which broader socioemotional competencies contribute to the development of more specific career-related resources, which in turn are more directly associated with behaviour.

Limited Role of Sociodemographic Characteristics

The hierarchical regression analysis confirmed that sociodemographic variables played only a minor role in explaining career engagement. Age, gender, and year of study did not significantly predict engagement in the final model. This result aligns with Life Designing (Savickas et al., 2009), a paradigm for career

construction in the 21st Century, which emphasizes that career development is fundamentally a process of active self-construction rather than demographic determination. According to this perspective, individuals continuously construct their careers by mobilizing psychological resources that enable them to navigate vocational tasks and transitions across their life span.

The only demographic variable that remained significant in the final model was *First Undergraduate Degree*. Students who followed non-linear educational pathways may display somewhat different engagement dynamics. Such trajectories may reflect processes of vocational reconsideration, identity exploration, or career redirection that influence how individuals invest in their current academic and professional development.

Implications for Research and Practice

The present study contributes to the literature by integrating socioemotional skills, career adaptability, and career engagement within a single theoretical framework. By adopting a hierarchical perspective, the findings clarify how these constructs are related and highlight the central role of career adaptability in translating individual competencies into proactive career behaviour.

From a practical standpoint, these results suggest that interventions aimed at fostering career engagement should address both foundational and proximal psychological resources. Programs designed to strengthen socioemotional skills may support the development of adaptability resources, while interventions focused on career planning, exploration, and self-efficacy may more directly promote engagement in career-related activities.

Limitations and Future Directions

This study has several limitations that should be considered. First, the cross-sectional design does not allow for causal inferences regarding the relationships among the variables. Longitudinal studies would be valuable in examining how socioemotional skills, career adaptability, and career engagement develop over time. Second, the use of self-report measures may introduce common method bias. Future research could incorporate behavioural indicators or multi-source data to strengthen the validity of the findings.

Finally, although the results are consistent with a hierarchical and potentially mediational process, the present study did not formally test mediation. Future studies should examine whether career adaptability mediates the relationship between socioemotional skills and career engagement using longitudinal or structural modelling approaches.

Conclusion

The present study examined the relationships between socioemotional skills, career adaptability, and career engagement among university students, contributing to a more integrated understanding of proactive career behaviour. The findings indicate that career engagement is primarily associated with career adaptability resources, particularly Concern, Curiosity, and Confidence, which emerged as the most consistent predictors of proactive career activities.

Although socioemotional skills were initially associated with career engagement, their effects were no longer significant after the inclusion of career adaptability, suggesting that their influence may operate through more proximal career-related resources. This pattern is consistent with a hierarchical perspective derived from Career Construction Theory, in which socioemotional competencies represent adaptive readiness, career adaptability reflects regulatory resources, and career engagement corresponds to the behavioural expression of these processes.

By clarifying the relationships among these constructs, the study highlights the central role of career adaptability in translating broader individual competencies into proactive career behaviour. These findings underscore the importance of fostering both socioemotional skills and career adaptability within higher education contexts as complementary resources that support students in navigating increasingly complex and uncertain career environments. In dynamic and uncertain labour markets, understanding how these

psychological resources interact provides a valuable foundation for supporting more proactive, adaptable, and self-directed career development.

References

- Al-Abri, M., Denman, C., Al Alawi, M., & Al Ajmi, M. (2024). Enhancing employability through university-industry linkages: Omani engineering students' perspectives of the Eidaad internship programme. *Humanities and Social Sciences Communications*, 11(1), Article 565. <https://doi.org/10.1057/s41599-024-02779-y>
- Algan, Y., & Huillery, E. (2025). Socio-emotional skills and the future of education. *Annual Review of Economics*, 17, 589–613. <https://doi.org/10.1146/annurev-economics-081624-080702>
- Almund, M., Duckworth, A. L., Heckman, J., & Kautz, T. D. (2011). Personality psychology and economics. In E. A. Hanushek, S. Machin, & L. Weismann (Eds.), *Handbook of the Economics of Education* (Vol. 4, pp. 1–181). Elsevier. <https://doi.org/10.1016/B978-0-444-53444-6.00001-8>
- Audibert, A., & Teixeira, M. A. P. (2015). Escala de adaptabilidade de carreira: evidências de validade em universitários brasileiros [Career adapt-abilities scale: Evidences of validity in Brazilian university students]. *Revista Brasileira de Orientação Profissional*, 16(1), 83–93. <https://pepsic.bvsalud.org/pdf/rbop/v16n1/09>
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (n.d.). *What is the CASEL framework?* <https://casel.org/what-is-sel>
- Chen, Q., Li, J., Shen, R., Wang, R., Xu, J., & Zhou, J. (2024). Career adaptability and work engagement: The roles of person–organization fit and job insecurity. *BMC Psychology*, 12(1), Article 562. <https://doi.org/10.1186/s40359-024-01907-2>
- De Fruyt, F., & Scheirlinckx, J. (2025). Challenges and opportunities for the assessment of social-emotional skills. *ECNU Review of Education*. <https://doi.org/10.1177/20965311251319355>
- De Fruyt, F., Wille, B., & John, O. P. (2015). Employability in the 21st century: Complex (interactive) problem solving and other essential skills. *Industrial and Organizational Psychology*, 8(2), 276–281. <https://doi.org/10.1017/iop.2015.33>
- Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, 5(6), 215–217. <https://doi.org/10.15406/bbij.2017.05.00149>
- 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>
- Hirschi, A., Herrmann, A., & Keller, A. C. (2015). Career adaptivity, adaptability, and adapting: A conceptual and empirical investigation. *Journal of Vocational Behavior*, 87, 1–10. <https://doi.org/10.1016/j.jvb.2014.11.008>
- Ingusci, E., De Carlo, E., Catalano, A. A., Semeraro, C. G., & Signore, F. (2026). Are university students ready to work? The role of soft skills and psychological capital in building sustainable employability. *Education Sciences*, 16(2), Article 181. <https://doi.org/10.3390/educsci16020181>
- Mancaniello, M. R., & Lavanga, F. (2024). Adolescence in the Italian labour market: In search of an equilibrium among instability, uncertainty, and AI challenges. *Social Sciences*, 13(12), Article 688. <https://doi.org/10.3390/socsci13120688>
- Marques, B. C. S., Oliveira, M. C., & Melo-Silva, L. L. (2019). Escala de engajamento com a carreira (EEC) [The Career Engagement Scale (CES)]. In A. L. de Andrade, M. F. O. Nunes, M. Z. de Oliveira, R. A. M. Ambiel (Eds.), *Técnicas e medidas em orientação profissional e de carreira* [Techniques and Measures in Vocational and Career Guidance] (pp. 49–60). Vetor.
- Nilforooshan, P., & Salimi, S. (2016). Career adaptability as a mediator between personality and career engagement. *Journal of Vocational Behavior*, 94, 1–10. <https://doi.org/10.1016/j.jvb.2016.02.010>
- OECD (2021). *Beyond academic learning: First results from the Survey of Social and Emotional Skills*. <https://doi.org/10.1787/92a11084-en>
- OECD (2024). *Social and emotional skills for better lives: Findings from the OECD Survey on Social and*

- Emotional Skills 2023*. <https://doi.org/10.1787/35ca7b7c-en>
- OECD (2025). *OECD skills outlook 2025: Building the skills of the 21st century for all*. <https://doi.org/10.1787/26163cd3-en>
- Okumoto, A. Y. de P., Oliveira, M. C. de, Melo-Silva, L. L., & Taveira, M. do C. (2022). Engajamento e sucesso na transição para o trabalho: Estudo com medidas repetidas. [Engagement and success during transition to work: Repeated measures study]. *Psicologia: Ciência E Profissão*, 42, e232824. <https://doi.org/10.1590/1982-3703003232824>
- Öztemel, K., & Yıldız Akyol, E. (2025). Career engagement as proactive career behavior: The role of core self-evaluation, career adaptability, and negative career goal feedback. *Turkish Psychological Counseling and Guidance Journal*, 15(76), 162–177. <https://doi.org/10.17066/tpdrd.1492624>
- Primi, R., Santos, D., John, O. P., & De Fruyt, F. (2016). Development of an inventory assessing social and emotional skills in Brazilian youth. *European Journal of Psychological Assessment*, 32(1), 5–16. <https://doi.org/10.1027/1015-5759/a000343>
- Primi, R., Santos, D., John, O. P., & De Fruyt, F. (2021). *SENNA inventory for the assessment of social and emotional skills: Technical manual*. Instituto Ayrton Senna. <https://doi.org/10.31234/osf.io/byvpr>
- 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. (2013). Career construction theory and practice. In R. W. Lent & S. D. Brown (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 147–183). John Wiley & Sons.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J.-P., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., & van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75(3), 239–250. <https://doi.org/10.1016/j.jvb.2009.04.004>
- 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>
- Soto, C. J., Napolitano, C. M., Sewell, M. N., Yoon, H. J., & Roberts, B. W. (2022). An integrative framework for conceptualizing and assessing social, emotional, and behavioral skills: The BESSI. *Journal of Personality and Social Psychology*, 123(1), 192–222. <https://doi.org/10.1037/pspp0000401>
- Sou, E. K., Yuen, M., & Chen, G. (2022). Career adaptability as a mediator between social capital and career engagement. *The Career Development Quarterly*, 70(1), 2–15. <https://doi.org/10.1002/cdq.12289>
- Spurk, D., Volmer, J., Orth, M., & Göritz, A. S. (2020). How do career adaptability and proactive career behaviours interrelate over time? An inter- and intraindividual investigation. *Journal of Occupational and Organizational Psychology*, 93(1), 158–186. <https://doi.org/10.1111/joop.12288>
- Teixeira, M. A. P., Bardagi, M. P., Lassance, M. C. P., Magalhães, M. O., & Duarte, M. E. (2012). Career adaptabilities scale—Brazilian form: Psychometric properties and relationships to personality. *Journal of Vocational Behavior*, 80(3), 680–685. <https://doi.org/10.1016/j.jvb.2012.01.007>
- Walton, K. E., Burrus, J., Murano, D., Anguiano-Carrasco, C., Way, J., & Roberts, R. D. (2022). A big five-based multimethod social and emotional skills assessment: The Mosaic™ by ACT® Social Emotional Learning Assessment. *Journal of Intelligence*, 10(4), Article 72. <https://doi.org/10.3390/jintelligence10040072>